Augmented Reality and Anticipated Life Consequences

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This study examines how initial exposure to immersive augmented reality (AR) experiences influences consumers' expectations regarding the long-term consequences of integrating such technologies into their everyday lives. Positioned within the broader evolution of spatial computing, the study addresses a critical gap in the literature by shifting the focus from short-term consumer responses to the anticipated life consequences of AR adoption, particularly among first-time users (Barta et al., 2025).

Although AR technologies are rapidly advancing and becoming increasingly accessible, academic research has predominantly focused on immediate outcomes such as attitudes, engagement, or purchase intentions (Rauschnabel et al., 2019; Hinsch et al., 2020). Consequently, there is limited understanding of how consumers cognitively process and anticipate the broader implications of AR for their future lives. To address this limitation, the study adopts inspiration theory as its central theoretical framework, proposing that AR experiences trigger motivational processes that extend beyond the moment of interaction and shape future-oriented cognition (Thrash & Elliot, 2003, 2004).

From a technological standpoint, the study situates AR within the continuum of extended reality (XR), distinguishing it from virtual reality (VR) based on the nature of user experience. While VR creates telepresence by immersing users in fully artificial environments (Cowan & Ketron, 2019), AR generates local presence, whereby virtual content is perceived as embedded within the physical environment (Schein et al., 2025). This hybrid experiential context allows users to simultaneously engage with real and virtual elements, thereby facilitating cognitive reframing processes and enabling the imagination of alternative realities (Mukherjee et al., 2020).

Furthermore, the article highlights the transition toward ubiquitous AR, characterized by the emergence of the so-called AR Cloud, which enables persistent and location-based digital augmentation of reality (Alimamy & Jung, 2025). Within this paradigm, AR is expected to become as pervasive as smartphones, fundamentally transforming how individuals interact, consume, and communicate (Regenbrecht et al., 2024). Such developments underscore the importance of understanding not only how consumers respond to AR in the present, but also how they envision its integration into their future lives.

To explain these processes, the study relies on inspiration theory, conceptualizing inspiration as a dual-stage process consisting of "inspired-by" and "inspired-to" (Thrash & Elliot, 2004; Böttger et al., 2017). The inspired-by stage reflects the activation of new ideas and the expansion of cognitive possibilities, whereas the inspired-to stage represents the intrinsic motivation to act upon those ideas. Importantly, inspiration is distinguished from general motivation in that it is externally evoked yet internally driven, functioning

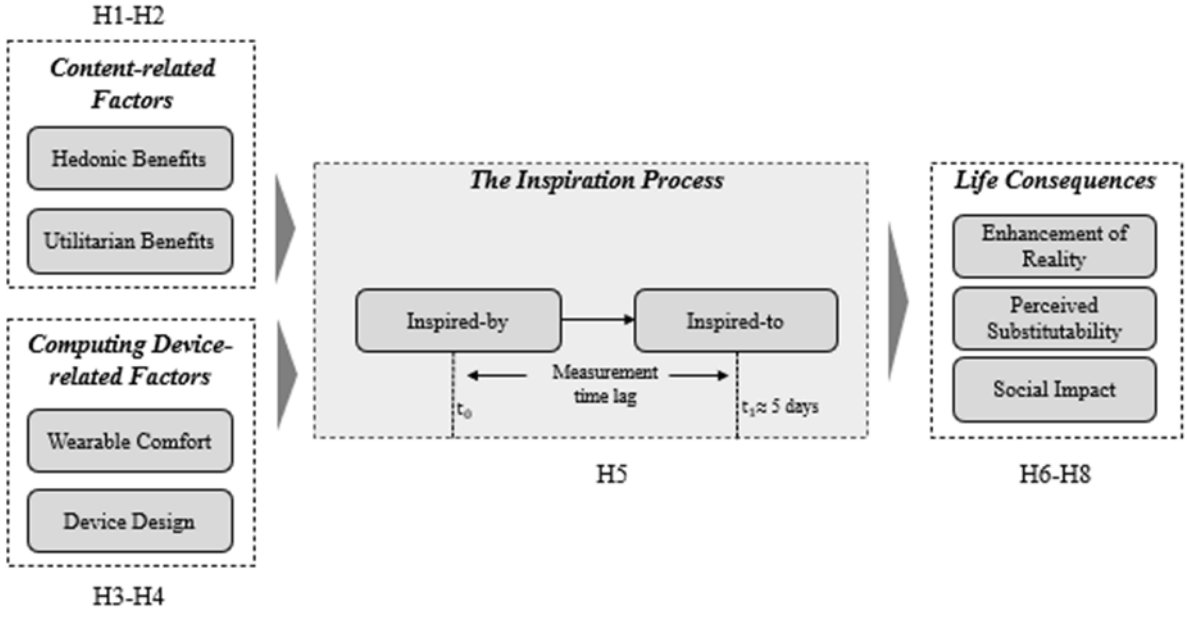
as a bridge between idea generation and goal-directed behavior (Thrash & Elliot, 2003; Ryan & Deci, 2000).

In the context of AR, this distinction is particularly relevant, as immersive technologies possess unique characteristics—such as interactivity, presence, and sensory richness—that make them especially effective in eliciting inspiration (Huang & Liao, 2017; Yim et al., 2017). Prior research has demonstrated that AR-induced inspiration can influence consumer attitudes and behavioral intentions (Rauschnabel et al., 2019; Zanger et al., 2022), yet these effects have primarily been examined within cross-sectional designs. The present study extends this line of research by introducing a temporal dimension, thereby enabling the examination of the persistence of inspiration over time.

Building on this theoretical foundation, the study proposes a conceptual model in which inspiration mediates the relationship between AR experience characteristics and anticipated life consequences (see Figure 1). The model integrates both content-related factors, such as hedonic and utilitarian benefits, and device-related factors, such as wearable comfort and design (Hilken et al., 2017; Rauschnabel, 2018). Hedonic benefits refer to the emotional gratification derived from using AR, including enjoyment and entertainment, whereas utilitarian benefits capture the functional value and perceived usefulness of the technology (Davis, 1989). These factors are expected to enhance the inspired-by state by either stimulating positive affect or facilitating problem-solving processes (Hinsch et al., 2020; Zanger et al., 2022). Additionally, the study considers wearable comfort as a key antecedent, arguing that ergonomic factors play a critical role in shaping immersive experiences and enabling cognitive engagement (Resnick & Rosenbaum, 2013). In contrast, although device design is theoretically relevant in influencing user experience (Bloch, 2011), its role in generating inspiration remains empirically uncertain.

Figure 1

Researh model



The empirical analysis is based on a time-lagged research design, which constitutes a significant methodological contribution. Data were collected from 148 participants with no prior experience using AR headsets. In the first stage, participants interacted with AR applications using the Microsoft HoloLens and subsequently reported their perceptions of hedonic and utilitarian benefits, wearable comfort, device design, and their inspired-by state. Approximately five days later, participants completed a second survey measuring their inspired-to state and their expectations regarding three outcome variables: enhancement of reality, substitution of physical products, and social impact.

The use of partial least squares structural equation modeling (PLS-SEM) allowed for the simultaneous estimation of measurement and structural relationships (Hair et al., 2022). The results indicate that both hedonic and utilitarian benefits significantly and positively influence the inspired-by state, thereby confirming that both affective and functional dimensions are critical drivers of inspiration. Wearable comfort also exhibits a positive effect, highlighting the importance of ergonomic factors in immersive experiences. However, device design does not significantly influence inspiration, suggesting that aesthetic considerations may be secondary to experiential and functional attributes in this context.

The findings further reveal a strong and significant relationship between inspired-by and inspired-to, even when measured across a temporal lag. This result provides robust evidence for the temporal stability of the inspiration process, demonstrating that the effects of AR experiences persist beyond the immediate interaction. This insight represents a notable advancement over prior research, which has largely focused on short-term effects measured within a single session (Rauschnabel et al., 2019; Hinsch et al., 2020).

Most importantly, the inspired-to construct significantly influences all three anticipated life consequences. Consumers who experience higher levels of inspiration are more likely to envision using AR to enhance their perception of reality, to substitute physical objects with virtual alternatives, and to engage in new forms of social interaction within AR-enabled environments. These findings align with the theory of sociotechnical imaginaries, which posits that technological innovations shape how societies envision and organize their futures (Jasanoff & Kim, 2015). In this sense, AR does not merely influence immediate consumer responses but also contributes to the construction of future-oriented mental models regarding how individuals will live, work, and interact.

From a theoretical perspective, the study makes several important contributions. First, it extends inspiration theory by demonstrating its applicability and temporal robustness within the context of immersive technologies. Second, it positions inspiration as a central mediating mechanism linking AR experience characteristics to high-level consumer outcomes, thereby reinforcing its explanatory power relative to alternative constructs such as novelty or awe (Hinsch et al., 2020). Third, it broadens the scope of AR research by introducing life-level consequences as dependent variables, moving beyond traditional marketing outcomes such as attitudes and purchase intentions. Finally, the study highlights the importance of hardware-related factors, particularly wearable comfort, which have often been overlooked in prior research focusing primarily on content-related variables (Rauschnabel et al., 2024).

From a managerial standpoint, the findings suggest that even a single exposure to AR can generate lasting effects on consumers' perceptions and intentions. This implies that organizations can leverage AR as a strategic tool to stimulate creativity, inspire new use cases, and facilitate technology adoption. Furthermore, the results indicate that effective AR experiences require a balance between hedonic and utilitarian value, as both dimensions contribute to the inspiration process. The anticipated substitution of physical products with virtual alternatives and the emergence of new forms of social interaction also highlight the disruptive potential of AR for existing business models and consumer ecosystems (Flavián & Barta, 2022).

Despite its contributions, the study acknowledges several limitations. The analysis focuses primarily on positive anticipated outcomes, leaving the potential negative consequences of AR, such as overdependence or ethical concerns, relatively unexplored (Regenbrecht et al., 2022). Additionally, while inspiration is identified as a key mediator, other psychological mechanisms, such as curiosity, perceived realism, or perceived control, may also play a role and warrant further investigation. Future research should also explore the integration of additional sensory modalities, such as haptics, and examine how AR adoption varies across cultural and socioeconomic contexts.

In conclusion, the article provides a comprehensive and forward-looking examination of how immersive AR experiences influence consumers' expectations about their future lives. By integrating inspiration theory with a time-lagged empirical design, the study demonstrates that the impact of AR extends far beyond immediate interactions, shaping how individuals imagine and construct their future realities in an increasingly digitized and augmented world.

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