Augmented Reality in Advertising: An Exploratory Study

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The foreseeable future shows unprecedented growth for augmented reality (AR) technology in marketing. Previous literature showed mixed findings regarding the effectiveness of using augmented reality in marketing. This study provides evidence of the positive effect of AR from a brand-new standpoint of advertising and marketing professionals. The authors employed in-depth interviews to uncover and explain the phenomenon of using AR in marketing. The study found that despite hurdles and challenges, advertisers have a positive attitude toward AR, and ad agencies are likely to adopt AR in future marketing campaigns. The study sheds light on the attitude of advertisers towards the use of AR in marketing, and their anticipated outcomes. The findings provide guidance for brands and firms when making marketing decisions to utilize AR technology.

Keywords: augmented reality, AR, advertising, marketing, technology adoption

INTRODUCTION

Augmented reality has been increasing in popularity throughout the 21st century. The contemporary definition of augmented reality is an interactive experience of the real world where virtual objects are ported into the real world. The popular mobile app Pokemon Go propagated the idea of augmented reality in 2016. Before it was widely accepted and used, augmented reality was developed by Ivan Sutherland in 1968 at Harvard University (Javornik, 2016). It served bureaucratic purposes in the army and industrial fields. Commercial use of AR mainly grew from German agencies in Munich in 2008. A subtopic of commercial use in which AR has meddled is tourism and apparel. In the early 21st century, AR developed for the touring industry and gained a foothold in the vastly increasing industry. Google Sky Map, Google Translate, and many more are designed for users to travel across the world. On the fashion side of AR, agencies like Holition, ModiFace, and Total Immersion have allowed their customers to dress themselves up. This allows them to assess their looks with their fashion choices.

Facebook has been one of the pioneers of AR in marketing. Facebook has allowed users to sample accessories to improve product retention among consumers. According to the National Retail Federation, $761 billion worth of products were returned in 2021 (Inman, 2022), the height of the pandemic. This was due to the customers' inability to sample merchandise like pre-covid. Another example is the beauty franchise Sephora. Sephora is one prominent example of the benefits of using AR in marketing. Sephora uses AR technology to allow shoppers to "test" beauty products before making a purchase. This has allowed

Sephora to stay afloat amid the surging Covid-19 Pandemic. Their implementation of AR in marketing has improved customer interaction immensely. Their product testing software has received more than 8.5 million visits from its launch in 2016 to the beginning of 2019. More and more people want AR to be implemented into marketing. A study by PRNewsWire found out more than 80% of customers say that AR would improve their shopping experience (Wool & Water, 2021).

The foreseeable future shows unprecedented growth for AR technology in marketing. The proof of AR being able to increase profits and sales during the pandemic is one that many businesses may have been paying attention to. In order to increase their profits, many businesses will hop on the trend of implementing AR in marketing. The future holds wonder for augmented reality in marketing.

The goal of this study is to explore the effect of augmented reality in advertising from industry professionals' perspectives. This study is of both theoretical and practical importance regarding the utilization of augmented reality. Theoretically, previous literature showed mixed findings regarding the effectiveness of using augmented reality in marketing (for example, Hoffmann et al., 2022; Javornik et al., 2021). This study provides insights from a brand-new standpoint of advertising and marketing professionals, who are the insiders of the industry. Practically, our findings provide guidance for brands and firms when deciding on marketing strategies. The study shed light on current practices and future forecasts on the use of augmented reality in advertising.

LITERATURE REVIEW

According to the cues-filtered-out theory (Sproull & Kiesler, 1986), when consumers have the option to choose content that they receive from a brand, the non-selected content will be ignored (filtered out). In this paper, the authors argue that when giving consumers more control and an overwhelming amount of content through augmented reality, consumers feel that they miss a lot of cues. Hoffmann et al. (2022) found that using augmented reality in marketing in a retail setting sometimes can backfire. When consumers can choose AR content while there is too much content to choose from, they feel it's hard to comprehend all information about a product. In this situation, consumers are less likely to buy the product (i.e., lower purchase intention).

On the contrary, media richness theory (Daft & Lengel, 1986) posits that rich media can help people better understand information. For example, a Zoom video conference is a richer communication medium than a phone call, because video conferencing does not only transmit audio information, but also visual cues such as body language and facial expressions. Besides cues, interactivity also increases media richness (Qin et al., 2021). Since consumers interact with augmented reality when it is used in marketing, augmented reality is regarded as rich media. Javornik et al. (2021) found that using AR to recreate the exact properties of their products is difficult. However, if done correctly, AR will enhance the experience and allow the customers to create a deeper bond with the brand. Their findings imply that uniqueness in AR marketing is an incredibly important trait to have. Since AR is the future, managers should invest in higher-quality AR technology for their companies. With that uniqueness should also include the luxuriousness of their products.

Furthermore, Rauschnabel et al. (2022) suggest that AR can be used for organizational, marketing, and educational purposes for employers and customers. AR will be extremely common in the future for both marketing and non-marketing purposes. AR will contribute greatly to society as a whole in the future. Meanwhile, they also identified a negative side of AR. AR creates an unrealistic fantasy in which people live, "shielding" us from the real world.

To answer the call for further research on AR from Rauschnabel et al. (2022), this study explored the following research question: How could ad agencies use AR in a unique and effective way to attract consumers?

METHOD

With aims to understand the actual practice of using AR rather than to predict usage, qualitative methods are more appropriate (Braybooke, 1965). This study employed in-depth interviews to uncover and explain the phenomenon of using AR in marketing.

Recruitment and Sampling

Informants who worked or are working as advertising or marketing professionals were recruited through a convenience sample. No incentives were offered to the sample for participation. The sample included 2 female and 4 male informants who have worked or are working at an advertising agency or a company's marketing department. They represent varying geographic regions and are between the ages of 25-45. The authors assigned pseudonyms to informants to maintain anonymity and privacy. More detailed information about the sample is in Table 1.

TABLE 1
INFORMANT TABLE

Pseudonym	Gender	Years of working in advertising/marketing
Elsa	female	10
Christina	female	10
Malcom	male	1
John	male	10
Martin	male	5
David	male	13

Procedure

The interviews began by asking participants' general views on AR. And they were also asked if they self-identify as themselves as honest or not. Further questions were asked regarding the benefits and drawbacks of using AR in advertising. Lastly, questions about their employers' plans of adopting AR in future campaigns, were asked. The structured interviews lasted 20 to 35 minutes. The interviewer took notes that included key or representative quotes. The authors collected data in 2022.

Data Analysis and Theme Development

A thematic analysis approach was used to better understand the attitudes and experiences of informants. This approach helped to identify, analyze, and report some of the common themes informants encountered (Braun and Clarke 2006).

Thematic analysis began first by coding for intriguing patterns that were found during the interviews and field notes. A list of the initial codes included: innovation/creativity, advanced technology, competitive advantage, high cost, tech constraints, customer experience, audience engagement, and adoption of AR. Following Braun and Clarke's (2006) thematic plan, a search for themes throughout the field notes was reviewed, defined, and renamed during the process.

Lastly, the authors grouped similar findings and observations into categories of meaning. Such grouping helped reveal emergent patterns. Afterward, respondent narratives were developed for each interview to condense data to only key themes illustrated in the next section.

RESULTS

The purpose of the study was to explore how advertisers use AR in a unique and effective way to attract potential car buyers. With that goal in mind, informants shared rich insights about using AR in advertising. Four major themes were found in the study: favorable perception of AR, benefits for brands, hurdles and challenges, and intention to adopt AR. Each theme is discussed in more detail below.

Favorable Perception of AR

Most advertisers have a favorable perception of AR. They regard it as an innovative and creative way to interact with consumers. They believe that car brands should adopt this advanced and cutting-edge technology to create a leading brand image.

Innovation and Creativity

Most advertisers have a favorable perception of AR. As uncovered in the interviews, advertisers view AR as an innovative and creative way to interact with consumers:

> I think consumers can be attracted by creative, interesting and high-quality AR advertising. (Elsa)

> It's innovative, and car brands want to be known for being innovative, fresh, and cutting-edge. (Malcom)

> John stated that AR "allow(s) brands to highlight its product/service's USP inventively and sophisticatedly."

Advanced Technology

Advertisers believe that car brands should adopt this advanced and cutting-edge technology to create a leading brand image. Most informants indicated that AR is an advanced technology that will not only get market attentions, but also potentially drive sales for car brands:

A company that uses high-end and advanced technology in their business marketing will also promote and uplift its brand image and identity. (John)

On top of that, AR ads might bring additional value to create perception this car brand itself is at the leading edge of science and technology, which is definitely beneficial to brand image, influence the brand consideration and the final purchase decision. (Christina)

Benefits for Brands

The informants discussed the multiple benefits of AR for brands. AR marketing with the right resources can help you get an edge over other companies. Their design can attract new customers and employees. These designs are one of a kind. Throughout the current pandemic, AR has been used to help customers look for the right products to buy and create a stronger connection to such products.

AR marketing allows companies to widen their horizon, coming up with unprecedented designs with wider opportunities and resources. AR is a unique tool for companies to create finer advertisement campaigns, thus creating more sales. This customized experience for customers will undoubtedly grow their customer base.

This will deepen relationships between the customer and the product, while also creating stronger incentives to return.

Competitive Advantage

The implementation of AR in marketing improves customer growth and sales. As a common theme in interviews, AR helps companies generate more sales and have an edge over competing companies.

"I think consumers can be attracted by creative, interesting and high-quality AR advertising." (Elsa)

"AR ads have advantages for it's engagement attribution." (Christina)

Customer Experience Enhancement

AR allows for more personalized ads for the customer and allows consumers to create the exact looks they want it to look.

"AR ads will be able to create more personalized experience for consumers. Take car color as example, AR ads can allow consumers to choose the color they prefer, which will for sure enhance the product experience." (Christina)

"For car purchase, product features, specs and especially driving experience are critical to purchase decision. It's quite hard for traditional formats of Ads to provide the experience on the scene." (Christina)

Audience Engagement

AR uses engaging marketing to create deeper relationships with the customer. It allows the customer to feel connected with the product while simultaneously creating incentives to return.

"It will help brands to build a stronger connection with its audience, allowing consumers to form positive associations to brands that they have better engagement with." (Martin)

"The brand is able to engage and showcase its potential buyers of the product specialty and experiences digitally." (John)

"AR is able to help brands to provide a user experience that is way more authentic and engaging." (John)

Hurdles and Challenges

Despite the benefits, the authors also identified hurdles and challenges from the interviews. AR advertising requires brands to invest heavily in AR technology to achieve a design to convey their company's message. Strong financial support is needed to counteract failure. New positions need to be created and filled to achieve competent AR marketing.

Technological Restraints

While AR may be prominent in the evolution of marketing, it still has limits.

"The technology may not yet be at a point to accomplish them. Examples could be getting the true feel of sitting in the vehicle." (Malcolm)

"Good experience of AR ads has high requirements to the speed of internet. If consumers would like to save mobile data bundle or their internet is not strong indoor or outdoor, that will ruin the customer experience." (Christina)

High Cost

To implement AR, one must have substantial resources to create an efficient marketing strategy around AR.

"Given a single commercial can cost upwards of $1M, this is an extremely high ROI strategy that scales." (Malcolm)

"Current challenges though, could be the cost and technology (convenience of getting this experience)" (Martin)

Intention to Adopt AR

The informants gave more weight to AR's benefit than hurdles. They believe that AR is a promising future avenue for marketing. They indicated that their companies are likely to use AR for clients. Its interactive capabilities are shown to be incredibly useful and effective in the always-evolving market. AR can also help customers who are unable to visit a brick-and-mortar store.

"As leading internet and ecommerce company, I believe no one would like to miss this opportunity" (Christina)

"Yes, [my company] Amazon has been experimenting with AR to leverage its brand growth for a while" (Martin)

"I think they will - media is changing [quickly and all companies will eventually develop AR solutions" (David)

"With the rise of metaverse marketing, AR and VR is definitely a technology to be invested in." (John)

CONCLUSION

By contacting and receiving information directly from those most involved in the industry, the authors can establish the connection between AR Marketing and the future. Ad agencies could use AR in unique and effective ways to attract consumers. AR marketing allows companies to widen their horizon, coming up with unprecedented designs with wider opportunities and resources. AR is a unique tool for companies to create finer advertisement campaigns, thus creating more sales and more clients in order to revolutionize and create unprecedented campaigns for initiating, managing, and implementing paid marketing communications. This customized experience for customers will undoubtedly grow their customer base. These benefits were also emphasized by our informants and interviewees. These agencies would be able to utilize this information and weaponize their thirst and hunger to create a new frontier to positively influence and contribute to the ever-growing economy of the world.

REFERENCES

Braun, V., & Clarke, V. (2006, January). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, *3*, 77–101.

Braybrooke, D. (1965). *Philosophical Problems of the Social Sciences*. New York: Macmillan.

Daft, R.L., & Lengel, R.H. (1986). Organizational information requirements, media richness and structural design. *Management Science*, *32*(5), 554–571.

Hoffmann, S., Joerß, T., Mai, R., & Akbar, P. (2022). Augmented reality-delivered product information at the point of sale: When information controllability backfires. *Journal of the Academy of Marketing Science*, pp. 1–34.

Inman, D. (2022, January 25). *Retail Returns Increased to $761 Billion in 2021 as a Result of Overall Sales Growth.* National Retail Federation. Retrieved from https://nrf.com/media-center/press-releases/retail-returns-increased-761-billion-2021-result-overall-sales-growth

Javornik, A. (2016, October 4). The mainstreaming of augmented reality: A brief history. *Harvard Business Review*. Retrieved from https://hbr.org/2016/10/the-mainstreaming-of-augmented-reality-a-brief-history

Javornik, A., Duffy, K., Rokka, J., Scholz, J., Nobbs, K., Motala, A., & Goldenberg, A. (2021). Strategic approaches to augmented reality deployment by luxury brands. *Journal of Business Research*, *136*, 284–292.

Qin, H., Peak, D.A., & Prybutok, V. (2021). A virtual market in your pocket: How does mobile augmented reality (MAR) influence consumer decision making? *Journal of Retailing and Consumer Services*, *58*, 102337.

Rauschnabel, P.A., Babin, B.J., tom Dieck, M.C., Krey, N., & Jung, T. (2022). What is augmented reality marketing? Its definition, complexity, and future. *Journal of Business Research*, *142*, 1140–1150.

Sproull, L., & Kiesler, S. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science*, *32*(11), 1492–1512.

Wool & Water. (2021, October 25). *Consumers Want More AR Capabilities for In-Store and Online Shopping - They Just Don't Want to Rely on Snapchat for Them*. Retrieved from https://www.prnewswire.com/news-releases/consumers-want-more-ar-capabilities-for-in-store-and-online-shopping--they-just-dont-want-to-rely-on-snapchat-for-them-301407564.html