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Virtual Reality in Public Relations and the Stakes of Digital Privacy: Toward Redefining the Relationship Between Organizations and Their Publics in Immersive Environments

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Abstract:
This study examines the emergence of Immersive Public Relations (IPR) as a transformative approach to organizational communication in the age of Virtual Reality (VR). It explores how immersive technologies are reshaping interactions between organizations and their publics by creating multisensory experiences that enhance engagement, trust, and emotional connection. The paper argues that communication has evolved from traditional interaction to full immersion, where audiences become active participants rather than passive recipients. It also highlights the ethical implications of immersive communication, particularly the collection and use of biometric, behavioral, and emotional data, which pose significant challenges to digital privacy. The study emphasizes the need to balance technological innovation with ethical responsibility by adopting principles such as transparency, informed consent, user autonomy, and Privacy by Design. It concludes that the future of public relations depends on developing responsible immersive communication practices that protect users' rights while maximizing the communicative potential of virtual environments.

Keywords: *Digital Privacy; Immersive Communication; Immersive Public Relations; Privacy by Design; Virtual Reality.*

I. INTRODUCTION

Recent years have witnessed profound transformations in the structure of organizational communication, driven by the rapid advancement of digital technologies, particularly Virtual Reality (VR) and Augmented Reality (AR). These emerging technologies have fundamentally redefined the ways organizations interact with their publics. Audiences are no longer passive recipients of public relations messages; instead, they have become integral participants in communication experiences, engaging with organizations through fully immersive environments that blur the boundaries between the physical and the virtual worlds.

This transition from interaction to immersion—commonly referred to as Immersive Public Relations (IPR)-represents a paradigmatic shift in communication philosophy. Communication is no longer limited to conveying information or shaping perceptions; rather, it is designed to create comprehensive sensory and emotional experiences that enable audiences to interact with, participate in, and experience an organization's presence within sophisticated three-dimensional virtual environments (Baker, 2023).

However, this unprecedented level of immersion introduces a new generation of ethical and communicative challenges, particularly regarding digital privacy. Immersive technologies grant organizations access to categories of personal information that extend far beyond conventional digital data. These technologies can capture highly sensitive biometric and behavioral information, including emotional responses, eye movements, body gestures, facial expressions, and even subtle neurological and cognitive indicators (Madary & Metzinger, 2016).

Against this backdrop, the present study addresses the intersection between the evolution of public relations toward immersive communication and the ethical implications arising from digital privacy concerns. It seeks to reconsider the foundations of the relationship between organizations and their publics within virtual reality and metaverse environments, where technological innovation increasingly intersects with human values, personal identity, and ethical responsibility.

Accordingly, the study is guided by the following central research question:

How is Virtual Reality reshaping public relations practices toward immersive communication, and what digital privacy challenges emerge as users' immersive experiences become a new source of data collection and behavioral influence?

To address this question, the study pursues the following objectives:

1. To examine the concept of **Immersive Public Relations** as an advanced stage in the evolution of organizational communication in the era of Virtual Reality.
2. To identify the characteristics of the emerging relationship between organizations and their publics within immersive environments.
3. To explore the principal threats facing digital privacy in the context of immersive communication.

1. From Interactive Communication to Immersive Communication:

balance between organizational interests and those of its publics by fostering trust, dialogue, and mutual understanding. The digital revolution subsequently introduced concepts such as participatory communication and social media, empowering audiences to contribute to the creation and dissemination of communication messages and giving rise to what has become known as interactive communication.

The emergence of Virtual Reality (VR) and the Metaverse, however, has elevated this interaction to an entirely new dimension: immersive communication. While interactive communication primarily relies on symbolic forms of engagement—such as likes, comments, and content sharing-immersive communication enables individuals to enter the communication experience itself through three-dimensional embodiment, real-time interaction, and multisensory engagement.

Consequently, public relations has evolved from a predominantly symbolic communicative practice into a lived experiential process in which audiences become active participants rather than passive observers. This transformation represents a fundamental departure from conventional communication paradigms by shifting public relations from the realm of representation to that of experience-from narrating reality to enabling audiences to live it. Such a shift offers organizations unprecedented opportunities to design immersive narratives capable of strengthening organizational image, deepening emotional attachment, and cultivating long-term audience engagement.

1.1. Immersive Public Relations: Concept, Characteristics, and Applications:

Immersive Public Relations (IPR) is an emerging concept that has evolved alongside advances in Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) technologies. These innovations enable organizations to communicate with their publics through highly immersive three-dimensional experiences that simulate reality while integrating users into fully interactive virtual environments (Konradsen & Jensen, 2020).

Within this new communication paradigm, the primary objective extends beyond merely delivering organizational messages. Instead, organizations seek to create emotionally engaging and multisensory experiences through which audiences can directly experience corporate identity, organizational values, and brand culture within interactive virtual spaces.

Contemporary research suggests that immersive public relations relies on experiential engagement as a strategic mechanism for building trust and fostering long-term loyalty. Rather than simply hearing or observing a message, audiences experience it firsthand, thereby creating stronger cognitive and emotional connections with organizations (Baker, 2023).

The defining characteristics of immersive public relations include:

1. Complete Sensory Immersion:

Virtual Reality engages multiple human senses—including vision, hearing, and touch—to generate a compelling sense of presence within the communication environment, making users feel physically and psychologically situated inside the virtual experience (Slater & Sanchez-Vives, 2021).

2. Symbolic Embodiment of Organizational Identity:

Organizations can construct virtual worlds that represent their visual identity, corporate

culture, and institutional values, thereby strengthening brand image and facilitating richer forms of organizational storytelling.

3. Emotional Engagement

Unlike conventional communication, immersive communication addresses not only cognition but also emotion. By stimulating users' affective responses, immersive experiences significantly enhance the persuasive power and memorability of communication messages (Makransky & Lilleholt, 2018).

4. Continuous Organizational Presence

Immersive environments—particularly within the Metaverse—allow organizations to maintain a continuous virtual presence unconstrained by geographical location or temporal limitations. This persistent presence creates ongoing opportunities for interaction and relationship-building with diverse stakeholder groups

The growing significance of immersive public relations is reflected in the strategies adopted by leading global organizations.

For example, Nike launched NIKELAND on the Roblox platform, creating an interactive virtual environment where users can explore products, participate in branded experiences, and strengthen their emotional attachment to the brand through immersive engagement.

Similarly, humanitarian organizations such as the International Committee of the Red Cross (ICRC) and the United Nations High Commissioner for Refugees (UNHCR) have employed Virtual Reality to recreate the lived experiences of refugees and victims of armed conflict. These immersive experiences have proven highly effective in enhancing public empathy, increasing humanitarian awareness, and encouraging charitable donations and public support.

Accordingly, immersive public relations has become a powerful strategic approach for redefining organizational communication through immersive storytelling, enabling organizations to influence emotions, construct meaning, and cultivate authentic relationships in ways that conventional communication methods cannot achieve (Dwivedi et al., 2022).

1.2. Publics in Virtual Environments: From Users to Emotionally Engaged Participants:

The transition toward immersive environments has transformed not only the tools and practices of public relations but also the very concept of the public. Within immersive communication environments, individuals are no longer merely consumers of communication content; they become cognitively and emotionally engaged participants who actively experience and co-create the communication process.

Loureiro et al. (2022) argue that Virtual Reality fosters a profound sense of spatial and psychological presence, whereby users no longer perceive themselves as observing a communication message from a distance but rather as existing within the communication environment itself. This heightened sense of presence fundamentally alters the relationship between organizations and their publics by transforming communication into a lived experience rather than a mediated interaction.

The distinctive feature of immersive publics lies in their deep emotional engagement with the communication experience. Sensory stimuli and affective responses continuously interact within virtual environments, producing stronger and more enduring effects on memory, attitudes, and behavioral intentions than those generated through conventional communication channels.

Consequently, some scholars have introduced the concept of the affective public, whose responses are shaped not merely by the quantity or quality of information received but

by the intensity of sensory and emotional immersion experienced within virtual environments (Peixoto et al., 2021).

Nevertheless, this heightened emotional engagement raises complex ethical questions concerning user autonomy within immersive environments. When communication experiences are capable of directly influencing sensory perception and emotional processing, an important question emerges: Does the user remain an autonomous recipient, or does he or she become part of a technologically engineered system designed to shape perception and behavior.

This concern becomes particularly significant in relation to cognitive privacy, which refers to an individual's right to protect thoughts, emotions, mental processes, and subjective experiences from institutional surveillance, manipulation, or exploitation (Ienca & Andorno, 2017).

2. Privacy Challenges in Immersive Communication and the Need for an Ethical Framework for Public Relations:

2.1 Privacy Challenges in Immersive Communication:

Digital privacy represents one of the most critical challenges associated with immersive communication. Unlike conventional digital environments, where organizations primarily collect personal information such as names, locations, or browsing histories, immersive technologies continuously gather extensive biometric, behavioral, and emotional data, including eye movements, vocal characteristics, breathing patterns, facial expressions, and other physiological indicators (Oh et al., 2023).

Consequently, privacy in the age of Virtual Reality and immersive communication has evolved into one of the most complex issues confronting communication scholars and practitioners. It is no longer confined to protecting personal information in its traditional sense; rather, it extends to safeguarding the integrity of the human self by redefining the relationship between individuals, intelligent technologies, and communication organizations.

Immersive Public Relations is fundamentally built upon the creation of sensory-rich, emotionally engaging experiences that transform audiences from passive observers into active participants who continuously contribute data through their bodies, voices, gaze, movements, and emotional reactions. As a result, privacy becomes considerably more vulnerable than in conventional digital environments (West, 2023).

This development enables organizations to construct sophisticated emotional and behavioral profiles of users, which may subsequently be employed to optimize audience targeting, personalize communication experiences, or deliberately influence emotional responses. Such capabilities challenge the classical understanding of privacy and raise fundamental concerns regarding the ethical boundaries of organizational communication.

Bailenson (2022) estimates that Virtual Reality systems are capable of generating more than two million data points per minute during immersive interactions. This unprecedented volume of data creates an environment characterized by continuous behavioral monitoring under the guise of enhancing communication experiences.

Consequently, academic discussions have increasingly emphasized the notion of emotional privacy, recognizing it as an emerging dimension of privacy that deserves explicit protection within immersive environments (Susser, Roessler, & Nissenbaum, 2019).

Organizations adopting immersive public relations strategies therefore assume a dual responsibility. On one hand, they are expected to provide innovative and engaging immersive experiences that strengthen organizational trust and audience relationships. On the other hand, they must ensure complete transparency regarding data collection practices, obtain meaningful informed consent, and protect users against any form of cognitive or emotional manipulation throughout the immersive experience (Carter & Egliston, 2023).

2.2 Levels of Privacy Challenges in Immersive Public Relations:

2.2.1Privacy Between Sensory Perception and Behavioral Data:

Within Virtual Reality environments, data are no longer collected solely through questionnaires, registration forms, or conventional digital interactions. Instead, immersive systems continuously capture information through users' bodily movements, eye-tracking patterns, heart rate, vocal characteristics, breathing rhythms, and other physiological signals. These indicators transform users into continuous sources of biometric and behavioral data, which are analyzed by sophisticated algorithms to infer emotions, preferences, intentions, and behavioral tendencies.

Consequently, organizational communication extends beyond its traditional informational function toward what may be described as emotional surveillance, where communication technologies are capable of monitoring users' affective and cognitive states in real time. Privacy therefore ceases to be merely a technical issue concerning data protection and becomes an existential concern directly related to personal identity, autonomy, and human consciousness

Furthermore, immersive public relations relies heavily on what may be termed self-proximal experiences, in which communication content is designed to stimulate users' senses directly. Such experiences reduce the psychological distance between audiences and communication messages, creating deep emotional immersion that often diminishes users' critical awareness. As a consequence, individuals may unintentionally disclose intimate aspects of themselves within virtual environments where the boundary between voluntary participation and involuntary exposure becomes increasingly blurred (Madary & Metzinger, 2021).

2.2.2 Immersive Public Relations as a Dual Space of Empowerment and Intrusion:

On the one hand, Virtual Reality technologies enable organizations to establish more authentic and meaningful relationships with their publics through realistic simulations, experiential storytelling, and immersive communication. These capabilities enhance audience engagement and strengthen organizational credibility by allowing individuals to experience organizational values rather than merely receiving symbolic representations of them.

On the other hand, these same technologies introduce unprecedented opportunities for subtle manipulation and covert persuasion. Through the continuous analysis of users' behavioral and emotional responses, organizations can personalize communication content according to moments of cognitive vulnerability or emotional susceptibility, thereby maximizing persuasive effectiveness (Slater & Sanchez-Vives, 2022).

This development raises serious ethical concerns regarding what may be described as the colonization of human perception, whereby audiences' sensory experiences become raw material for commercial exploitation and behavioral prediction. Consequently, new ethical questions emerge:

- Who owns sensory and perceptual data generated during immersive experiences?
- Who has the legitimate authority to analyze users' emotions within virtual environments?
- What ethical limits should govern organizations' access to such intimate dimensions of human experience?

These questions place public relations before one of its greatest contemporary challenges: preserving its traditional commitment to transparency, trust, and mutual understanding while operating within technologically mediated environments capable of unprecedented psychological influence (Fisher, 2024).

2.2.3 From Data Management to Digital Identity Management:

Within immersive communication environments, privacy extends far beyond the protection of personal information. It increasingly concerns the governance and protection of embodied digital identity.

Users participating in Virtual Reality environments are represented not merely by static profiles or conventional digital identities, but by sophisticated three-dimensional avatars that embody their physical appearance, movements, behaviors, and psychological presence. These avatars function as digital extensions of the self, enabling individuals to navigate virtual environments in ways that closely resemble real-world interaction. Accordingly, unauthorized access to, manipulation of, or disclosure of these immersive identities constitutes a form of digital intrusion into the self, affecting both the symbolic and biological dimensions of personal identity simultaneously (Oh & Bailenson, 2021).

In this context, the mission of public relations evolves beyond managing organizational communication toward managing organizational presence within immersive environments. Organizations are therefore expected to protect virtual interaction spaces, ensure the security of immersive experiences, and establish transparent standards governing the collection, processing, and analysis of biometric and behavioral data.

To address these challenges, an increasing number of organizations have begun adopting the principles of Privacy by Design, integrating ethical and privacy considerations into the architecture of immersive experiences from the earliest stages of development rather than attempting to address privacy concerns after deployment (Cavoukian, 2020).

2.2.4 An Ethical Framework for Immersive Public Relations:

The rapid evolution of immersive communication necessitates a comprehensive reconsideration of professional ethics within public relations. Traditional ethical codes, which primarily focus on protecting conventional personal data, are no longer sufficient in immersive environments.

A contemporary ethical framework for immersive public relations should incorporate the following principles:

- Respecting users' virtual bodily integrity and personal boundaries.
- Preventing the excessive commercial exploitation of emotional and biometric data.
- Guaranteeing users' right to withdraw from immersive experiences at any time without negative consequences.
- Promoting digital literacy by educating audiences about monitoring mechanisms and data collection practices within immersive environments.

Such principles support a new understanding of ethical communication in immersive spaces, where transparency, informed consent, and user autonomy become indispensable foundations of the relationship between organizations and their publics (Trepte & Masur, 2023).

2.2.5 The Ethical and Communicative Challenge: Defining the Limits of Intervention into the Human Self

Perhaps the greatest paradox of immersive public relations lies in the fact that technologies designed to strengthen organizational relationships, foster trust, and enhance audience engagement may simultaneously become instruments for infringing upon individuals' emotional and cognitive privacy.

The central ethical challenge, therefore, is to strike an appropriate balance between the creative potential of immersive communication and the protection of users' digital dignity and personal autonomy. Human beings should never be reduced to mere sensory responders or data-generating entities. Rather, they must retain the fundamental right to privacy, ambiguity, self-determination, and the freedom to disengage from immersive experiences whenever they choose (Floridi, 2020).

Recent scholarship consequently advocates the adoption of what has become known as **Responsible Immersive Communication**, a normative framework grounded in three fundamental principles (Dwivedi & al., 2022):

1. Transparency

Organizations must clearly disclose the nature of the data they collect, explain the purposes for which these data are processed, and communicate the mechanisms governing their storage, analysis, and potential sharing.

2. User Autonomy and Control

Individuals should be provided with meaningful control over their immersive experiences, including the ability to determine the degree of immersion, regulate data collection, modify privacy preferences, and withdraw from immersive environments without compromising their digital rights.

3. Data Minimization

Organizations should collect only those data that are strictly necessary to achieve the legitimate objectives of the immersive experience. Excessive or unjustified collection of biometric and emotional data should be regarded as incompatible with ethical public relations practice.

Accordingly, privacy should not be viewed as an obstacle to technological innovation. Rather, it constitutes an essential ethical condition for ensuring the legitimacy, credibility, and long-term sustainability of immersive communication in the era of Artificial Intelligence and the Metaverse.

2.2.6 Toward a Privacy Governance Model for Immersive Communication

From a strategic perspective, organizations must develop comprehensive Immersive Privacy Governance frameworks capable of addressing the technological, organizational, legal, and ethical dimensions of immersive communication.

Baker (2023) proposes a multi-level governance framework designed to ensure that immersive communication remains consistent with the principles of responsible innovation and ethical organizational communication.

Furthermore, organizations should integrate the concept of Privacy by Design into every stage of immersive system development. Rather than treating privacy as an issue to be

addressed after deployment, privacy protection should constitute a foundational design principle embedded within the architecture of Virtual Reality systems from the outset (Oh et al., 2023).

Embedding privacy safeguards into immersive environments at the design stage enables organizations to develop communication experiences that are not only technologically sophisticated but also ethically responsible, socially sustainable, and respectful of users' fundamental rights.

II. Results and discussion:

The findings of this study demonstrate that the emergence of Immersive Public Relations (IPR) represents a fundamental transformation in the philosophy and practice of organizational communication. Unlike conventional public relations, which primarily relies on the dissemination of information and symbolic interaction, immersive public relations introduce a communication paradigm centered on multisensory experiences, active audience participation, and emotional engagement. This shift confirms that communication in Virtual Reality environments is no longer limited to message transmission but has evolved into the creation of experiential realities in which publics become integral components of the communication process.

The study further highlights that immersive technologies significantly enhance organizations' ability to strengthen stakeholder engagement, foster trust, and cultivate long-term relationships. By enabling users to experience organizational values rather than merely observe them, Virtual Reality expands the strategic capabilities of public relations beyond persuasion toward experiential relationship building. These findings are consistent with contemporary perspectives that view immersive technologies as catalysts for redefining organizational-public relationships through experiential communication.

However, the findings also reveal that the growing communicative potential of immersive technologies is accompanied by unprecedented ethical and privacy challenges. Unlike traditional digital platforms, immersive environments continuously collect extensive biometric, behavioral, and emotional data, allowing organizations to infer users' psychological states and behavioral intentions with remarkable precision. Consequently, privacy within immersive communication extends beyond the protection of personal information to encompass emotional, cognitive, and behavioral autonomy. This finding suggests that existing privacy frameworks are insufficient to address the unique characteristics of Virtual Reality environments.

An important contribution of this study is its conceptualization of privacy as a communicative value rather than merely a legal or technical concern. The analysis indicates that protecting users' autonomy, preserving informed consent, and ensuring transparency in data collection are essential prerequisites for maintaining public trust in immersive communication. Accordingly, privacy should be integrated into communication strategy as a core ethical principle rather than treated solely as a compliance requirement.

The study also contributes to the growing body of literature by proposing the concept of Responsible Immersive Communication as an ethical framework for future public relations practice. This framework emphasizes transparency, user autonomy, and Privacy by Design as foundational principles capable of reconciling technological innovation with respect for fundamental human rights. Such an approach reflects the evolving role of public relations professionals, whose responsibilities increasingly extend beyond reputation management to include safeguarding digital rights and promoting ethical communication practices in immersive environments.

Despite these contributions, the study remains primarily conceptual and

theoretical. It does not include empirical evidence derived from organizations or users operating within immersive environments, which limits the generalizability of its conclusions. Future research should therefore adopt empirical methodologies—such as surveys, experiments, or qualitative interviews—to examine users' perceptions of privacy, trust, and engagement in Virtual Reality-based public relations initiatives. Comparative studies across industries and cultural contexts would also contribute to a more comprehensive understanding of immersive communication and its ethical implications.

Overall, the study argues that the future of public relations will depend not only on organizations' ability to adopt immersive technologies but also on their capacity to employ these technologies responsibly. Sustainable success in immersive communication requires balancing innovation with ethical accountability, ensuring that technological advancement enhances human experience without compromising individual autonomy, privacy, or digital dignity.

III. Conclusion:

This study demonstrates that Immersive Public Relations represents a new stage in the evolution of organizational communication, in which communication is transformed from the transmission of messages into the creation of cognitive and emotional experiences that audiences actively live within immersive virtual environments.

Virtual Reality does not merely redefine communication practices; it fundamentally reshapes the concept of the public itself. Audiences evolve from passive recipients into active participants, and ultimately into fully immersed actors whose perceptions, emotions, and behaviors become integral components of the communication process.

Despite its transformative potential, this paradigm also introduces complex challenges concerning digital privacy. Emotional, biometric, and behavioral data have become essential resources within immersive communication ecosystems, creating unprecedented ethical and regulatory concerns regarding user autonomy, informed consent, and the protection of fundamental human rights.

Accordingly, the future of public relations in immersive environments will depend largely upon organizations' ability to reconcile technological innovation with ethical responsibility. Sustainable immersive communication requires balancing immersive engagement, technological creativity, and respect for human dignity and digital privacy.

Ultimately, immersive communication should not be regarded merely as a technological opportunity. Rather, it represents an ethical responsibility that calls for a fundamental redefinition of the relationship between organizations and their publics in the age of Virtual Reality and the Metaverse.

- **Recommendations**

Based on the findings of this study, the following recommendations are proposed:

1. **Develop specialized ethical codes for immersive communication** that explicitly address the protection of emotional and biometric data while ensuring complete transparency in data collection and processing practices within immersive environments.

2. **Institutionalize the principle of Privacy by Design**, ensuring that privacy safeguards are incorporated into the architecture of immersive experiences from the earliest stages of development rather than being introduced after deployment.
3. **Establish clear regulatory frameworks** governing data collection in Virtual Reality environments, including explicit provisions regarding permissible categories of data, legitimate purposes of processing, retention periods, and conditions for third-party data sharing.
4. **Empower users to exercise meaningful control** over their immersive experiences by providing accessible mechanisms for adjusting immersion levels, disabling tracking functions, and withdrawing from immersive environments without compromising their digital rights.
5. **Promote interdisciplinary research** on cognitive and emotional privacy, given the limitations of existing theoretical frameworks in explaining the psychological, behavioral, and ethical implications of immersive communication.
6. **Enhance professional training for public relations practitioners** by equipping them with advanced competencies in Virtual Reality (VR) and Augmented Reality (AR) technologies, while emphasizing ethical data management and the protection of users' rights within immersive environments.
7. **Encourage participatory design approaches** by actively involving users in the development of immersive communication experiences, thereby ensuring that such environments respect human values, promote meaningful engagement, and avoid excessive emotional manipulation or cognitive exploitation.

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