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Interviewing in the metaverse: The renewed importance of location and embodiment

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ABSTRACT

In this paper, we explore the methodological implications of conducting online qualitative interviews in the metaverse through virtual reality (VR). Technology companies have invested heavily in creating metaverse platforms for bringing people together in digital worlds, yet there is a significant absence of geographical research examining the implications of these spaces. Twenty-six undergraduate students participated in a remote interviewing exercise using the platform AltSpaceVR. Face-to-face interviews were subsequently conducted to gather their reflections about the experience of research interviews in a metaverse. The study highlights the significance of immersion and presence in virtual environments. Participants noted that, in contrast to video interviewing, the immersive nature of the virtual space resembled conventional face-to-face interviews. A sense of immersion and presence enhances the authenticity of the interview experience. There were, however, challenges in interface management and the role of avatars altering the embodied connection with the research subjects. The avatars provided personal representation but introduce complexities in establishing genuine connections and rapport. In our discussion of the implications for VR qualitative research, we emphasise the interplay of immersion, presence and embodiment which can add real value to remote interviewing experience, while reflecting on the technical and physiological limitations.

1. Introduction

One of the lasting methodological legacies of the COVID-19 pandemic has been the normalisation of video interviews as a standard component of the qualitative research toolkit (Gray et al., 2020; Oliffe et al., 2021). The pandemic also coincided with the high water mark of the most recent hype cycle around the *metaverse*. With work and social interaction shifting online, there was a great deal of interest and investment in the possibilities offered by shared virtual worlds, where remote communities could come together to work, socialise, and shop. As the pandemic began to fade, so too did enthusiasm for the metaverse, with significant reductions in investment and layoffs across the tech sector from the second half of 2022 (Zitron, 2023), as people began to return to face-to-face interactions.

Just as video calling has not disappeared post-pandemic, however, so the metaverse seems likely to continue to develop and grow, albeit at a slower rate than had been anticipated (Jones, 2023). With this in mind, we use this paper to explore the potential that the metaverse offers to researchers, specifically when it comes to conducting qualitative interviews. We should note at this point that there is no singular metaverse, but rather several rival platforms offering opportunities for people to meet in digital space. We argue that these platforms offer a distinct experience compared to video interviewing, specifically because they are designed to create a 'place illusion' (Slater, 2009) of embodied co-presence with other people *inside* an immersive digital environment.

These qualities are of particular interest to geographers given that the spatial location of interviews is widely acknowledged to shape the interview process (Elwood & Martin, 2000; Sin, 2003). Video interviewing removes the multisensory contextual cues that create sense of place in face-to-face interviews (Sand et al., 2022). As a result, Zoom and similar video-conferencing platforms flatten sense of place, creating a universal experience of faces in boxes on a screen. We argue here that

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the *feeling* of embodied co-presence created by immersion in the metaverse adds a sensory, place-based element to remote interviewing even where the digital environments themselves are not particularly realistic representations of the physical world. This experience has commonalities with the conventional face-to-face interview but also brings unique experiences because of the nature of metaverse spaces and the presentation of the body via its avatar.

Twenty-six undergraduate students from four different countries were invited to try the experience of remote interviewing via the now defunct metaverse platform AltSpaceVR. The students were set the task of undertaking an unstructured interview on the theme of life at a university in a different country. These students were subsequently interviewed face-to-face by a member of the research team to reflect on the experience of conducting research interviews in the metaverse. The sense of immersion and presence offered by virtual environments, especially when experienced via a VR headset was particularly noted by participants as creating something more akin to a conventional interview, though with significant caveats around the difficulties with managing the interface and the role of the avatar in altering the nature of the embodied connection with the research subject.

2. Interviewing in virtual reality

The VR interviews we discuss in this paper are a digitally mediated conversation akin to the various remote approaches to conducting interviews that have become more popular in recent years with the rise of internet-mediated research (Deakin & Wakefield, 2014). Online interviews, such as those conducted on Microsoft Teams and Zoom, have distinct practical and methodological advantages. They allow researchers to connect with participants whose location may not be geographically convenient, creating greater flexibility and resource efficiency in data collection (Sturgis & Hanrahan, 2004). Online interviews as an alternative to face-to-face interviews can also, crucially, provide greater anonymity and comfort to the participants as they share their experiences (Thunberg & Arnell, 2022). Lowe et al. (2023), for example, have shown how remote elicitation methods can explore emotions and fraught topics with sensitivity and care.

Despite the strengths of online interview methods, there is a tendency to present them as inferior (Novick, 2008) because in-person interviews provide the strongest foundation for building rapport, mitigating ethical issues, and represent the most natural conversational setting (Irvine et al., 2013). More pressingly, online interviews are broadly disembodied. As talking heads on a computer screen, online interviews lose those subtle embodied, non-verbal and spatial cues that contextualise and provide additional depth to the interview (Deakin & Wakefield, 2014; Keen et al., 2022). This includes missing locational information, which can play a significant role in interpreting the social context of the interview and can provide a possibility to explore micro-geographies of spatial relations and meanings (Cope & Elwood, 2009). However, this is where VR interviews differ from traditional online interviews, precisely because the interviewer and interviewee have a *presence* in a virtual space – well beyond a talking head.

2.1. Immersion and presence in the metaverse

VR is an assemblage that blends technological infrastructure and people to create a space for mediated interaction (Jones & Osborne, 2022). Whilst many other mediums do this, Evans (2018) suggests that immersion and presence are VR's unique selling points. Immersion is generally perceived as the direct result of the technology's capabilities (Slater, 2003), where the user is placed within a digital environment and the technology can, to different degrees, simulate the physical place. The better a given technological system performs, the greater immersion. On the other hand, the concept of presence is the human response to such immersion. It is a psychological construct that denotes the individual's subjective perception of being in the virtual environment (Schuemie et al., 2001). As such, presence refers to the subjective experience of being in an environment, the "sense of being there", even if physically the body is in another environment (Fontanesi & Renaud, 2014; Fromberger et al., 2015). This experience has also been referred to as "place illusion" (Slater, 2009) and, within the frame of geographical thought, can be closely connected to the various theoretical imaginations of the concept of place (Cresswell, 2004). Place has always been perceived as a crucial condition of human existence within geographical and phenomenological traditions (Heidegger, 2013; Tuan, 1977). From this perspective, immersive virtual environments provide a rich field of study for research on place where the feeling of presence, in its various forms, is a vital factor in creating place attachment, sense of place, and place identity.

When discussing digitally mediated interviews in VR, the most relevant forms of presence needed to facilitate rich conversation are self-presence, spatial presence, and co-presence. Self-presence is the recognition that it is *me* in the VR environment, even if my body is not in that space; an ability to embody the avatar (Osborne & Jones, 2022; Ratan, 2013). Spatial presence, on the other hand, is the feeling, sense, or state of "being there", occupying the space meaningfully and authentically interacting with the space. Crucially, *co-presence* refers to a sense of "being there" together with (simulated) others and being able to interact with them (Nash, 2018). It is a perception of being together in or sharing a space and being able to affect an engagement with others (Harms & Biocca, 2004). As Biocca (1997: 2) argues, co-presence is the perception of "access to the intelligence, intentions, and sensory impressions of another". Thus, when conducting interviews in VR, the interviewer and the participant(s) must be present in their avatar, the metaverse, and with each other.

Whilst immersion and presence are key aspects of VR, it is important to note that being present in VR does not occlude the physical space in which VR use takes place. The feeling of "being-there" in VR can be understood as a kind of "dislocation". Dislocation generally refers to the discrepancy or disconnection between a person's physical location and their perceived location within the VR environment. This can be a negative aspect of VR use, caused by factors such as latency, tracking errors, or design flaws in the VR system. Saker and Frith (2019) argue that a sense of dislocation is instead the phenomena where the digital space of VR temporarily supersedes physical space. The shared norms, practices, and interactions with others in VR become the primary focus and locus of activity, while the physical remains a constraint upon actions in the virtual space. In a dislocated space where the digital incorporates the physical, the physical does not disappear, nor is the person rendered wholly absent (Saker & Frith, 2019, p. 223). Presence in VR is still contingent on the physical – the space, the technological assemblage of VR and embodiment of corporeal space – even when the user is experiencing the three kinds of presence in VR.

2.2. Social VR

The idea of *social VR* has emerged as a way of thinking about the new possibilities for human connection and interaction that immersive co-presence in VR has enabled. Social VR enables users to interact and socialise in shared, interoperable and immersive virtual environments (Cheng et al., 2022). With its ability to transport individuals into shared digital environments, social VR has swiftly garnered attention as a transformative space that transcends physical boundaries and brings people together like never before (Maloney et al., 2020). In social VR platforms, such as VRChat, BeanVR and Rec Room, users can cultivate online social relationships, experiment with self-representation and enjoy collaborative immersive gaming (Maloney et al., 2020).

In these digital spaces, users have interactive agency through an avatar: a digital alter ego that is an embodied and tangible representation of the user (Freeman et al., 2020, pp. 1–8; Osborne & Jones, 2022). Most social VR platforms allow avatars to be customised to the preferences of the user, meaning that avatars emerge as key geospatial

manifestations, embodying the essence of an online user's identity within the metaverse. Thus, personalisation takes centre stage, moulding avatars into digital representations of the user, or creating a whole new persona (Schroeder, 2012). For example, Freeman and Acena (2022), in their work on the queer community in social VR, demonstrated how queer players selectively present their gender and sexual identities through avatar choice and design to the extent that it becomes a type of 'identity tourism' where they selectively and actively perform versions of themselves as raced and gendered beings (Huh & Williams, 2009; Nakamura, 2013). Thus, the user perceives the avatar not as mere pixels on a screen but as a reflection of their own identities and values. The avatar becomes an extension of the user's emotions, dreams, and ambitions, shaping the very essence of their existence in the metaverse.

The emergence of social VR platforms introduces an entirely new dimension of possibility, where users can transcend physical boundaries and engage in shared, interoperable immersive virtual environments. Social VR facilitates human connection and collaborative experiences and empowers users to experiment with self-representation through customisable avatars, opening avenues for exploring identity in digital spaces (Huh & Williams, 2009). This allows geographers to investigate how individuals interact within the metaverse, shaping their spatial interactions and relationships.

In previous work on the potential of VR for use in interview practice, there have been several applications of 'go-along'-type interviews (e.g., Kostakos et al., 2019; Vindenes & Wasson, 2021), where the interviewer and participant explore a virtual space together in a similar manner to a walking interview (Evans & Jones, 2011). Whilst this work is very effective in exploring the geographies of digital worlds, we expand these discussions with an explicit focus on *embodied* natures of interviews in virtual reality. Additionally, and in comparison, to video conferencing interviews, it has been shown that webcams fail to capture the complete individual and their surrounding physical environment (Smith & Neff, 2018). The lack of mobility and movement inherent in stationary webcams hinders task performance and gesture communication. By harnessing the power of VR and social VR platforms, we argue that researchers can access novel spatial and embodied insights and engage in more immersive and authentic conversations with participants. However, a cautious approach is essential, as addressing the technical, ethical, and methodological concerns will be crucial in ensuring that the metaverse becomes a valuable and reliable resource for geographers.

3. Methods

Twenty-six students from geography and media studies were recruited for this project via local email advertisement in the departments of the study's authors. The students were asked to wear a VR headset to talk to someone whom they had not previously met using AltSpaceVR (Fig. 1). This now defunct metaverse platform allowed groups to come together to meet in public and private spaces to chat, play games and explore. AltspaceVR was selected because, besides being familiar to the project team, it met the requirements of the study by providing a simple virtual environment with straightforward avatar

Fig. 1. Material world setup for interviews.

customisation and a friendly user interface. Previous tests with participants also showed it was easy for first-time VR users to navigate. The graphics in metaverse platforms tend to be quite cartoon-like to save bandwidth, and AltSpaceVR was no exception (Fig. 2). The advantage of this was that it was not computationally demanding, meaning it could be run on standalone headsets without the inconvenience of being tethered to a high-powered PC. All participants used Meta Quest 2 headsets which were the most readily available standalone units at the time of the research, with all participants thereby having the same level of technical immersion.

We followed Maloney et al. (2021)'s research guidelines for ethical research practice in social VR: (1) we prioritised the welfare and consent of the participants, (2) we had existing knowledge of the social VR platform, (3) we ensured the privacy and care of the participants, and (4) endeavoured to recruit diverse participants across genders and nationalities.

The student-led interviews were arranged cross-country (Netherlands-England and Wales-Poland), reflecting existing collaborations within the research team. Depending on availability, students interviewed each other, and in some instances interviewed a research team member, about their life experience at university in a different country. Participants were playing both the role of interviewee and interviewer during the same session. We provided our participants with five topics they should discuss during the interviews: satisfaction with student life; things missing in student life; unique characteristics of student life; and the pros and cons of student life at their university. The list was intentionally simple and short since there was no practical option to provide text notes while participants were immersed in VR, and we wanted to steer the interaction toward a classic unstructured interview format (i.e., Longhurst, 2010). The topic of the interview was also chosen to be something familiar, not intrusive, and not related explicitly to the VR experience to explore the potential for discussing topics other than those relating to the technology itself. Participants were given an orientation session to get used to the headset and the controls before being given the opportunity to customise the avatar that they would use to conduct the interview. A research team member was always in the room to ensure participant safety while in VR. The interviews lasted around 20 min each, in line with good practice for not overexposing participants to VR. Participants were given a cool-down period after emerging from VR and then interviewed by a research team member about the experience of interviewing in the metaverse.

Some of the metaverse interviews were recorded using the online streaming software OBS, though this material does not form part of the analysis presented here. Instead, we concentrate below on the post-activity interviews with the research team, which were transcribed and coded using NVivo. Using an iterative coding framework, a series of key themes emerged which we discuss below.

4. Results

Four major themes were present in the reflections of our participants. The first theme relates to the feelings of immersion and presence that interviewees experienced, how they were induced, and how they shaped the interviews. The second theme focuses on the perception of virtual environment from the perspective of visual cues and personal feelings. The third theme examines avatars and how they allow people to represent themselves and perceive others, influencing rapport and trust. Finally, we assess how movement and gestures were used and perceived by participants when considering their VR embodiment. Names of the participants were anonymised.

4.1. Immersion and presence

The VR experience that was provided for the participants was enough to induce feelings of immersion (Slater, 2003) and presence (Fontanesi & Renaud, 2014; Fromberger et al., 2015). Their first reactions after removing VR headsets were focused on the ease of achieving the separation from the material world (immersion) and being able to suddenly exist in another virtual world (presence):

> But this genuinely felt like I was wherever the environment was. As soon as you pop it on, it's like a snap, and then go somewhere else. (P1)

> Suddenly I was in this whole new world, and it was like, oh, my God. I was sitting here in the office, but I was in another world. (P2)

Most people do not expect how easy it will be for them to be immersed in VR. We specifically explored this by asking participants if they felt observed by us, as we stayed in the same room for the whole VR interview, or if they even have been aware of this when in VR. And for the majority of people, our presence in the same material space was almost negligible when compared to virtual space:

> *I knew you were present, but as soon as I got into the headset, I just would have ignored you, even though I knew you were there (P3)*

It was only when there were technical problems that the immersion was broken. For some of the participants, this moment came when for example, they were trying to clap their hands, and they crashed controllers instead. For others, it was the sound and voice that came from the outside world when for example, the VR connection malfunctioned and we were using an online call to communicate:

Fig. 2. Virtual worlds used for interviews. Avatars were created by participants.

It was such a moment of return to the awareness that I was sitting in a room. Because of that, I could hear what was going on or when she had the microphone muted in this space, but you could hear her here on the laptop microphone. Then there was this dissonance between this world and that world.(P4)

Breaking immersion here is characterised as a loss of a state of focus. Mihaly Csikszentmihalyi's (1989) concept of flow argues that individuals are in a state of flow, they experience deep immersion, focus, and intrinsic motivation in their activities. Here, the intrusion of stimuli from outside of the VR-based experience breaks the flow state. An alteration of focus on the virtual environment and the activities therein creates the dissonance described by the participant that breaks immersion. Thon (2008) argues that immersion is a kind of attentional focus, a psychological immersive shift of attention that goes hand-in-hand with the construction of situational models of engagement. The breaking of immersion thanks to external distraction reveals presence in this situation as an illusory construct of mediated experience not being mediated thanks to deep immersion (Lombard & Ditton, 1997).

While the researcher's presence in the same room could diminish immersion in the virtual world, the company of other avatars in VR was an essential factor in building presence. When someone else appeared in the same virtual environment, people switched their focus toward VR, expressing intentional behaviour that can be positioned as crucial for achieving immersion and embodiment (Evans & Rzeszewski, 2020). Through the ability to see and interact with other avatars, both social presence (Biocca, 1997; Lee, 2004) and co-presence (Bulu, 2012) were visibly strengthened, as was also shown in previous studies (Blascovich et al., 2002). Our participants were aware of the importance of the presence of others in VR and also of the difference that it makes for the interview setting:

I haven't been talking to a screen. I was in this world. We were in the same room, and it was an interview with a totally different person from another destination, and we were close to one another and … Well, closer to one another than we would be for a screen (P2)

Oh, that would be the big difference working for the benefit of this VR, that it's easy to trick your senses and very easy to get that feeling that you're talking to someone who's in the same room with you. (P4)

4.2. Virtual environment

The virtual environment, which forms a setting for an interview and a basis for the feelings of immersion and presence, was also perceived and described by our participants separately purely through its visual qualities. The AltSpaceVR world was seen as a very pleasant and calming experience. Its overall look was described as cartoonish, and for some people, this was disappointing as they were expecting something more realistic:

The induction part was very impressive, but the actual social platform is a bit cartoonish. [laughs] I'm not sure why the company chooses to make it that way. They could have done a more realistic representation.(P3)

For the majority of participants, this simplistic nature of the environment was received favourably and was perceived as less demanding and more comfortable than the realistic experience that some of them were expecting. As the VR world was not realistic, the whole interview situation was less stressful:

It was a little bit that I felt like that was just part of a game, or I had that feeling. It triggered just such associations with some comfort zone, with something nice (P5)

AltSpaceVR felt separated from material reality, and the lack of formality in the setting added to our participants' feeling of safety and comfort, especially when compared to remote interviews. Participants enjoyed the colors, the freedom of movement, and the playful interactions (e.g., grabbing, throwing) that VR provided, which put them at ease – something that starkly contrasts the spatial arrangement of online interviews and that is also hard to achieve with face-to-face meetings.

But when I started grabbing these things, it was just so interesting to me and something different. In the sense I didn't feel it, and it was like things were moving around me, I was in another world, so a very interesting experience overall. (P7)

I liked it. It was very natural to me. I liked the fact that it was like season changing. It was mainly autumn, but you could see the different seasons throughout the space that we were in. And also it felt warm. Like, it felt like you were at home in a conversation with someone new. It didn't feel like you were put into a random place that you were a bit stressed out and anxious about. (P7)

… when I'm on Zoom particularly, I get really self-conscious about where I'm supposed to look, and I tend to watch myself in some ways. (P7)

While we have not encouraged participants to change their worlds, this is easy on most VR platforms. This function can be used to migrate to a different place where the interviewee will feel comfortable. Participants who had previous experience with online interviewing were aware of how those settings could be uncomfortable for many people, where they can feel judged since they bring their person and their surroundings. VR environment can take away this problem:

And without that sense of being judged by the respondent. It was especially a problem with me that some people didn't want to connect, and we thought that's because they didn't want to connect from their apartment so you could see the whole environment. (P15)

Our participants also reflected on the spatial properties of the virtual environment in the context of performing interviews and arrangements of the virtual setting. It was essential to them that the interview took place 'outside'. While they were aware that this was a simulated environment, which can be distracting, they still appreciated the feel and look of the virtual world. They were suggesting modifications to the virtual world. Those modifications and custom-made settings could be used to make VR world less distracting or to invoke positive associations:

I really liked that it was outdoors, not indoors, but just the colours of the trees, it's so abstract. It was very bright and very distracting. I enjoyed it. But because of how pretty it was, I think it got in the way a little bit. I don't know, I would probably do it somewhere resembling a real park. And I really liked that there were these natural sounds. (P15)

I think perhaps more realistically, because I also think the way that world looked, it had some positive associations. With some camps, with some vacations and those kinds of places. So perhaps I would focus more on putting some buildings there, some street or just some room. More office-like or more like some kind of classroom, some kind of room. (P11)

Finally, some of the participants saw and suggested the possibilities of a VR world setting to influence the interview directly, to invoke feelings for a place, or, even more simply, to put the place into the conversation.

I guess if we're talking about different places, being able to go to them. So say Hong Kong - you go there, it might stimulate memories of his or mine or then be able to move around to wherever you're talking about. He could have shown me around the university, I guess, that aspects of it. Putting it into the real conversation. (P7)

4.3. Avatars

It is interesting how our participants reflected on their choices of avatar appearance. It was often the case that they spent a significant amount of time selecting various attributes such as hair colour, body shape, and clothes. This in itself is not surprising as it has been shown that avatar appearance in VR is one of the factors influencing Sense of Ownership and, in turn, Sense of Embodiment (Freeman et al., 2020, pp. 1–8; Fribourg et al., 2020). This was one motivation that was stated in the interviews:

> Perhaps not some kind of special concept but to make myself at least a little bit more like myself, so that I don't feel like I'm some total "random character," but at least a little bit like myself.(P8)

But even more importantly, the interview setting directed most participants into creating their avatars in a way that would reflect their own appearance rather than misleading the other person by showing a very different look. At the same time, however, they admitted that it was very tempting to represent themselves in an even slightly improved manner. But in the end, the most crucial thing was to make a proper impression on the other person, particularly to build trust with them:

> I just wanted the character to look like me, at least a little bit, and I wanted the person who was going to talk to me to kind of know who they were talking to (P9)

> But I'd say that in terms of an interview or something, where you're talking to someone you may not know, their first impression of you, it would be an important aspect for them to see the real life version of you (as closely represented) as possible (P10)

However, it was also possible to engage with the medium in a more playful manner. For example, one of the participants tried to make an avatar that utilized all the available design options to look as strange as possible:

> I chose my avatar because I wanted to push the limits of normality within VR. Because I noticed that probably most people would just choose a character that is like themselves, whereas VR is meant to be creative and limit the ability of … Not limit yourself to things (P11)

Similarly, one participant deliberately chose their avatar's design to conceal their offline appearance, particularly their ethnicity:

> I wanted the not-so-explicit with my demographic characteristics. Because I used to be very conspicuous in terms of that, I look different from the majority of white students. And then, if I choose to be a different avatar in VR, I can hide my identity to some extent. (P3)

This is an important case in the discussion about the potential of VR as an interview medium as it shows the possibility of creating a safe space in such circumstances without resorting to uncomfortable measures such as limiting interaction to audio-only. But this also touches upon the ability of VR to misrepresent and mislead, which is something that some of our participants were also aware of. While most people will put work into building a good first impression of their own person through the appearance of their avatar, this can also be utilized to create an entirely misleading impression that is even stronger than in other media because of the effects of immersion and embodiment:

> The disadvantage would probably be that someone might somehow also misrepresent what they look like or what their attitude is, and that might be lost somewhere.(P5)

4.4. Gestures and movement

The final theme that permeated the interviews related to how our participants perceived their bodies and the bodies of others, both in the virtual and material world. The most common observation that was made during and after interviews was the presence or absence of hand gestures during conversations. Our VR setup required the use of controllers, but this introduced an unfamiliar setting for using hands. People were self-conscious about using hand gestures in a more everyday manner and were aware that this created a limitation in a person-to-person communication. Despite this, it was often the case that people found a way to use their virtual bodies and hands during conversation. Most commonly, this was done by waving. Using gestures was often associated with participants that were feeling more comfortable in VR, either due to their attitude or by having previous experience with VR. Participants who were more reserved were also less likely to initiate bodily communication on their own. Two quotes can illustrate those situations:

> Maybe he was using his hands better than ours because I felt at some point I wasn't using them as much as I normally would in, like, a normal conversation, whereas he really, like, I saw that he was doing it. (P6)

> I caught myself holding those controllers, too, and I was waving my hands around like that because at least I could see on the other side as my friend was saying something; she was trying to use her hands a little bit too. (P4)

It was also common to expect shaking hands with one another, but our participants were unsure how to signal this and have not been able to find a suitable replacement:

> I felt a bit awkward, to be honest. Because he wanted to shake hands, and I was like, what? Can I do that? (P11)

The inclination to get closer to the other person was also connected to the technical factor that AltSpaceVR employed spatial audio which, unlike the audio in a remote interview, means you have to move closer to another avatar to hear them more clearly. This mimics material world behaviour and was a natural instinct for our participant, even when it was a sub-conscious:

> I also had this funny reflex that when I didn't understand, I wanted to get closer to her. It was like I immediately had this reflex to lean in, and I wanted to get closer with this button. (P9)

Leaning closer to another person and expecting a handshake and eye contact are material world behaviours that persist in a virtual environment (Yee et al., 2007). However, proximity between avatars is often regulated on social VR platforms. In the case of AltSpaceVR, users were surrounded by a body bubble that prohibits 'physical' contact between two avatars. Participants were briefed about this, but in practice keeping a distance often occurred naturally. Interestingly, in one case the body bubble was switched off by participants, and this allowed them to move their avatars through one another, something that induced an almost physical discomfort:

> It's like, oh, God, why are you? In a way, it's a thing of just when someone moves through you; it's like this confusing thing of what just happened. And I mean, I've played games. I've played games where people do not have boxes, so you can just walk through each other. But it's very different when that's on, like, a computer screen and when that's right there in front of your face. (P12)

Gestures and movement in VR are unique because they seemingly occur in two different spaces at once but can result in different actions being taken in the material and virtual worlds. As we asked our participants to sit during the interviews for safety reasons, this gave us an opportunity to interrogate this dualism. It seems that while some participants gave the opinion that sitting was preferable purely due to safety concerns, most perceived the standing position as being more favourable for immersion. This observation stems perhaps from the fact that in the VR world, avatars are standing, and physical sitting breaks immersion:

> Then definitely standing would be a lot more natural because everything else, apart from the fact that we were staying standing still … that sort of stuck in my head like, "This feels wrong slightly." (P1)

People were also observant of the other avatar's movement and tried to guess whether the other person was sitting, standing, or just more comfortable with user controls:

> For a while I thought, I don't know if this girl is standing or not, but the way she's moving and the way her avatar is moving and standing, I thought maybe because I'm sitting and she's standing, it's all so natural for her (P13)

5. Discussion

In practice theory we understand that practices shape, and are shaped by, the spatial and social contexts in which they occur. The metaverse environment is a new one for most users; as such, the practice of interviewing will be altered because of the spatial properties of the virtual environment. Normally, social practices are closely related to spatial practices which are embedded in, and reproduce, social structures (Bourdieu, 1984). In a metaverse space where users are unfamiliar with the environment, the everyday process of structuration (Giddens, 1984) is in essence 'unmade'. Users do not have their everyday spatial scaffoldings that allows for the navigation of social situations in space, as strategies and tactics (de Certeau, 1984) have not been established. In these conditions, the interviewing process and reflection on that process reveal how habituation and the understanding of roles (Goffman, 1959, pp. 135–146) shape spatial practices in this novel space.

In short, interview location matters (Herzog, 2005). VR experiences open up new types of digital location for situating our research practice. These digital spaces have more commonalities with physical co-presence than can be achieved via conventional video chat. As we have highlighted above, the sense of presence, immersion and embodiment are fundamental to creating this sense of sharing a space (albeit a digital one) with an interviewee. Embodiment is key to creating the multisensory qualities that give a distinctive sense of place within these virtual spaces. The key advantage that the metaverse has over Zoom or Teams is that the lack of multisensory embodiment within video interviewing occludes sense of place thereby eroding the potential for place-generated connection between researcher and participant.

From a researcher point of view, this quality of embodiment within (digital) place has tremendous value, combining the advantages of co-presence with the convenience of remote working. Geographers have highlighted how the interview site can produce important information about the way respondents construct their identities in relation to place (Sin, 2003). In the project described above, we used relatively generic virtual spaces styled as unthreateningly domestic to create a safe-feeling space for our participants. Looking beyond this particular piece of work, metaverse-based interviewing offers the opportunity for future studies to design digital interview spaces to suit the particular aims of a research project.

The use of avatars that mirror participants' embodied movements is crucial to creating the sense of immersion. It also offers interesting opportunities to engage in identity play, though as [P3] highlighted, accent and language skill can undermine the idea of convincingly *becoming* the other when talking inside the metaverse. The ability to add body language – gesture and movement – to an audio chat, reinforces the sense of talking to a person rather than a screen. Taking off the headset at the end of the interview was often accompanied by a jarring reminder for participants that they had not been co-present in a colourful digital world with the interviewee but had instead been sat in an unremarkable academic office.

Nonetheless, there are important drawbacks to consider. Our participants noted that the cartoonish, simplistic nature of the virtual world shaped how they responded to the conversations held within it. Graphical quality will likely be improved over time, but for the moment, bandwidth constraints for networked 3D landscapes mean that these tend to be fairly simplistic. This may reduce the symbolic meaning of place, in turn reducing the intensity of the influence that a location has on the interview dynamic.

In line with good practice for work with participants in VR we limited their time within the headset, which in turn put a practical limit on the length of the interview. This would, of course, not be ideal for more in-depth qualitative work. Even with this limit, some of our participants still suffered mild symptoms of cybersickness following their exposure. Likewise, the controls for navigating the digital spaces are not intuitive and researcher and participant can be left frustrated when they feel a disconnect between how they want to interact with the digital space and their capacity to deliver this interaction. Thus, physical limitations remain a crucial barrier to more widespread use of this technology in its current forms. It is also worth pointing out here that our sample group consisted of young people, and it is entirely reasonable to suspect that older people would react differently and would be less comfortable using VR. However, recent studies suggest that cybersickness is not more significant in older adults (Drazich et al., 2023) and that the feeling of presence is even more pronounced in this age group. (Liu et al., 2020). We can, therefore, assume that the identified limitations of the method and barriers to its use are less related to the age of the participants than to the individual preferences and attitudes.

Another limitation we have introduced in our study is that we have opted to have participants sit during the session. We have done this for safety reasons, but at the same time, we have artificially restricted their degrees of freedom in VR. This limitation may impact the participant's ability to become immersed in the virtual world and the conversation although, of course, conventional face-to-face interviews are usually conducted while seated. However, when asked about this, only one person preferred standing in VR. For others, sitting had provided a level of safety that not only does not inhibit the feelings of immersion and presence but, on the contrary, limited distractions and provided an anchor for a more carefree exploration:

> So I was very content being in a chair and having that real thing to hold on to. I think with more practice, so getting used to this environment, I wouldn't mind it, but for the first time experiencing this in depth, I was very happy to have a chair. (P13)

Finally, there are practical issues. For many of our participants – a self-selecting group of the young, highly educated and technology-curious – this was their first time in VR. Of the others, few had extensive experience of the technology. For all the hype, VR remains niche and while video chat is not ubiquitous, it is sufficiently widespread that a large pool of potential participants can be contacted via this medium. The same is not true of VR, which for the time being limits its potential to projects that are explicitly interested in existing users of metaverse platforms, rather than a more general population. The only way around this is to set up equipment loan and training for participants as we have here. Many technology companies would like to see VR become as commonplace as the smartphone but that is unlikely to happen in the short-to-medium term.

6. Conclusion

The platform that we used for this project was discontinued by Microsoft in March 2023. Microsoft subsequently took some of the underlying technology from AltSpaceVR to create 'Mesh' which has been integrated into its Teams video chat platform. Business users are thus being encouraged to create blended meetings where participants can choose between joining via conventional video chat or attending as a 3D avatar in a virtual meeting room. In its marketing material, Microsoft (2023) emphasises how Mesh allows users to 'feel presence', suggesting that they can:

Connect with new depth and dimension. Engage with eye contact, facial expressions, and gestures. Your personality shines as technology fades away.

The issues that we highlight in this paper, therefore, are at the heart of commercial thinking about how this type of technology changes the experience of remote interactions. The concerns that researchers have about video chat as lacking in presence and thus an intrinsically inferior experience are shared by businesses attempting to remotely recreate the embodied dynamics of the face-to-face meeting, embedding a sense of place and thus a richer, multisensory experience.

Social VR remains a niche pastime. The pivot of tech companies toward business-to-business metaverse experiences is interesting because it points toward a path for mainstreaming these kinds of online interactions. After all, it was largely businesses that normalised video chat for remote conversations in the early 2000s. The problems we have highlighted here remain however, not least that the technology doesn't 'fade away' in a metaverse meeting. Embodied presence in the digital space comes at a cost – both financially in terms of buying the necessary equipment and physically though the ill effects suffered by many users after prolonged exposure.

A final consideration to raise is that these platforms have a kind of fragility that can make researchers nervous about using them. We invested time and energy in a project using a platform that no longer exists. Microsoft were unusual in giving AltSpaceVR users three months' notice that the platform was going to be switched off – the tech sector is usually quite brutal about suddenly withdrawing platforms and services deemed to be failing. Despite this platform fragility, there are significant advantages to interviewing in the metaverse compared to regular video chat, which are worth paying attention to, even if the progress toward VR becoming a more mainstream and unremarkable technology is slower than some of its promoters would like.

Declarations of interest

None.

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CRediT authorship contribution statement

Michal Rzeszewski: Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Tess Osborne:** Writing – original draft, Methodology, Investigation, Conceptualization. **Phil Jones:** Writing – original draft, Methodology, Investigation, Conceptualization. **Leighton Evans:** Writing – original draft, Methodology, Investigation, Conceptualization. **Gerd Weitkamp:** Writing – review & editing, Methodology, Investigation, Conceptualization.

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