The Impact of Consumer Imagination and Narrative on Brand Intent in AR Advertising

Ching-Jung Fang, Ming Chuan University, Taiwan

Abstract

The integration of augmented reality (AR) with the advertising and marketing industry has become a global phenomenon, with the potential to introduce unique communication models to the field. However, most research on AR has focused on technological operations and interactivity, with limited attention given to consumer perceptions of AR content narratives and consumer fantasy imagery. Scholars have noted that narratives delivered through mediums such as films, books, images, or videos can concentrate the viewer's cognitive abilities on the narrative experience, allowing them to engage in situational imagination, identify with the story, and even evoke positive or negative emotional responses. This can lead to a temporary psychological detachment from reality. AR advertising possesses the unique capability of enhancing unfinished stories within real environments, thereby inspiring consumer imagination through immersive experiences and completing brand communication. This study aims to explore, from the consumer's perspective, how consumer fantasy and imagination trigger virtual narratives in AR, subsequently generating brand intent. An experimental design was employed, using both narrative and non-narrative AR stimuli, with a sample of 250 participants. The findings indicate that narrative advertising significantly impacts advertising attitudes, brand attitudes, and behavioral intentions. The level of consumer imagination significantly moderates the effect of narrative transmission on brand intent. Specifically, when participants possess higher imaginative capacity, the impact of narrative transmission on behavioral intent is more pronounced, whereas participants with lower imaginative capacity show no significant relationship between narrative transmission and brand intent.

Keywords: narrative, imagination, augmented reality, advertising design

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Introduction

The rapid growth of augmented reality (AR) has revolutionized advertising and marketing, capturing increasing attention from researchers and practitioners. Scholz and Duffy (2018) classify AR consumers into two categories: active users, who directly interact with AR experiences, and passive observers. These groups perceive AR differently, making strategic planning essential for marketers. The ENTANGLE framework (Experiences, Nourishing Engagement, Target Audiences, Aligning AR with Marketing Programs, Neutralizing Threats, Goals, Leveraging Brand Meanings, Enticing Consumers) serves as a guide for creating immersive AR experiences that encourage consumer participation.

While AR has significant potential in integrated marketing, existing research largely focuses on operational and interactive aspects, with limited exploration of consumer perceptions, AR narratives, and imaginative engagement (Scholz & Duffy, 2018). This gap highlights the need for deeper insights into how AR can effectively engage consumers.

Fiske (2000) emphasizes that successful communication relies on shared understanding between sender and receiver. Traditional consumer experiences often prioritize efficiency over creativity and enjoyment (Jessen et al., 2020). AR bridges this gap by offering unique opportunities for creative communication, enriching both online and offline interactions and providing insights into how consumer imagination can drive engagement.

Despite its potential, research into how AR fosters creative consumer engagement remains scarce. Hilken et al. (2018) argue that guided AR experiences are critical to delivering satisfying customer journeys. This study adopts a consumer-centric perspective to explore how narrative and non-narrative AR designs influence consumer perceptions and how imagination in AR advertising impacts brand intention.

Literature Review

Narrative Transmission in Advertising

Narratives are widely applied across disciplines, including marketing advertising. Padgett and Allen (1997) highlight narrative advertising as a key research focus, explaining how consumers interpret services and experiences. Bruner (1986) identifies two cognitive modes: the paradigmatic mode, which relies on logical reasoning, and the narrative mode, which constructs meaning through goals and significance.

Narratives shape perceptions and interpretations by fostering participation and self-reflection, positioning experiences within time and place through creative expressions. These stories, evaluated via causal structures and temporal sequences, evoke strong emotional responses (van Laer et al., 2014) and enhance brand persuasion. Consumers, as travelers in a narrative journey, are influenced by immersive storytelling experiences.

This study examines the impact of narrative AR on brand intention, proposing the following hypotheses: narrative AR fosters stronger brand intention, better advertising and brand attitudes, and greater action intention compared to non-narrative AR.

H1: Narrative AR leads to stronger brand intention compared to non-narrative AR.

H1a: Narrative AR leads to more favorable consumer advertising attitudes compared to non-narrative AR.

H1b: Narrative AR leads to more favorable consumer brand attitudes compared to non-narrative AR.

H1c: Narrative AR leads to stronger consumer action intention compared to non-narrative AR.

Customer Fantasy and Imagination

Hunt (1994) suggests that brands solve consumer problems by transforming needs into symbolic advertisements. Creativity is defined as developing brand propositions to address consumer challenges (Mehta & Zhu, 2016). Waade (2010) emphasizes imagination as key to understanding advertisements, reflecting their effectiveness and aesthetic impact. Imaginative consumption includes thoughts, fantasies, and expectations formed in consumers' minds.

Seregina (2014) notes that technology connects real and imagined worlds, linking fantasy, nostalgia, and play. Holbrook and Hirschman (1982) introduced "consumer fantasies," highlighting their role in experiential marketing. Consumer fantasies transport individuals to imagined roles, altering experiences.

In AR advertising, virtual objects blend with reality, creating a hybrid environment. Consumers' imagination bridges these worlds, activating advertising cognition. Thus, the study hypothesizes that viewers' imagination enhances AR narrative transmission, influencing brand intention, advertising and brand attitudes, and action intentions.

H2: Viewers' imagination enhances the effect of AR narrative transmission on consumer brand intention.

H2a: Viewers' imagination enhances the effect of AR narrative transmission on consumer advertising attitudes.

H2b: Viewers' imagination enhances the effect of AR narrative transmission on consumer brand attitudes.

H2c: Viewers' imagination enhances the effect of AR narrative transmission on consumer action intention.

AR Activation Models and Narrative Design

According to Scholz and Smith (2016), AR advertising can be classified into five models: Active Print/Packaging, Bogus Window, Geo-Layer, Magic Mirror, and Projection Mapping. This study employs the Active Print/Packaging method, where consumers engage with printed material enhanced with AR layers. This approach effectively connects the physical and digital realms, fostering interactive storytelling.

While non-narrative AR formats focus on visual or sensory engagement, narrative AR integrates sequential events, characters, and user participation to create a more compelling brand experience. Understanding the effectiveness of these formats—and the role of consumer imagination in each—can guide marketers in designing impactful AR campaigns.

Methods

This study utilized a 2 (narrative vs. non-narrative AR) × 1 (viewer imagination) between-subjects design to examine how AR content type influences brand intention and how consumer imagination moderates this relationship. The independent variable was the type of AR experience (narrative or non-narrative), and the moderator variable was the level of

imagination. Dependent variables included advertising attitude, brand attitude, and action intention.

Experimental Stimuli

The experimental material, titled Taiway No.9 XR Experience Box, was designed to evoke Taiwan's historical railway culture. The narrative AR version included:
- An IP character presenting stories about Taiwan's four major industries.
- An interactive map leading users through a Q&A storytelling sequence.
- Embedded AR triggers that combined online and offline exploration.

In contrast, the non-narrative version featured:
- Static AR visualizations without storytelling structure.
- Interactive displays focusing on visual exploration and spatial scanning.
- No sequential or character-driven content.

Both conditions were designed using the Active Print/Packaging model and distributed through scannable posters.

Participants

A total of 250 valid responses were collected. Participants were recruited from universities and cultural exhibitions. Demographic breakdown:
- Gender: 76% female, 24% male
- Professional background: 75.6% with a design-related academic

This distribution ensured participants had adequate familiarity with AR and visual storytelling, increasing the validity of their responses.

Measures

All variables were measured using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The constructs and their measurement items included:
- Imagination: 12 items from Wang and Huang (2015)
- Brand Intention: 11 items adapted from Feng and Xie (2019) and Smith et al. (2008), Advertising Attitude (5 items), Brand Attitude (3 items), Action Intention (3 items)

Reliability analysis showed acceptable Cronbach's alpha values (0.705 to 0.913) and composite reliability (0.711 to 0.916), indicating strong internal consistency.

Results

Reliability and Validity, Cronbach's α ranged from 0.705 to 0.913, and Composite Reliability (CR) values ranged from 0.711 to 0.916. Correlation analysis confirmed good discriminant validity, supporting the robustness of the measurement model.

MANOVA and Hypothesis Testing, MANOVA results showed statistically significant effects of narrative AR on all three outcome variables (advertising attitude, brand attitude, and action intention), confirming H1 and its sub-hypotheses.

Moderation Analysis, Using PROCESS Model 1, moderation analysis revealed:
- Narrative transportation negatively impacted attitudes.
- Viewer imagination had a strong positive effect on all outcomes.
- Interaction effects (X × M) showed that high imagination moderated the relationship positively. Thus, H2 and all sub-hypotheses were supported.

Consumers with high imagination experience AR ads similarly to engaging with art, reflecting personal meaning. Narrative AR is most effective when aligned with consumer imagination, suggesting marketers should tailor content based on audience creativity levels.

Conclusion

Advertising communication goes beyond promoting products; effective communication relies on aligning consumers' imagination and fantasy with brand identity. Imaginative individuals, often described as daydreamers, tend to focus less on the material attributes of a brand and more on the higher emotional or spiritual joy promised by the brand's image. This aesthetic relationship between the audience and advertising parallels how people appreciate artworks or museum exhibits. A well-crafted advertising narrative activates a reflective mode of reception, allowing consumers to project their feelings and memories, create images, and experience fantasies and dreams. This reflection evokes sensory experiences tied to the brand and mirrors how audiences engage with consumer culture, fashion, and lifestyles (Waade, 2010).

In recent years, marketers have utilized AR to provide richer brand messages, propositions, and content that intersects with consumers' real-world experiences. Through autonomous personal devices, consumers freely manipulate and interact with AR, engaging deeply with the brand to understand its attributes and benefits.

The study revealed that individuals with higher imagination exhibit significantly stronger narrative transmission effects, particularly in terms of action intention. Conversely, for individuals with lower imagination, no significant relationship was observed between narrative transmission and brand intention.

Future advertising designs should emphasize integrating narratives with AR technology to enhance brand communication effectiveness. Advertisers should also tailor content based on audience characteristics, particularly levels of imagination, to achieve optimal marketing outcomes.

Acknowledgements

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Contact email: cjfang@mail.mcu.edu.tw