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Balancing fun and professionalism in game development: the dark and light side of play in virtual meetings

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Introduction: The COVID-19 pandemic accelerated remote work adoption in the game development industry, an already precarious field characterized by “crunch” culture and ludopolitics. Against this backdrop, this study examines the dual nature of “play” in virtual meetings (VMs) among game industry professionals ($N = 38$).

Methods: Through semi-structured interviews, we identify three primary manifestations of play: self-presentation through avatars and backgrounds, technological experimentation, and direct gameplay.

Results: Our findings reveal that playful elements simultaneously offer benefits, or “light” sides—enhanced creativity, reduced video conferencing fatigue, improved team cohesion and drawbacks, or “dark” sides—distractions, reduced professionalism in client-facing settings.

Discussion: Context emerges as a critical determinant of play’s appropriateness—indie studios embrace playfulness more readily than corporate environments, while brainstorming sessions accommodate play better than task-oriented meetings. Avatar use particularly highlights this complexity, potentially reducing fatigue while raising concerns about professional trust. These findings contribute to understanding how game developers navigate integrating play into professional spaces, suggesting that successful implementation requires careful consideration of meeting context, company culture, and workplace objectives.

KEYWORDS

game development, virtual meetings, remote work, play, avatars, interviews

1 Introduction

It may not be all fun and games when it comes to game production. A notoriously precarious industry (Bulut, 2020; Creus et al., 2020), upheavals only increased after the COVID-19 pandemic where waves of layoffs shook perceptions of the occupation’s future. Chief among these issues is remote work—companies like Bungie were bullish about fully moving remote work 5 years ago, but have reduced staff 17% subsequently while other studios have simply seen calls for office returns (Kelly, 2024). Game production and work remains in flux, implying an uncertain future to a rapidly changing industry (Keogh, 2023).

As much as these shifts may be the focus of political economy and production studies scholars, the psychological impacts on the game developer workforce are also profound and well-documented. Systemic industry precarity fosters significant psychosocial stress, with

recent surveys indicating that 44% of developers identify as having a mental or physical difference, including high rates of neurodivergence (24%) and psychiatric illness (15%) (Weststar and Lentini, 2024). These mental and physical differences are exacerbated by periods of stressed caused by intense, often unpaid overtime that over half of developers experience, known as “crunch,” and can lead to burnout, exhaustion, and quitting (Cote and Harris, 2021; Weststar and Legault, 2024). Thus, despite relative independence based on their position within the field (Keogh, 2023), developers must deal with job precarity, instability and other negative factors exacerbated by the move online.

Online and remote work was already common to the gaming development industry preceding COVID-19 lockdowns. However, remote meetings also represent a key place for different types of attitudes to manifest in terms of working conditions. Virtual meetings (VMs) are a core component of remote work. Defined as, “mediated synchronous communication, making it possible for two or more geographically remote people to interact, and employs audio or video conferencing technologies, or computer-mediated web-conferencing” (Lindeblad et al., 2016), VMs are used for a variety of situations in game development, including, but not limited to playtesting, ideation, production check-ins, and meetings with external stakeholders. They are important arenas for collaboration through information sharing and community building (Murugavel and Reiter-Palmon, 2023; Rosen et al., 2007); they also having significant effects on employees’ well-being, relationship building, and performance (Hill et al., 2024; Rivkin et al., 2024). Popular VM platforms in the gaming development industry include, but are not limited to Zoom, Microsoft Teams (Shewale, 2025), and VRChat for those who work with Virtual Reality games. Although VMs facilitate collaboration among remote workers, they also present challenges, with phenomena such as “Zoom fatigue” emerging as obstacles to effective communication in remote workplaces (Fauville et al., 2021). Therefore, the following paper explores how game workers (e.g., developers, managers, company heads) perceive the benefits and challenges of VMs in their work. We specifically explore the role of “playfulness” in game developer remote work as a means to better understand ways to mitigate psychological stress and maximize opportunity on the job.

By identifying the positive affordances and negative aspects of VMs that impact worker well-being and productivity, among others, we aim to create new solutions to amend ongoing psychological and social struggles which typify this industry. However, we recognize that these issues are often context dependent. Our goal is not to entrench VMs as the *only* modality for the gaming development industry, but rather to leverage these platforms and practices to bolster an increasingly necessary working modality within the industry.

To do this we first review literature on the “ludopolitics” of remote game work and the dissonance it creates between creativity and the economics of the industry. From there, we examine the psychological impacts of VMs, followed by how play can help mitigate these issues. We then report findings from semi-structured qualitative interviews ($N = 38$) with remote game workers and those in related fields, to inductively examine how play manifests in virtual workplaces (including games), and its impacts on individual workers and the industry at large. Interviewees saw play in their work through a variety of lenses, such as personally expressing themselves via avatars—digital representations of the self (Nowak and Fox, 2018)—or experimenting with virtual tools, as well as actually playing games during VMs. As avatars—digital representations of the self—became a prevalent theme

for our participants, and in this context are used as a means to represent one’s self in their preferred manner. Avatars may range from hyper-realistic depictions of an individual, anthropomorphized avatars, to objects. Avatar use is noted as beneficial to psychological well-being (Aymerich-Franch, 2020), and may serve a positive role in mitigating the common issue of burnout in the industry (Mendes and Queirós, 2020). These conceptions of play are then examined in terms of their benefits, such as affording freedom of identity expression and team-building. However, the disruptive elements of play in VMs, such as distraction and detractions from the business are also noted. After, common themes regarding play are synthesized. Ultimately, we encourage remote workers and companies to implement playful aspects where appropriate, in light of exploitative ludopolitics that define the industry, and look for sufficient middle grounds where play can be encouraged as a means to improve worker well-being while mitigating risks of distraction and team degradation.

2 Literature review

The positive and negative conditions of game development set the groundwork for understanding why remote work is important to the industry. We are particularly interested in remote work via play, a key psychological and cultural factor which surrounds developers’ daily work. The following will tackle these two key components and then introduce how remote work acts as an important proxy for understanding how developers approach their occupation.

2.1 Game development and psychological stress

The move to remote work has de-centered productive forces, especially in the tech industry (Alaimo and Kallinikos, 2022), leaving many to feel destabilized when it comes to their position in the “field,” or the socially constructed space in gaming development production within which employees imagine themselves (Bourdieu, 1991). However, for those within game work instability is normal. Keogh (2023) argues that such an industry does not autonomously exist since video games encompass a wide variety of products. Instead, producers compete and collaborate to produce what they or their bosses consider to be a “game.” Within this broader field there are some common economic conditions which influence what is considered valid work (Hammar, 2019). Viable productions are generally taken to be valid “video games,” and in turn those who make them are similarly seen as “real” producers (Harvey, 2014; Consalvo and Paul, 2019; Keogh, 2023). These economics produce common conditions by which game producers expect to work, ranging from general economic precarity (Keogh, 2023) to common industry practices (e.g., Chia et al., 2020; Foxman, 2019), like remote work.

Similarly, standard ideologies and social conditions set boundaries for developers (e.g., Keogh, 2023). Norms tie the industry together (e.g., Harvey, 2014) and tend to coalesce around particular demographics and groups (e.g., Legault and Weststar, 2021). Bulut (2020) describes these common ideologies as “ludopolitics,” where the industry expects developers to commit to their work with a passion that blurs the line between work and play. As neologisms like “playbor” (Kücklich, 2005) highlight, the practices associated with making

games come with expectations of passionate play. This also extends to utilizing game development tools (Foxman, 2018, 2019) and of course occupying virtual games and other spaces. While seemingly positive, this ideology creates a psychological double-bind. Crunch, a system of unlimited, unpaid overtime (Weststar and Legault, 2024), is one phenomenon used to exploit worker passion. This paradox directly contributes to burnout and the risk that fosters pervasive anxiety about job security and career longevity (Legault and Weststar, 2021; Weststar and Legault, 2024). A sense of powerlessness compounds this psychological pressure. Due to the industry's financialized structure, ghost actors (i.e., remote funders or publishers) often make key decisions despite not being present in the direct employment relationship (Legault and Weststar, 2021). Developers are then left feeling unable to influence the conditions that lead to their overwork.

Furthermore, the industry struggles with equity and inclusion; a staggering 74% of developers in 2021 believed equal treatment and opportunity do not exist for all (Kumar et al., 2022). The high rates of perceived micro-aggressions and social inequities erode psychological safety and a sense of belonging, particularly for women and workers of color (Kumar et al., 2022). It is within this complex psychological context, defined by anxiety, burnout, powerlessness, and a precarious sense of belonging, that developers navigate their work in VMs.

2.2 Remote work for game developers

Remote work ideally alleviates such conditions by allowing for more flexible hours and accommodating various lifestyles and removes the barrier of co-location as a work necessity; this point has been promoted by advocates (Brunelle and Fortin, 2021). However, telecommuting is not without problems—it can exacerbate precarious working conditions because game executives have long relied on remotely working with freelancers (Keogh, 2023, p. 37) and can intensify issues like managerial surveillance (Carter, 2022). Game developers overwhelmingly work in hybrid or remote circumstances (Gameworkers.org, 2023) and post-pandemic policies still favor hybrid or remote models (McAloon and Tait, 2024, p.27). Return to office measures have been tied to recent layoffs and company exits, while executives note its need. The paradox is captured by one anonymous quote in an industry survey: “People like working from home but they miss working with teams. It is a Catch-22 situation” (p. 28). Thus, remote work not only is normalized within game production, but fits well with existing ludopolitics that suggest passionate creative workers can devote time outside of traditional schedules to fit projects and seamlessly blend work and play.

However, while such flexibility may promote work-life balance for certain groups (e.g., male workers with children; Kim, 2020), other groups, such as working mothers (Dunatchik et al., 2021; Guy and Arthur, 2020) and those with lower incomes than necessary to afford home office environments (Reuschke and Felstead, 2020), struggle to achieve this balance, which can deteriorate their well-being and productivity. Many remote employees report feeling as though they need to be digitally available outside of traditional work hours to appear committed to their job, sometimes leading to worsened performance, and further eroding work/life balance (Afota and Robinson, 2023). Crunch can also worsen in remote work settings as workers feel pressured to demonstrate their productivity (Charalampous et al., 2021) and managers often expect remote

workers to be constantly available (Rymaniak et al., 2021), exacerbating an always-on corporate culture (Mikołajczyk et al., 2023) common in tech and gaming. These challenges can also exasperate unpaid labor conditions and blur the lines of one's perceived job (Sezgin, 2023).

Loss of community and closeness with colleagues is another detrimental effect of remote work. The absence of organic co-located social interactions can undermine solidarity (Collins, 2020), which also may erode collaboration and creativity (Spivack and Rubin, 2011). Collaborative physical work environments that foster collaboration and connectivity are considered crucial in game development, despite the ubiquity of remote work (Park et al., 2022), allowing for easy design, coordination and social connections (Caravella et al., 2023; Park et al., 2022). As these spaces were phased out after the COVID-19 pandemic, workers were mostly left with digital platforms to as channels for creativity and socialization.

VM research provides mixed results in terms of productivity and psychological impact, compared to in-person meetings. Many organizations strive to create VM environments that match in-person meetings, including providing co-presence (feeling of proximity to one's co-workers), synchronicity, fidelity of speech and non-verbal cues (Kock, 2011). From a productivity stand point, this approximation may be beneficial, but from a well-being stand point, workers may experience additional stresses due to the combining of work and play, especially in creative fields. Barriers to achieving this come from meeting context. External factors like home working environment, meeting amount, and organizational mismanagement exacerbate challenges presented within meetings themselves. For example, distracting elements like eating on camera (which can make participants feel as though their time is not respected) and audio issues combine make VMs even more challenging (Karl et al., 2022). Further, “Zoom fatigue” presents a significant challenge to meeting efficacy and mental well-being (Fauville et al., 2023). Its negative effects can be amplified by overstimulation, as workers allocate more mental resources to process on-screen occurrences over face-to-face meetings (Walther, 2007).

As suggested, VM conditions are complicated in game studios. The longstanding use of remote workers means that developers often rely on asynchronous and text-based communication for much of what they do, while recognizing the importance of physical and synchronous spaces for social cohesion (e.g., Caravella et al., 2023; Park et al., 2022). Further, developers have a very different relationship with virtual environments than similar workers, in that they make up the building blocks of daily work activities, whether that means development, design, and playtesting material or simply playing games (e.g., Johnson, 2013). Therefore, certain components of VMs, such as avatars, which can be beneficial for alleviating Zoom fatigue (Lim et al., 2024, 2025), are normalized in game environments. This is just one example of how playful features endemic to working conditions and games themselves impact VMs.

2.2.1 Play and virtual meetings

As suggested, VM conditions are complicated in game studios. The longstanding use of remote workers means that developers often rely on asynchronous and text-based communication for much of what they do, while recognizing the importance of physical and synchronous spaces for social cohesion (e.g., Caravella et al., 2023; Park et al., 2022). Further, developers have a very different relationship with virtual environments than similar workers, in that they are

expected to be involved with virtual spaces as part of their daily work activities, whether that means development, design, and play-testing material or simply playing games (e.g., Johnson, 2013). Therefore, certain components of VMs, such as avatars, which can be beneficial for alleviating Zoom fatigue (Lim et al., 2024, 2025), are normalized in game environments. This is just one example of how playful features endemic to working conditions and games themselves impact VMs.

There is a growing body of evidence that play can be a useful feature for remote workers who are not co-located (Plester and Lloyd, 2024). “Virtual fun,” generally, is characterized as “semi-organized virtual activities that are less task-oriented and more relationship-oriented—in the form of informal communication to provide a sense of enjoyment” (Ghosh et al., 2023, p.4). These activities, in any virtual work environment, can strengthen organizational cohesiveness and employee happiness. However, no consensus exists as to *how* to implement fun in the virtual workplace, as it tends to manifest organically, and some individuals exhibit an aversion to such fun, due to implied or explicit normative pressures (Barker, 1999). Virtual play often results in “virtual socialization,” which allows employees to feel more interconnected and behave more authentically through virtual impression management. The directionality of this relationship between virtual play and socialization also remains unclear, given that play is often spontaneous and closer social ties may invite more organic playful interactions.

Within game studies, play has multiple meanings, understood as at once an integral part of culture (Huizinga, 1971) and tied to explicit psychological states (e.g., flow; Csikszentmihalyi, 1997). Feezell (2010) provides 36 different characterizations of play, including “freedom, separateness, non-seriousness, illusion,” and “unreality” (p.23). However, it should be noted that play has also long been understood to have rhetorical value within society (e.g., Sutton-Smith, 1997) where it can be utilized as a force for fostering specific identity among other factors. This is particularly evident within game development where, as ludopolitics suggests, it is embedded into labor practices and identity of workers. As neologisms like “playbor” (Kücklich, 2005) highlight, the practices associated with gaming come with expectations of passionate play. This also extends to utilizing game development tools (Foxman, 2018, 2019) and of course occupying virtual games and other spaces. As our findings, discussed below suggest, even if ill-defined, components of play typify developer work.

There has been a movement in corporations to introduce playful behaviors and spaces with results pointing to (paradoxically) both extending opportunities of creativity while extending labor time (Abend et al., 2021; Alexandersson and Kalonaityte, 2018) and even leading to the “degradation of fun” when play is operationalized as work, particularly for game developers (Bulut, 2020). However, as jobs moved online during the COVID-19 pandemic, games and similar playful digital spaces became a key site to break up Zoom meetings’ monotony (Abramczuk et al., 2023; Bonfert et al., 2023; Euteneuer, 2023; Somoza Medina and Somoza Medina, 2023).

However, the overall effects of playfulness in virtual spaces and/or workplaces are well documented: playful representation of self—particularly through avatars—and game activities can increase individuals’ prosocial behavior (Guegan et al., 2020). For example, playful workplaces can foster altruism and conscientiousness (Caracuzzo et al., 2024). From a team-building perspective, playful avatar and background aesthetics are notable factors in increasing interactions between members during VMs—e.g. the more

aesthetically pleasing the avatar or background is, the more likely co-workers will want to interact (Freeman and Maloney, 2021). This pro-social behavior and collaborative efforts in gaming can foster better team-building environments and working conditions (Keith et al., 2014; Smith, 2012). Moreover, a playful work environment positively contributes to job performance and proactive behaviors by increasing employee engagement (Dishon-Berkovits et al., 2024; Ahmad et al., 2025). In addition, playful work design can foster competence, thereby leading to employee engagement (Pap et al., 2025).

Yet, gaming and *overly* playful environments in work contexts may yield negative (dark) outcomes depending on the specific forms of “play-at-work” and underlying objectives (Celestine and Yeo, 2021), both in terms of team goals (Tolias et al., 2015) and culture (Georganta and Montgomery, 2019). In addition, playful features can be unnatural in business settings and interactivity with multiple users at the same time can increase burnout (Riedl, 2022). Uncertainty surrounding workplace fun is magnified in remote settings, as remote workers receive fewer social cues compared to in-person interactions (Plester and Lloyd, 2023). Yet, meetings that use playful features and adopt playful tones can increase feelings of co-presence, community and aid mental well-being (Alhasan et al., 2022). A balance can be struck between playful features and work meetings according to emerging literature (e.g., Celestine and Yeo, 2021).

Consequently, remote work and VMs act as a unique proxy for understanding the “dark” and “light” sides of games for producers. Playful virtual environments may alleviate endemic issues like crunch by providing necessary outlets for workers to exercise creativity and keep flexible work hours. However, the technical makeup and social isolation caused by remote work could compound extant issues, especially given the expectation that their work should be based on playful passion and ludopolitics. It could even worsen cultural issues surrounding game producers by providing virtual spaces that reinforce ludopolitics. Therefore, to better understand the effects of remote work on game production and producer identity, our research will investigate:

RQ1: How do remote work and meetings affect game producers’ perceptions of themselves and their jobs?

RQ2: How do games, play and affiliated tools affect developers’ use of remote work tools and environments?

RQ3: What tools and practices do game producers use to navigate remote work in terms of perceived challenges and benefits?

3 Materials and methods

To more deeply explore these questions, we conducted semi-structured qualitative interviews ($N = 38$) with participants in and adjacent to the industry. Interviews, rather than surveys, were useful in ascertaining more context and depth from participants who came from various backgrounds that a survey or similar quantitative research would have not necessarily captured. Those interviewed represented a relative broad swath of gaming development industry professionals, ranging from CEOs to developers at both corporate and indie studios, as well as freelancers, from across the world—such as

the US, Argentina, Finland, China, and Canada, among others. Overlap between games and other industries is increasingly common for studio viability (e.g., Keogh, 2023). As part of a larger project looking at the impact of remote work and VM software on game producers, interviews were recruited via snowball sampling. Interview questions focused on the challenges and opportunities of remote meetings, using innovative software including virtual environments for meetings, and about playfulness and other activities that occurred due to remote work, in relation to our research questions. Interviews ran from 2021 through 2024, until a saturation point was reached, and therefore represented time periods before and after COVID-19 lockdowns.

While majority male and white, the interview cohort reflected industry demographics (Legault and Weststar, 2021)—See Table 1 for demographic details. Ultimately, in terms of occupational variety, our interviewees represented a variety of game workers commensurate with the industry's porous boundaries (e.g., Keogh, 2023), including chief officers, presidents, or founders of companies, others ranged from area heads to designers and graphic artists. All participants worked remotely a majority of the time, and all were a part of remote teams – some of which sporadically worked in-office.

3.1 Analysis

Participants gave insights as to *how* games can be used as a force for cohesion and productivity, as well as *why* they may be a hindrance to team-building and culture. Interviews occurred online, were transcribed, and then moved to the qualitative analysis program Dedoose for an inductive thematic analysis in which themes are generated from the data itself, and in relation to our research questions (Braun and Clarke, 2017). Two researchers met and communicated

regularly to discuss and generate codes that were then grouped into themes as is common with this approach while keeping an audit trail (Nowell et al., 2017) until trustworthy findings could be found, which is the goal of qualitative research (Lincoln and Guba, 1985). Emergent themes provided several new insights as to exactly *which* playful features serve as a distraction and *how* they may be mitigated or used effectively. As a consequence, we report our findings specifically regarding themes of play before discussing how developer answers can be understood in regard to our broader research questions.

4 Results

From our interviews, and in line with existing literature (e.g., Feezell, 2010), no single definition of “play” came from our participants. Instead, we found that play took on several different meanings, depending on goals and context. From these definitions, key themes emerged as to how play is understood and practiced: self-presentation, experimentation, and gameplay. These findings primarily applied to game development and creative industries that already incorporated gaming elements in some fashion like Social Virtual Reality (VR) and extended reality (XR) applications.

4.1 Self-presentation

Participants' prevailing definitions of play centered around self-presentation and the freedom to express one's identity however they desired. Often, meeting leaders were responsible for fostering an atmosphere where employees felt able to express themselves freely and creatively. For example, one company CEO from California mentioned that setting a playful tone is as simple as “What ironic t-shirt am I wearing in our meeting today?” While attire was one way participants expressed themselves playfully, they were more likely to embrace play within the confines of their meeting software and the options that those platforms allowed for self-presentation. Within this conception of play as self-presentation, definitions tended to coalesce around a few key software features within a VM platform: avatars and backgrounds.

4.1.1 Avatars

Interviewees emphasized the significant role that avatars play in their self-presentation. In fact, avatars were overwhelmingly mentioned as the chief method of “play” by participants, compared to other features. Regardless of whether one's chosen avatar was “realistic” or not, participants acknowledged that they serve both playful and practical roles—playful in terms of customizability and interactivity; practical in terms of reducing fatigue and boosting mental wellness. Use during team/project meetings ranged from seldom to the point of some participants *only* knowing their coworkers via their avatar. This sort of blurring between the online and offline self-afforded users an atmosphere in which they could be more comfortable psychologically—by selectively highlighting the parts of their identity they wanted to accentuate, and those they wanted to change. Though avatars are not inherently playful, participants noted that they fostered a more playful atmosphere, as explained by one VR game developer, “And how you choose to identify yourself, how you choose to represent yourself in VR, sometimes the ability to

TABLE 1 Participant demographic breakdown.

| Demographic information | Count | Percentage |
|-------------------------|-------|------------|
| Education level | | |
| Bachelor's degree | 14 | 38.9% |
| Master's degree | 17 | 47.2% |
| PhD | 3 | 8.3% |
| Trade school | 1 | 2.8% |
| High school | 1 | 2.8% |
| Gender | | |
| Male | 24 | 66.7% |
| Female | 7 | 19.4% |
| Non-binary | 3 | 8.3% |
| Female/NB | 1 | 2.8% |
| Male/NB | 1 | 2.8% |
| Age range | | |
| 20–29 | 7 | 19.4% |
| 30–39 | 11 | 30.6% |
| 40–49 | 12 | 33.3% |
| 50 | 6 | 16.7% |
| Total sample size | 38 | |

be open and silly, I think, is the best place to be like, that's a good workplace—and it feels more freeing, you can talk how you want.” This psychological freedom provided by avatar-mediated interaction creates a foundation for deeper engagement with virtual collaboration, extending beyond mere representation to actively reshape interpersonal dynamics in the digital workspace.

Using avatars in VMs also allowed for more playful interactions as it reduces perceived distance between users. Participants also lauded their use as a means of expression and virtual management impression, and their utility as “conversation starters.” While acknowledging the differences between two and three-dimensional avatars, such as movement fidelity, proxemics, and additional customization, participants still found avatars to be a useful tool in fostering playful, creative, and collaborative atmospheres. Though prior research suggests that many users will create and utilize avatars that resemble their physical body (Zimmermann et al., 2023), participants stated that they employed various avatars during work meetings, ranging from animals to mythical creatures, as well as retaining a human body in a gender-swapped identity. Such playful variability shaped workplace dynamics. For example, one anonymous participant noted that engaging with playful elements like avatars helped break down traditional hierarchical barriers on the job further explaining that they would use an avatar, “only if I could be like an orc, or like a big monster, or like a nondescript nonhuman avatar,” to disrupt preconceived notions on gender.

Avatars were so important that some interviewees even mentioned creating their own assets from scratch, due to their numerous benefits. Noticing a dearth of avatars that looked like them, one participant explained their process of creating more inclusive representations: “There's no black ones. But now we have a set of I mean, I think over a two-year span of time, I think I've made like 80 avatars, it was awesome!” Another participant of South Asian descent described this same process, explaining, “We did not have many good looking Indian avatars, for example. And then, I was the one building the avatar.” This intersection of play and identity work provides a foundation for the broader sense of agency valued in virtual environments.

Ultimately, participants acknowledged that the option to change one's avatar—whether playful or true-to-life—provided overall positive outcomes by giving them personal agency, succinctly summarized by one VR developer: “I think the choice is what is key, you give people the choice to change and to change the way they express, I think the style of the aesthetics, all of this adds into that agency.” This conception of play as self-representation extended beyond avatars, however, and participants noted how avatars work in tandem with other meeting platform features to create a playful environment for self-expression.

4.1.2 Backgrounds and virtual environments

While avatars were most often described as the go-to software feature for play, participants did not discount the use of backgrounds as a playful means of self-representation, as well as its use as a marker of company culture. Employers who wanted to foster a creative atmosphere expressed little desire for sterile office replicas in their virtual environments, and instead opted for more whimsy, as one CEO explained, “We're not just a company, we are a creative company. So replicating a cubicle farm and virtual space had zero interest for us. You know, being able to paint the walls, nice start. But we are like, no, we have literal 3D assets from our game, why cannot we bring those

into your virtual space, and meet in some of the locations of our game while we are talking about the game?” In this instance, play via backgrounds and virtual meeting environments serves as a signifier of company and brand identity. Beyond the company level, participants noted that play through backgrounds allowed for supplementary personal expression. For example, one developer mentioned they liked to frequently switch their backgrounds to match their mood, saying, “I prefer the city one day, and nature the next.” This practice of professional branding and personal expression through background environments creates a foundation for more unique curation of users' online identities, particularly as users transition from 2D videoconferencing to fully realized 3D virtual spaces.

When it came to 3D and virtual realms, participants expressed a desire to meet in environments that matched the tone of the meeting. In the game design industry, that often meant playing and exploring their meeting space. In some instances, this immersion tied avatars to those environments, to create playful “themes.” For example, during one interview that was conducted in a virtual environment created by a project officer, they explained to us, “So if you look at the other world, we can jump into the one that does with the unfolding universe, okay, we kind of restricted all the avatars to look like little astronauts. So that sort of avatar is actually the theme of the world.” This marriage of avatars and virtual environments for the purposes of play and personal expression showcased the ways that participants strove to maintain a playful atmosphere in the workplace at the individual and company levels.

4.2 Playing games

Participants also described their experiences with playing games during VMs. Though not as frequently mentioned as avatars, backgrounds and meeting features, gameplay in meetings occurred both as a team-building exercise and for play-testing. For some, divorcing games from VMs in a game production company was impossible, as “games are what we do,” one CEO emphasized.

From a team-building perspective, participants sometimes mentioned that games like Walkabout Mini-Golf were utilized as digital equivalents to offline casual business meetings. One studio head described their experience with the game, stating, “So we would just actually come in and putt and play this golf game while having our team meetings, which was actually kind of nice, you know, it was like the digital equivalent of big business [...] I mean, for obvious reasons, it increases the level of fidelity and gives you the ability to bring in some of those proxies for nonverbal language because you are now moving about the world.” While these experiences served as a proxy for casual in-person meetings, few participants reported using similar platforms in this manner.

Actual gameplay was not frequently used during VMs, and instead occurred incidentally or spontaneously. For example, one company leader described their experience with spontaneous play in a VR environment, “Or they have a thing where you can play instruments and if multiple people play instruments at the same time, they will harmonize and you make a little band...it's just a cool moment.” Similarly, another company leader noted their affinity for play through team-building, commenting on a different social VR game, “It's called Remio. And it's actually great, like kudos to developers. They did a really wonderful job with it. And I actually love the idea of using VR

for team building.” In these cases, whether intentional or not, participants understood play through games to be a vital exercise in promoting social cohesion.

4.3 Experimentation

Other participants related play to experimentation with technology, with one company CTO explaining it as “toying around with something new. Like it goes back to the concept of invention, right?” Play and experimentation go hand-in-hand when it comes to using technologies outside of their intended purpose. A freelance developer remarked, “I remember spending a bunch of time in college learning about people doing motion capture with the Kinect. Because, well, Microsoft did not make money on the Kinect, so we might as well get to play with it. I think there’s a lot of that.” Cases like this highlight the significance that play serve as an entry-point for innovation and exploration with emerging technology.

Participants tended to not make a distinction between spontaneous and planned playful experimentation, and did not always see it as productive. Play ranged from experimenting with avatar identities, to hardware and software. Play even manifested when they experimented with different VM platforms like VRChat. “What percentage of users actually meet in VR?” explained one Head of Experience, adding “We try a new VR meeting app every time [...] I have the feeling that use for meetings for VR is just not widely adopted yet. So really, for VR, play is the reason to do it, right? It’s just really dope video games is why people do VR, which is not what investors want to hear.” Others that took this approach thought VM platforms were a vital step in gaining an upper-hand in the industry, with one participant explaining, “But yeah, I would not say that we are directly using our products on a daily basis for productivity purposes [...] because we are building these things that we need to understand how they work.” Therefore, while not oriented specifically towards work, this play still had occupational benefits. Similarly, experimentation through play was noted as crucial to onboarding new generations of game producers, with many participants wishing for new initiatives to educate children about emerging tech.

5 Discussion

5.1 Perceived benefits of play by game workers

In the extensive discussion of *how* play manifests in the remote workplace, participants revealed many benefits for play and playfulness in VMs have, in terms of mental well-being, social cohesion, and innovation (RQ3).

5.1.1 Mental well-being

Participants acknowledged how play via avatar can serve as a boon to worker well-being in several aspects. Avatars allow workers with social anxiety to remain “present” in VMs without “presenting” themselves on camera. Avatar use was helpful for combatting Zoom fatigue, a sentiment echoed by one US female freelancer who said, “I think for a lot of people the benefit of the avatars stuff is not anonymity, but it’s also like not having your face on screen.” On a more personal

level, participants noted that playing with avatars afford users more authenticity in their self-expression and presentation. Many participants noted some anxiety resulting from presenting themselves in acceptable ways for work meetings, and mentioned that avatars were a reasonable remedy.

Other participants remarked that more cartoonish avatars allowed them to express an identity that did not conform to their physical appearance (RQ1). These types provided an avenue to psychological comfort. For a workforce with documented high rates of social anxiety and neurodivergence (Weststar and Lentini, 2024), the ability to use an avatar as a psychological shield to reduce the cognitive load of being “on camera” represents a significant benefit, acting as a direct coping mechanism against the industry’s endemic pressures. One participant posited a possible generational divide on this practice, saying, “I would bet that there’s going to be sort of generational differences and what kind of comfort level you have, and in the avatar that you choose [...] If we stereotype Gen Z, [they] might want something that’s like the ability to be non-binary and the ability to represent ‘I’m whatever animal and that’s my true self,’ then fine.”

Another participant noted this trend to be a part of a larger merger between the online and offline self, stating, “So in the short term, we solve problems like Zoom fatigue, you know, being judged by the people based on your appearance. Your appearance is essentially commodified at this point [...] you can be whoever you want to be and you are not defined by biology anymore.” These findings suggest that avatars served as more than mere digital representation—customizing and playing with them afforded a psychological shields and creative outlets to reduce emotional labor and mental strain in remote work contexts.

Playful elements of avatar customization and interaction also created moments of levity and authentic connection with others in a space where creativity and mental well-being mutually reinforce one another. These playful interactions could potentially mitigate burnout and stress resulting from otherwise arduous working conditions, while simultaneously strengthening team cohesion through shared creative endeavors.

5.1.2 Social cohesion

Several participants mentioned that they felt less connected to their co-workers when they could not be seen in VMs. Rather than simply turning off the camera when one is experiencing anxiety, Zoom fatigue, or other burnout traits, avatars were cited as an acceptable alternative. One participant remarked on the merits of visual presence via avatar, “So we are trying to make people feel present. And that is, that’s kind of a dual psychological safety thing for the speaker. It makes it feel like nobody’s ignoring you. People are engaged. They’re there. They’re listening. For the attendee, it feels like you are there. You’re part of the team.” This alternative to turning off a camera during a VM can reduce the risk of personal anxiety, as well as create adequate feelings of co-presence.

Feelings of co-presence is also bolstered by the spatiality of avatars in VMs. Not only did avatars allow for more familiarity with co-workers, they also allowed for meetings to mimic the proxemics of in-person get-togethers—a preference among participants. One studio head reflected on this, “I think a lot of the research on avatars and tracking and some of the other ways of defining co-presence, so not just a bunch of screens in a row, or in a grid or like UI—in teams, you can put them in little seats. And is not that cute? But actually

creating a sense of asking ourselves the question of ‘okay, yes, we are not in meatspace together,’ but parking that for a moment, ‘what are the things that we actually get out of physically being co-located?’”

Virtually all participants worked remotely, which led to challenges in fostering collaboration and community. In addition to play being utilized for team building enterprises, participants noted that it helped them feel spatially closer together (*RQ1*). Play through digital proxemics provides opportunities for creating social bonds that might not otherwise be available in remote work contexts. By integrating playful interactions and expression, remote workers were better able to recreate conditions that allowed for traditional team building and closeness.

5.1.3 Innovation

Via experimentation, participants generally acknowledged play’s role in innovation of which they felt a measure of responsibility for maintaining an understanding (*RQ1*). VR was a particular area of emphasis for participants, as some viewed themselves and immersive media as the vanguards of both gaming technology and remote work. Without innovation at the developer level, the larger industry might be in peril, as one company CTO explained, “I think game developers are pushing the envelope on what is good VR, for the rest of society. I do not think anyone else is going to do it. And if game developers do not push the envelope in VR, the business tools will just kind of fall flat, and it will just fizzle out.” These sorts of common sentiments shared by many participants underscore the interconnected nature between play, innovation, and a shared identity between developers.

This pressure and perceived need to innovate was a substantial motivating factor for many participants and their companies to experiment with the tech to find more profitable uses. Ultimately, participants generally agreed that regardless of its use-case, playing with emerging technologies in VMs positively impacts innovation in the gaming development industry as it allows them a means to push the boundaries of the technologies they use everyday, which they would otherwise not be tasked with in their standard work duties.

5.2 Perceived challenges of play by game workers

While participants noted the numerous benefits of play in VMs, many of their cited features and practices also were perceived to have negative impacts for the individual, the team, and overall productivity (*RQ3*). Avatars, backgrounds and games could sometimes hamper team cohesion and productivity, if used in the wrong context or too excessively (*RQ2*).

5.2.1 Distraction

Paradoxically, the feature mentioned to be the most distracting in VMs was also the feature spoken of most positively—avatars. Many interviewees exhibited a willingness to use avatars, but also acknowledged their ability to distract. One developer explained this from a corporate studio standpoint, “And then, you know, it’s serious business, there’s no time to play around and jump around in the meeting. So like, while your avatar could be cute, and us as creatives would love to jump around and do that, it almost be distracting for us to kind of be in that space.” Other participants likened an overly

cartoonish avatar or backgrounds to wearing a Halloween costume to the workplace. The underlying message was that while play and personal expression *were* championed values by workers, they could not supersede the business-oriented, productivity-focused necessities of the industry.

Participants tended to distinguish between cartoon-like and “realistic” avatars, as necessarily for simulating real-life workplace interaction. High-fidelity avatars able to mimic facial expressions and body gestures, while remaining outside of the uncanny valley, were an alternative for workers who wished to represent themselves in a playful manner without distraction. One company owner believed this was the sweet-spot for implementing playful features saying, “If it was an option, where we had super-realistic avatars that animate in a perfect way, then people would use them for meetings more.” This was emphasized by other participants indicating how more realism was seen as the greater boon to work meeting quality.

Participants also listed several other playful features that were barriers to VM productivity and team cohesion. For example, many platforms include digital tools for participants to play with, such as whiteboards and virtual toys. One developer acknowledged how they sometimes draw attention away from others and tasks, explaining, “I’m present, but I’m also present with all these fun little knickknacks. And it’s not socially impolite for me to play with the marker or do all this stuff while people are talking. When you realize that your team has been doing that for over a month, there are probably some miscommunications.” While entertaining, most who were interviewed acknowledged the detrimental effect of too much play with those features and assets.

5.2.2 Antithetical to business

Though participants emphasized the role of play in the game development process, they also frequently noted how the practice and inclusion of play elements created dissonance in their work (*RQ2*). For example, the use of non-realistic avatars in VMs could detract from crucial workplace values, like trust. A company owner, explained their choice to abstain from avatar use in some meetings via a hypothetical scenario, “[In] serious business meetings, where you are going to make decisions that are all about trust, and if I make the wrong decision, everybody is going to have to work weekends for the next two months, cartoon faces and stuff. I do not think people are gonna swallow it, because I think it’s just too problematic [...] I do not see how to bridge that gap right now.” This tension highlights the dual nature of fun and “play,” in an industry that simultaneously promotes play through its products, but tries to rein it in for the sake of business. It also reflects the psychological pressure exerted by the industry’s financialized structure; the “serious business meetings” where trust is paramount are often those where developers feel the most powerless, as decisions are influenced by the “ghost actors” of publishers and funders (Legault and Weststar, 2021). In this context, cartoonish avatars can be perceived as a risk to a project’s perceived legitimacy and, by extension, its financial viability.

Though play in meetings can have a perceived adverse impact on a company’s bottom line, participants cautioned against doing away with play in broader company operations, especially to adapt to new innovations: “There’s so many companies who are like maybe we should gamify stuff and I’m always like, you want to have one eye on it! Because if [...] you say our business has no need for VR, has no need for augmented reality, has no need for game engines, you are

gonna miss incredible advancements, right?” This tension between play and innovation intersects at a juncture where profit is valued above all else, and is encouraged, largely, for fear of missing a trend. For workers, this tends to mean play for the sake of play and innovation, for owners, this tends to mean play for the sake of innovation *and* profit.

5.2.3 Physical and generational challenges

Many participants mentioned technical barriers to play, which impacted even the most seasoned users. For example, one developer spoke to difficulties he had in play-testing games remotely in VR due to the lack of integration with the other work tools: “The hardest part is putting on the headset, testing and putting it up, and then recording, putting it back on. And this constant in and out is tiring. It’s exhausting. Especially when you are both testing and trying to get something to work and ‘Okay, does it work now?’” said one African-American Los Angeles-based developer who characterized themselves as a “combat trainer,” speaking of the complications of showcasing their work in VMs. Hardware and software limitations meant that defaulting to more universal tools was common. One primary challenge faced was bridging generational gaps between digital and non-digital natives who faced a steeper learning curve when it came to using emerging technology. Participants largely framed these challenges as “accessibility issues,” with developers advocating the need to be more intentional about creating games and environments that people without technical expertise, like investors, could navigate. One developer discussed how the conception of a “game” needed to be re-thought, “So talking professionally, but what I want to play with, I think we have a lot of accessibility bias on what a game should be. Because we have been playing games in a certain way, with a controller with mouse and keyboard on a flat screen for so long.” Such commentary fit with the shifting understanding of the field itself (RQ1).

5.3 Prevailing attitudes towards play

Collectively, the attitudes toward play reveal several noteworthy lessons about how game developers’ use of VMs and remote work impact their understanding of themselves and industry at large. Specifically, they highlight how context still matters to playful environments, despite its fundamental nature in the industry. Therefore, play can be a vital tool for navigating endemic industry issues

5.3.1 Context matters

Meeting context and its desired tone are the primary factors that lead game development companies to adopt playful features into their VMs. For one interviewee, this meant using avatars. Others moved their meetings into different virtual environments. When deployed in the proper context, they also were seen to promote well-being and social cohesion. Therefore, the appropriate context game producers will adopt playful elements and game spaces can overcome specific challenges to daily work (RQ3). Though the gaming development industry requires creative expression, professionals are split as to how, where, and when creative expression and play belong in VMs. On one hand, some choose to lean into play in the workplace, as they view it to be inseparable from the creative process.

This speaks both to how they identify remote work in their jobs (RQ1) and how they see affiliated tools as integral to remote work (RQ2). On the other hand, some participants view *too much* play, or play in the wrong contexts, as detrimental to a productive workplace. Nearly all participants acknowledged a split between “serious” meetings and other activities in their workplace. “Serious” meetings, such as those involving clients, outside business partners, or pertain to fiscal and performance matters, deemphasize playfulness. Less serious meetings, such as brainstorming sessions and product testing, tend to encourage playfulness. This speaks to the nuances with which game producers approach using games in their work environment—in one context the same playful environment can be viewed as helpful or problematic.

Similarly, there is a bifurcation between corporate and indie work environments that dictate when play is acceptable. Browne and Schram (2021) define “indie” through three prongs of independence—financial, creative, and publisher. Indie work environments tend to have a more flat hierarchy, where work can be distributed more evenly, especially in remote contexts. With these hierarchical barriers lowered, playful expression may be viewed more positively. Similarly, they define “corporate” along the lines of strict hierarchies in terms of employee distribution and tasks. Participants in corporate contexts expressed more aversion to playfulness—like avatar use—in their remote work meetings, even if playfulness was desired. Even making playful implementations in corporate products can be taboo, so participants mentioned that they were less likely to engage in play during their meetings. For example, one developer noted how corporate studios prioritize deadlines and profit at the expense of quality, let alone play, stating, “So even though you have a good idea, even though the barrier of work is not that much, the fear of trying to pitch it to the bigger corporations, who is paying the bills, or trying to get everybody on board is such a hassle that it is better to leave something that will diminish the gameplay experience in there. And that’s something that you know, you have to get used to working in a bigger company.” In these cases, remote work tends to follow the size and scope of the company (RQ1).

Further, professional precarity in the gaming development industry may factor in the curtailment of play. Some participants expressed that playfulness is antithetical to career advancement, as it perceptually detracts from career advancement, especially in corporate contexts. One company head emphasized this tendency towards “professionalism” over play, remarking, “I think just the fact that where everyone’s at in their career, I think everyone’s really very focused [...] Of course, there’s an element of creativity, which sometimes brings laughs. And so, it’s always been very professional, I think none of us would draw something on someone’s face or do anything like that.” Thus, play can be a limitation or challenge for career advancement.

Conversely, those involved with indie studios expressed a greater willingness to engage with play; First, they noted their companies’ flatter hierarchies where workers view themselves as more equal. Smaller studios also lead to smaller meetings. Perceived equality in smaller meetings leads workers to be more open to playful elements, as the need to “code-switch” is lessened, according to one participant. Second, smaller teams tend to rely on creative input from all workers, so playfulness is seen as a vehicle for brainstorming and innovation, a sentiment echoed by one company CTO who valued play in both the iteration and development process, “I tried to keep the team small,

iterative. But the thing that always excited me from both software and games, I do not like making my own spin on something that already exists. I like invention. I like doing something new. I like breaking new ground. And the thing that I focus on is social interaction.” Therefore, and following studies of self-perception of developers (e.g., Keogh, 2023), remote work and playful environments differ drastically based on how developers relate to the larger industry and the boundaries they see themselves lying in or breaking.

Ultimately, participants recognized limits to the acceptability to playfulness in the workplace, even if “play” was the primary goal of their output. These contextual boundaries, whether explicit or implicit, do not detract from the idea that elements of play *are* necessary to maintaining both a healthy, creative workplace.

5.3.2 Play is fundamental except when it comes to profit

Regardless of context, virtually *all* participants acknowledged the value of play, especially in their industry. Participants recognized play as a foundational aspect of human connection, and essential for improving workplace culture and employee satisfaction. Because play is a function of the product, its role in the development process is a crucial foundation, as one company head explained, “This is not brain surgery, no one is going to die from the work we do. Someone’s life may be changed by the work we do, but it is literally not life and death. So we have to maintain a playful attitude, in terms of the work we do, and our successes and our failures. And so for me play is paramount in work, because we are making play.” From a psychological standpoint, this shows that some managers and bosses are at least aware that there *should* be time for play in the industry as a means to preserve employee well-being, and they wish to entrench that conception as part of their workplace culture. Moreover, participants recognized the role play holds when it comes to innovation, as one participant summarized, “It goes back to the concept of invention, right? It’s new, there’s a lot of things that have not been decided, there’s a lot of things that have been discovered, that people do not realize have been discovered.” These benefits were seen as core to developer identity and ludopolitics (Bulut, 2020) did not change based on VMs, which makes sense in an industry that has bolstered remote work for years.

Play was also viewed by some participants as synonymous with “well-being,” as one company owner explained, “I try to encourage a playful environment, because I think it’s important when you are making games. I do not think stress or anxiety belong in game development.” While, paradoxically, stress and anxiety *are* a part of the industry on the worker’s end due to issues like crunch, this further highlights the recognition of management that this problem still persists and wish to find remedies. Participants mostly described play through the software and platform-specific features they used within their meetings, with one professional describing these features as beneficial for the “psychological safety of workers.” Ultimately, participants noted these as a double-edged sword in terms of increasing workplace morale, personal well-being, and creativity, as they run the risk of distracting and detracting from project goals.

Similarly, participants conceded that play does not always mesh well with turning a profit. Participants expressed a greater willingness to experiment and play with existing technology that is not profit-driven or not profitable. While play is valued in the ideation and post-production processes, there is a hesitance to include play when

money is on the line. So, while play is inherently valued in terms of employee well-being, ideation, and product testing, it was largely seen as antithetical to profit. This leads workers to bifurcate their work as times for play, and times to be more serious.

5.3.3 Play and game industry norms

Finally, our work highlights how playing at remote work can stress ludopolitics and self-perception within the industry itself (RQ1). Our interviewees clearly saw games and play serving useful means by which to create connections with teams and ways to represent themselves. Playfulness was seen as inherent to the best parts of their job, and fell in line with the same sort of aspirational and positive language associated with “ludopolitics.” In some cases, it also seemed to provide specific means of self-expression.

At the same time, it could easily be seen that play had strict limitations in some parts of the business. There were certainly moments when those, particularly in positions of power that we interviewed, implied that play in remote work would not make sense and that in certain context work should be “taken seriously.” Collectively, this positions play as an interesting pivot point between being an expectation of work but also that, as Bulut (2020) suggests, it can lead to a “degradation of fun” when normalized with gaming development industry parameters. The same is implied for remote work more generally: expectations to work often supersede actual thought into the virtual environments where many game makers work: efficiency and production matter more than having playful tools for remote communication.

However, the positive views of play, particularly in terms of psychological factors like well-being and self-presentation point to a potential template for considering remote work for game makers more broadly. To combat endemic issues like crunch, occupational precarity, and the psychological stresses found for those working on games, it seems that a little bit of play can go a long way and provide means by which workers can have a sense of self and team, aligning with previous work (Keith et al., 2014; Smith, 2012). Furthermore, given the ubiquity of remote work, this play is equally important in virtual environments. VMs that have some level of play are important for asserting occupational and personal identity, giving workers who are dispersed a means to better understand each other, experiment and be creative. It seems necessary for businesses to recognize this reality, but also for workers to seek out and push the margins of this in their jobs in order to overcome the ongoing issues that both they and scholars recognize are endemic problems in this industry.

6 Limitations

We are aware that our sample does not represent every view of play within the gaming development industry. Our snowball sampling method ran into barriers where secrecy surrounding projects is common. That stated, our sample represents a broad swathe of workers in a variety of roles, spanning from company owners to freelancers. While this provided a breadth of perspectives regarding play and VMs in and around the industry, future work should consider how play impacts specific departments (e.g., art), game types (e.g., esports), and other configurations where remote work is common. One could imagine remote work of those in the esports industry where VMs are built into competition would

be different than an indie developer. Beyond this, while our numbers coalesce with industry demographics, we aim in future work to look further into identity categories and their perceptions of play.

7 Conclusion

7.1 Summary

This research reveals the complex role of play in game development work, particularly in VMs. While game developers broadly recognize play as fundamental to their industry and creative process, its implementation in remote work settings presents both opportunities and challenges. The study highlights how different forms of play, defined by participants as self-presentation, technological experimentation, and direct gameplay, can simultaneously foster psychological safety and team cohesion while potentially undermining productivity and professionalism in certain contexts.

Notably, these findings suggest that the effectiveness of playful elements in VMs is highly contextual, varying between corporate and independent studios, as well as between different meeting types. While participants suggest features like avatars can reduce video conferencing fatigue and increase mental well-being, particularly in informal or creative sessions, they may also hamper trust and meeting effectiveness in client-facing or high-stakes situations. This tension reflects broader industry dynamics around ludopolitics and labor conditions, where the imperative to “have fun” at work intersects with professional pressures and productivity demands, which can add psychological stressors and pressures for workers.

7.2 Recommendations

Based on this research, we propose a few recommendations for the implementation and fostering of play in gaming development industry workers’ VMs and remote work to further pro-social ends, and reduce the negative impacts that play presents in its current form. Similarly, our recommendations may also extend to other digital creative industries, like those that develop assets for online meeting platforms. Regarding specific issues raised by participants germane to the gaming development industry, we also make specific recommendations to aid in fixing those issues.

For all these creative industries, first, we propose context-dependent guidelines for avatar use. Specific to gaming development contexts, cartoonish or eccentric avatars should be reserved for less formal VMs, such as brainstorming sessions, play-testing, or informal team check-ins, which developers reported as crucial events. For more formal VMs in game development, *and* creative industries, we recommend not eliminating avatar use, but instead encourage more photorealistic avatars. In a similar vein regarding avatars and backgrounds, an alternative could be “themed” meetings, similar to how many traditional workplaces allow for a more lax dress code on a designated day or week. This allows for personal expression that also serves as a means for team-building. Workplaces could encourage a background or avatar theme for a given meeting or time

period, such as having workers *all* change their background to reflect their favorite cityscape, film, or other theme. This way, personal expression is encouraged, while at the same time maintaining consistency amongst workers so that one outlier background or avatar does not serve as a distraction from the others, and can serve as conversation starters between workers to foster closer connections.

Lastly, and more germane to the gaming development industry, in order to mitigate the negative impacts of spontaneous play in VMs, we encourage team leaders to hold structured “play and innovation” sessions independent of their regularly scheduled meetings. This way, game development workers are encouraged to explore the boundaries of their tools in a space where they have no specific task. Not only does this fit iterative design processes common to game making, but those tools will likely serve as a lesser distraction during regular meetings, since those tools lose their novelty effect, and engagement with them in more serious meetings can be limited to discussion of their tangible benefits. By implementing this set of guidelines, play in creative industries, especially gaming development, can be more appropriately focused and serve greater ends for both the worker and their company.

Data availability statement

The datasets presented in this article are not readily available because this study used human subjects interview data that is not available due to privacy restrictions. Requests to access the datasets should be directed to mfoxman@uoregon.edu.

Ethics statement

The studies involving humans were approved by University of Oregon Institutional Review Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

DB: Formal analysis, Investigation, Writing – original draft, Writing – review & editing. MF: Conceptualization, Data curation, Funding acquisition, Investigation, Project administration, Resources, Writing – original draft, Writing – review & editing. CL: Writing – review & editing. AL: Conceptualization, Writing – review & editing.

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