# Virtually Limited: Boundaries of Play in Virtual Reality Production

# Maxwell Foxman

University of Oregon 1275 University of Oregon Eugene, OR 97403, USA mfoxman@uoregon.edu

## **Dalton Bouzek**

University of Oregon 1275 University of Oregon Eugene, OR 97403, USA dbouzek@uoregon.edu

# Rabindra A. Ratan

Michigan State University 404 Wilson Rd. East Lansing, MI 48823, USA rar@msu.edu

#### Alex P. Leith

Southern Illinois University Edwardsville Box 1775 Edwardsville, Illinois 62025, USA alex@siue.edu

#### **Keywords**

Virtual Reality, Game Production, Game Engines, Game Development, In-Depth Interviews

## INTRODUCTION

From the Virtual Boy (Boyer 2009) to the original Kickstarter campaign for the Oculus Rift (Wingfield 2013), Virtual Reality (VR) has a long association with games. However, while games are still VR's dominant genre (Foxman et al. 2022) and integral to content creation (Evans 2018), much of VR's marketing and public discourse has downplayed games in favor of more social, educational and business experiences, motivated in part by investment from tech behemoths like Meta (Egliston and Carter 2021). Thus, VR both practically and discursively challenges the limits of games and play, but there is a dearth of literature about the limits of VR in game production. Results of our interview research suggest that although developers perceive play as detached from the conception of VR content, it is instrumental in the actual production process. Furthermore, such informal and social play does not resemble traditional published "gaming" products.

#### **Proceedings of DiGRA 2023**

© 2023 Authors & Digital Games Research Association DiGRA. Personal and educational classroom use of this paper is allowed, commercial use requires specific permission from the author.

# OF GAME PRODUCTION AND VIRTUAL REALITY

Because VR is built upon game engine software like Unity and Unreal, capable content developers tend to derive from gaming backgrounds (Foxman 2019). Consequently, game engines and their technical and cultural norms will have an inordinate influence on the expansion of VR into novel non-gaming terrain, like the metaverse (Chia 2022). Users describe such applications playfully (or even magically) as "voodoo software" (Whitson 2018) and must accede to their idiosyncrasies. In addition, play is understood as inherent to the "ludopolitics" (Bulut 2020) of the industry, which fosters a culture of constant play at all stages of development. By contrast, tech firms (particularly in North America) moved away from such conceits to instead promote an "Oculus Imaginary" (Egliston and Carter 2022a) focused on VR's social components (and implied data collection) as well as its integration into a larger suite of metaverse platforms (Egliston and Carter 2022b). Some of the discursive distancing from gaming may result from the cultural baggage surrounding the early creators of this generation's devices (Golding 2019; Harley 2020) and fits the discursive "newness" (Harley 2022) long associated with the technology. However, it obscures VR's reliance on game engines and designers.

Thus, our work seeks to better understand the tenuous relationship between game production and VR on two fronts: first, to explore how games and play manifest in the VR production process itself—in other words, how developers use play in their work; and second, to determine designers' discursive limits regarding VR.

# **METHODS**

As part of a larger project regarding the use of virtual meetings in game production, we conducted interviews (N=22) with game and VR developers recruited via a snowball sampling from a variety of companies, including indie and mid-sized organizations, virtual reality production firms, and businesses focused on developing virtual meeting platforms (but whose members hail from game production). Interviewees resided in North America and were predominantly white (75%) and male (90%). Such demographics generally reflect those in the games industry. Interviews were transcribed and inductively analyzed (Braun and Clarke 2006) for common themes, with one member of the team coding each interview and cross-checking this regularly with other members. We expect to conduct more interviews prior to the conference.

# PRELIMINARY FINDINGS

We have identified a few key themes surrounding the connection between VR, games, and play. First, and in line with previous research (Egliston and Carter 2022a), developers did not discursively frame VR around play. Rather than seeing VR as a platform for gaming, they viewed it as serving multiple purposes, including social and business solutions marketed by major tech corporations. As one VR company executive expressed, "We're not looking to create the next Beat Saber. So basically our kind of guiding thing is we want to be B2B [Business-to-Business]," and then provided examples of their products, including team-building games and virtual comedy venues. At the same time, play and games did underlie some production practices and techniques, particularly how developers used the devices. One mentioned how they incorporated the ubiquitous whiteboard found in game studios or used 3D painting applications to prototype VR games. Others instituted morning standup meetings in VR or used the technology to put themselves within a game scene. Several "play[ed] some different multiplayer VR games together" weekly to build cohesion (particularly during COVID-19 lockdowns). Such examples display the symbiosis between games and VR development, employing industry tools to make games to better fathom VR, and vice versa.

We also found that certain modes of play appeared more valuable in VR than others. Social play was lauded by many developers who described it as beneficial for networking, bringing teams together, and finding cohesion. However, this type of play was more ad hoc and less organized, whether spontaneously gathering in *Walkabout Mini-Golf* or finding ways to "make a little band. The developers don't need to do that and it has nothing to do with the core gameplay or anything like that. It's just literally a cool moment." In other words, developers often worked outside of traditional game rules (or intentions) to play in VR. They also felt that controls and use should diverge from flatscreen digital gameplay and rather focus on the "body. And if you don't have an answer for that, you probably shouldn't be [creating content] in VR." Traditional gameplay and games were less important to these developers than making experiences that engage multiple people, body gestures, and physical activity.

Such findings portend interesting implications for designers and producers of both games and VR content. They demonstrate that playful practices associated with game design are still integral to VR production despite manufacturers' aspirations. Makers rely on game-making tenets when creating content, whether a game, virtual meeting software, or metaversal product. Even so, VR removes former limits to playful interaction, suggesting more freeform modes of engagement as opposed to the highly structured play found in "traditional" gaming.

#### **ACKNOWLEDGMENTS**

This material was completed as part of a larger National Science Foundation project studying the future of VR.

#### **BIBLIOGRAPHY**

- Boyer, S. 2009. "A Virtual Failure: Evaluating the Success of Nintendo's Virtual Boy." *The Velvet Light Trap.* 64 (1). 23–33.
- Braun, V. and Clarke, V. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology*. 3 (2). 77–101.
- Bulut, E. 2020. A Precarious Game: The Illusion of Dream Jobs in the Video Game Industry. Cornell, NY, USA: Cornell University Press.
- Chia, A. 2022. "The Metaverse, but Not the Way You Think: Game Engines and Automation beyond Game Development." *Critical Studies in Media Communication*. 39 (3). 191–200.
- Egliston, B. and Carter, M. 2021. "Critical Questions for Facebook's Virtual Reality: Data, Power and the Metaverse." *Internet Policy Review.* 10 (4). https://doi.org/10.14763/2021.4.1610.
- Egliston, B. and Carter, M. 2022a. "Oculus Imaginaries: The Promises and Perils of Facebook's Virtual Reality." *New Media & Society* 24 (1): 70–89.
- Egliston, B. and Carter, M. 2022b. "The Metaverse and How We'll Build It': The Political Economy of Meta's Reality Labs." *New Media & Society*. September, 146144482211197.
- Evans, L. 2018. *The Re-Emergence of Virtual Reality*. New York, NY, USA: Routledge.
- Foxman, M. 2019. "United We Stand: Platforms, Tools and Innovation with the Unity Game Engine." *Social Media* + *Society* 5 (4). https://doi.org/10.1177/2056305119880177

- Foxman, M., Beyea, D., Leith. A. P., Ratan, R. A., Chen V. H. H. and Klebig, B. 2022. "Beyond Genre: Classifying Virtual Reality Experiences." *IEEE Transactions on Computational Intelligence in AI and Games*. 14 (3). 466–477.
- Golding, D. 2019. "Far from Paradise: The Body, the Apparatus and the Image of Contemporary Virtual Reality." *Convergence: The International Journal of Research into New Media Technologies*. 25 (2). 340–353.
- Harley, D. 2020. "Palmer Luckey and the rise of contemporary virtual reality." *Convergence: The International Journal of Research into New Media Technologies*. 26 (5-6). 1144–1158.
- Harley, D. 2022. "This Would Be Sweet in VR': On the Discursive Newness of Virtual Reality." *New Media & Society*. March, 14614448221084655.
- Whitson, J. R. 2018. "Voodoo Software and Boundary Objects in Game Development: How Developers Collaborate and Conflict with Game Engines and Art Tools." *New Media & Society*. 20 (7). 2315–2332.
- Wingfield, Nick. 2013. "Oculus Rift Headset Aims for Affordable Virtual Reality." *The New York Times*. https://www.nytimes.com/2013/02/18/technology/oculus-rift-headset-aims-for-affordable-virtual-reality.html.