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EDITORIAL

Immersive Storytelling as a Technology, a Practice, and an Experience

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Abstract

This thematic issue explores the transformative potential and challenges of immersive storytelling through extended technologies. While these technologies have been hailed as potential "empathy machines" that will encourage perspective-taking and understanding of others, they have also been critiqued for being distracting or engaging in identity tourism. Essays in this collection further demonstrated the complexities of extended reality storytelling. Collectively, these essays reflect ongoing dialogues about the efficacy of extended reality in conveying meaningful narratives, urging a nuanced understanding of technology's role in storytelling. This collection serves as a catalyst for future explorations into where and how to craft immersive narratives for impact.

Keywords

augmented reality; empathy; extended reality; participatory design; virtual reality

1. Introduction

From charcoal and berries on dark and cavernous walls to digital pencils and capacitive tablet computers, communication technologies exert a profound impact over the form and content of the stories we tell (Schramm, 1988). Here, the emergence of metaverse technologies (such as virtual and augmented reality) represents a potentially profound means for enhancing the veracity, artistry, and impact of these stories.

At the same time, this technological emergence also poses unique challenges for how we create and share narratives of the experiences of a wide range of people. Much of our expertise is based on "screen-based storytelling" such that we usually tell *stories in rectangles* but bleeding edge technologies take users into the screen, requiring us to understand how to tell *stories in spheres*. Amidst initial promises that extended reality technologies would be "empathy machines" (Milk, 2015), there have been numerous challenges about overpromising in this respect (Sora-Domenjó, 2022)—such as concerns about identity tourism and false empathy (Nakamura, 1995) or considerations about the taxing and demanding nature of interacting with immersive worlds (Bowman, 2021).

Our thematic issue invited scholars and creatives from a variety of epistemological and practical backgrounds to directly engage with questions around the efficacy and limitation of using extended reality to create and deliver meaningful and impactful stories. To some extent, the notion of "immersive storytelling" is somewhat of a misnomer in that it conflates narratives with the technologies used to deliver those narratives; it confuses "being in a story" with "being in a place" (see Pressgrove & Bowman, 2020). That said, the articles collected here show consistently that the medium through which a story is told can have a profound impact on how those narratives are engaged. Below, we preview a few of the offerings in this collection, and we encourage you to directly read them all.

2. Storytelling and Empathy

Several of our manuscripts were focused on fostering a sense of empathy and perspective-taking among VR users. For example, Vázquez-Herrero (2024) argues convincingly that established approaches towards immersive storytelling privilege the former term over the latter, leading to a form of technological determinism that seems to undermine the critical role of narratives in storytelling. This article reminds us that while technologies do unlock new affordances for how stories are created and engaged, we should ensure that "technology is at the service of the story."

Two empirical data collections somewhat bear out Vázquez-Herrero's (2024) claims. Martínez-Cano (2024) compared a 2D and 360° virtual reality (VR) video to deliver a narrative about a school-aged student being bullied because of their gender identity to understand if and how this content would encourage empathy via self-reported and physiological measures. Across these measures (and admittedly with a smaller sample size), they found no such effects, such demonstrating that the use of extended reality technologies alone was not enough to simulate significant variance in empathy. More telling is that the 360° VR video was initially more engaging, but not enough to foster engagement with the narrative (and thus, empathy for those in the narrative). Likewise, Green et al. (2024) employed self-determination theory to better understand how audiences engage with IDEA-themed content via 360° VR (inclusion, diversity, equity, and accessibility). Through a rigorous methodology that included quantitative and qualitative data, their findings raised possible drawbacks in that users often expressed feeling a *lack* of autonomy, competence, and relatedness with content and instead, often felt like voyeurs within the space (conversations about Alzheimer's, blindness, and living in a refugee camp). Likewise, perspective-taking was often less about one's own perspective but rather, considerations of close others (noting that self-differentiation is a key to empathy, see Bowen, 1978).

Of course, we also see data that does support the efficacy of immersive storytelling to foster intended effects. Shin and Lee (2024) used monoscopic 2D compared to stereoscopic 3D footage of environmental concerns,

such as damage to coral reefs due to nearby taro farms. Their findings were somewhat complicated in that they revealed curvilinear rather than linear relationships in which message credibility decreased as presence increased initially, but increased once presence was intensified (i.e., after an initial dip). Among other effects that we encourage you to explore in the manuscript, the article shows a complex but still compelling use of stereoscopic 3D to potentially encourage more careful consideration of the environment. Such effects are especially relevant as they suggest that immersive storytelling techniques are especially relevant when space and places are key to the narrative being told (see Barreda-Ángeles et al., 2024).

Very much in this same frame, and pulling from his own award-winning work *Body of Mine* (https://www.bodyofminevr.com), Kostopoulos (2024) sought to empirically validate the extent to which embodying a viewer in the body of a transgender person could directly foster empathy by encouraging a more compassionate engagement with gender dysphoria. Their data demonstrate that users self-reported a better understanding of gender dysphoria, identifying more closely with trans people, and supporting a general notion that people should be free to decide and change their gender, among other results.

3. Immersion Into Other Narratives

Not all stories are designed to foster empathy, and several essays in our thematic issue feature different applications of immersive storytelling. For example, Bustos-Lopez et al. (2024) describe specific elements of user experience and extended reality that are key to helping designers better understand how to craft spaces in the context of transformable architecture. Girginova et al. (2024) likewise advocate for a process of research through design, suggesting that self-identification and empathy between audience and content can be fostered through participatory design processes, especially when focusing on augmented reality campaigns. Their manuscript provides a readily replicable "research through design" framework with numerous examples for the curious reader. Han et al. (2024) likewise demonstrated that one way to improve engagement with VR (and to potentially counteract barriers to these experiences) is through a scaled approach that gradually introduces them to the technologies that they will be engaging, as compared to written or non-interactive video techniques.

While this technology was viewed overall quite positively in the scope applications above, Greber et al. (2024) found that audiences were less enthusiastic about the use of the same technologies for journalistic news. One of the more compelling findings from their study is that while immersive journalism did not influence knowledge of events per se, it did lead to greater perceived knowledge, which might point to an unanticipated "credibility paradox." One of their implications was that such uses might not be suitable for informing audiences, but could be highly useful for situations in which it is important for audiences to feel like they are *part of the story*. Such claims are explored in more detail within their manuscript. In all of this, Kukshinov (2024) reminds us to avoid being seduced by a technologically deterministic approach in presuming that immersive media will de facto improve the impact of stories and likewise, he notes that even comparatively "low-tech" solutions are highly effective at fostering empathy and perspective taking—after all, immersion is a psychological state rather than an inherent feature of technology. Thus, we have to consider the stories being told, the users engaging those stories, and ultimately which modalities are most effective for helping the latter engage the former.

4. Conclusion

These essays were motivated by a companion event hosted by the S. I. Newhouse School of Public Communication—Advances and Opportunities in Immersive Storytelling Technologies (https://newhouse.syracuse.edu/research/newhouse-summit-2024). At that event, and in these essays, we see critical discussions about the past, present, and future of immersive storytelling through extended reality technologies. Just as the development of those technologies shows no signs of slowing, our individual and joint interest in communicating authentic and meaningful stories about the world around us endures. We hope that the essays selected for this thematic issue inspire each of us to critically reflect on and more deeply engage with the intersections of immersive technologies and narrative.

Conflict of Interests

The authors declare no conflicts of interest.

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Dan Pacheco is the Peter A. Horvitz endowed chair in journalism innovation at Syracuse University's Newhouse School, where he teaches storytelling techniques like VR. He co-produced USA TODAY's Harvest of Change, the first VR project in commercial news. Pacheco serves as a juror for the Peabody Awards Interactive Board, recognizing excellence in immersive storytelling. He previously held digital leadership roles at AOL and *The Washington Post*.

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