King's Research Portal

Document Version
Early version, also known as pre-print

[Link to publication record in King's Research Portal](#)

MOBILE TECHNOLOGY AND ADVERTISING: MOVING THE RESEARCH AGENDA FORWARD

Stefan F. Bernritter, Shintaro Okazaki, and Douglas C. West

King's Business School, King's College London, Bush House, 30 Aldwych, London WC2B

4BG, United Kingdom.

stefan.bernritter@kcl.ac.uk

shintaro.okazaki@kcl.ac.uk

douglas.west@kcl.ac.uk

Introduction

Mobile technology offers advertisers not only an ever-growing global audience of "always-on" multi-functional smartphone capability, but also instantaneous access to their contextual information. Location-based, environmental and behavioral data are increasingly being used to apply novel targeting and creative strategies for the development of new forecasting models. The available evidence suggests there is widespread dissemination and broad acceptance of mobile technology in the marketplace, as well as very promising opportunities for advertisers to engage with their customers in novel ways. In 2021, over six billion people worldwide had smartphone subscriptions (*Statista* 2022). Not surprisingly, almost 60% of web traffic is accounted for by mobile devices (*StatCounter* 2022).

Accordingly, the evidence suggests that advertisers spend about two-thirds of their digital advertising budget on mobile advertising (*eMarketer* 2019).

Nevertheless, such proliferation in mobile technology has not received significant attention from the advertising research community in comparison to marketing scholars. For example, during the past two decades, the *Journal of Advertising* has published only a few papers that investigated the topic (e.g., Baek and Yoo 2018; Okazaki, Li, and Hirose 2009; Peters, Amato, and Hollenbeck 2007). Moreover, a recent meta-analysis of mobile advertising research includes only three articles published by major advertising journals between 2012 and 2021 (Maseeh et al. 2021). In our view, such a lack of scholarly attention in our community can be attributed to at least two main reasons. First, a shift in mobile advertising research methods from more conventional survey or experimental approaches to a big data and field experimental approach may have played a role. Over the last decade, mobile (advertising) scholars have increasingly focused on large-scale field data as the backbone for their research. Yet collecting this type of data comes with its own challenges because it mostly requires collaboration with industry partners. Field data are also susceptible to increasing consumer privacy protection legislation. Hence, the threshold to obtain high quality data for mobile advertising research is high. Indeed, according to a methods survey among major advertising journals[1] only a little over 6% of the publications between 2011 and 2015 used market data, such as sales or media ratings (Chang 2017). To sum up: the unique features of mobile technology (e.g., portability, granular location targeting, dynamic environmental factors) are hard to capture with survey or experimental methods, as commonly used by advertising scholars.

---

[1] *Journal of Advertising, Journal of Advertising Research, International Journal of Advertising, and Journal of Current Issue and Research in Advertising.*

Second, while it is widely understood that exposure to mobile advertising and the creation of user generated content work differently than in nonmobile online media (e.g., Grewal and Stephen 2019; Melumad et al. 2019), our theoretical understanding of mobile advertising remains underdeveloped. Most studies are grounded in theories from existent online advertising research, without fully accounting for the complexities of the mobile advertising "landscape". This is also reflected by commentators from industry who have indicated that new contextual insights such as location data are among the most misunderstood areas in marketing (*Adweek* 2018) and with advertisers still struggling to harness insights effectively (*Forbes* 2019).

This *Journal of Advertising* special section on "Mobile Technology and Advertising" intends to address some of the issues related to the underrepresentation of mobile advertising research in advertising journals by "kick-starting" the conversation around this exciting field of research. In doing so, this special section aims to extend our current knowledge of the topic by taking a broader and more current approach to these newly emerging complexities. Specifically, we want to reflect on two particularly understudied topics: i) bridging virtual and real experiences through mobile technology and ii) the unintended consequences of mobile technology in advertising.

Bridging virtual and real experiences

The boundaries between virtual and real-life experiences have become increasingly blurry. Consumers often share their consumption experiences with others via social media and, in doing so, create virtual experiences for themselves as well as for others to relive. This development has largely been fueled by the wide and rapid adoption of smartphones that has allowed consumers to take and share photos or broadcast live video streams in real time.

Unsurprisingly, advertisers have largely welcomed consumers taking over this role in their marketing communications by proactively sharing their experiences.

The existing literature on sharing real-life experiences in the virtual domain has investigated relevant questions, such as the consequences of sharing own experiences for consumers (e.g., Barasch, Zauberman, and Diehl, 2018), or how selfies should ideally be taken and positioned to increase engagement (Farace et al., 2017). This line of work mainly focuses on the consumer that is part of the experience or the content they create of that experience. However, the role of the environment in which an experience takes place has been largely neglected. Many readers of this editorial will likely have been in the situation where they visited, for example, a shop, a restaurant, or a museum and felt the urge to take a picture and share it on social media. What are the situational factors that elicit such response from some places and not others? How can advertisers actively design environments that inspire consumers to share their experiences with their social media followers? In this special section, Campbell et al. (2022)[2] tap into this very phenomenon and investigate how real-life environments inspire consumers to generate and share user-generated content. They introduce a new term to us to describe this activity: "environment-cued indirect advertising".

Campbell et al. (2022) neatly bring together the three distinct literatures of consumer-generated content, experiential marketing, and retail atmospherics (the controllable characteristics of retail space) to enhance our understanding of how environments can be cued to generate indirect advertising. They find that brightness, colored lighting, and the number of colors present influence social media sharing. The authors also note that consumers are motivated to look good in the re-creation of an experience rather than during the experience itself. Consequently, to maximize indirect advertising, brand atmospherics

---

[2] Please note: due to the affiliation of the third author of this paper, the paper underwent the regular JA review process to avoid any conflict of interest.

needs to focus upon mobile photo opportunities and not only on the actual enjoyment of the experience.

Overall, the research underpins and throws further light on the importance of social media (in this case Instagram) to many people's lives. Many consumers are willing to lean forward and embrace opportunities that enable the co-production of content with brands in pursuit of self-presentation: the "selfie". Their finding that self-presentation, which is facilitated by mobile technology, appears to be more motivating to the creation of indirect advertising rather than the enjoyment of the actual experience, also neatly fits into the second research area that we want to discuss in the next section: the unintended consequences of mobile technology.

Unintended consequences

Mobile advertising has anecdotally often been praised to have revolutionized the advertising landscape. While it indeed offers novel applications, such as granular location targeting, in-app and cross-app advertising, synced advertising and many more, it is also important for advertisers to understand that novel technological innovations can have unintended consequences. For example, Osinga, Zevenbergen, and van Zuijlen (2019) have found that mobile banner ads do not increase online sales; instead, they have been found to increase offline sales. Research has also shown that using location-based mobile advertising (LBMA) can backfire by evoking negative consumer reactance when advertisers target consumers with a suboptimal combination of location, type of promotion and/or type of product (Bernritter, Ketelaar, and Sotgiu 2021).

It is generally recognized that unintended consequences of mobile technology often become apparent when comparing mobile with other platforms. In this special section, Close Scheinbaum et al. (2022) add to our understanding of unintended consequences by using

clickstream data to compare mobile shoppers with consumers shopping via PC or tablets. One of their key-findings is that the frequency of completed orders and e-cart value is lowest for smartphones; suggesting that smartphones might be an inferior shopping platform. They also find that reading other customers' online reviews does not positively affect conversion if consumers shop via smartphones, though it does so for tablets and PCs. Thus, while prominently displaying online reviews is a worthwhile endeavor on most platforms, it might not pay off on mobile. As such, their research indicates that the accepted norms for how non-mobile platforms work do not necessarily apply to mobile platforms.

Another unintended consequence of advertising in the general advertising literature is ad avoidance. Ad avoidance has been an important topic in interactive media but has received less attention in the context of mobile. During the past two decades, interactive media research has attributed ad avoidance to a series of determinants from psychological, behavioral, and tactical perspectives. For example, scholars found consumers avoid online ads due to perceived goal impediment (Cho 2004), perceived intrusiveness (Edwards, Li, and Lee 2002), privacy concerns (Segijn, Voorveld, and Vakeel 2021), ad irritation (Baek and Morimoto 2012), and attention-getting tactics (Campbell et al. 2017), among others.

Ad avoidance is especially relevant to mobile devices because as much as 90% of mobile users perceive targeted ads as annoying and irritating, resulting in almost $150 billion ad spending wasted (Ogury 2019). Yet, this topic appears rarely in the advertising literature. More recent research on LBMA reveals that location congruence attenuates the effect of intrusiveness on negative attitudes towards mobile ads (Ketelaar et al. 2018). Similarly, a study combining LBMA and media multitasking found that, while multitasking consumers, compared with single-tasking consumers, are more likely to avoid LBMA. Multitasking consumers tend to perceive ads from closer stores more intrusive, thus avoid them (Choi, Choi, and Song 2021).

In this special section, Maier and Schmidt (2022) address mobile ad avoidance from a new perspective: incidental exposure to embedded, as opposed to fixed, mobile banner ads. They show that ad avoidance on mobile phones works differently from that known from desktops. In an experimental setting, the authors measured participants' gaze time using eye tracking while observing their scrolling actions via viewport logging. Their results suggest that while mobile users often ignore ads through the widely known "banner blindness" phenomenon, they also interact with their devices to actively scroll embedded mobile ads out of their focus of attention to their periphery. Overall, the authors conclude that ad avoidance might be a bigger problem for advertisers in mobile compared to desktop. Nevertheless, it is not all bad news for advertisers: the authors provide several worthwhile recommendations for advertisers to diminish this phenomenon.

Looking forward

The three articles in this special section focus on forward-looking and relevant topics. We hope that their research will inspire advertising scholars to rekindle their interest in mobile advertising research because there is so much more that we need to learn about this rapidly evolving and important field of advertising. In addition, we would like to highlight two areas that we believe are also deserving of further attention. First, the mobile gaming market has grown to truly fascinating heights, accounting for 57% of total global gaming revenue (Statista 2021). Yet, the advertising literature is mainly focusing on non-mobile gaming applications (e.g., Terlutter and Capella 2013) and more niche phenomena, such as advergames (for a meta-analysis, see van Berlo, van Reijmersdal, and Eisend 2021). Consequently, this leaves room to enhance our understanding of the role of mobile gaming for advertising theory and practice.

Another potential avenue for future research lies in the future integration of mobile technology and advertising in the metaverse. The metaverse will further blur the line between

real life and the virtual world. Mobile technology will likely play a pivotal role in linking the two as consumers are almost always accompanied by their mobile devices. The advertising literature would benefit from research that provides us with a better understanding of how advertisers can fit in in these environments and how they perhaps can even facilitate the link between the real and virtual world with novel mobile applications. We hope that this special section on mobile will provide further inspiration and support to investigate this fascinating area of advertising research.

References

Adweek (2018), "How Brands Are Getting More Sophisticated at Using Location Data," available at https://www.adweek.com/digital/how-brands-are-getting- more-sophisticated-at-using-location-data/ (accessed January 14, 2020).

Baek, Tae Hyun, and Mariko Morimoto (2012), "Stay away from me," *Journal of Advertising*, 41(1), 59-76.

Baek, Tae Hyun, and Chan Yun Yoo (2018), "Branded App Usability: Conceptualization, Measurement, and Prediction of Consumer Loyalty," *Journal of Advertising*, 47(1), 70-82.

Barasch, Alixandra, Gal Zauberman, and Kristin Diehl (2018), "How the intention to share can undermine enjoyment: Photo-taking goals and evaluation of experiences." *Journal of Consumer Research* 44(6), 1220-1237.

Bernritter, Stefan F., Paul E. Ketelaar, and Francesca Sotgiu (2021), "Behaviorally targeted location-based mobile marketing." *Journal of the Academy of Marketing Science* 49(4), 677-702.

Campbell, Colin, Frauke Mattison Thompson, Pamela E. Grimm, and Karen Robson (2017), "Understanding why consumers don't skip pre-roll video ads," *Journal of Advertising*, 46(3), 411-423.

Campbell, Colin, Sean Sands, Matteo Montecchi, and Hope Jensen Schau (2022), "That's So Instagrammable! Understanding How Environments Generate Indirect Advertising by Cueing Consumer-Generated Content," *Journal of Advertising,* ==xx(x), xx-xx.== ==THIS ISSUE==

Chang, Chingching (2017), "Methodological Issues in Advertising Research: Current Status, Shifts, and Trends," Journal of Advertising, 46(1), 2-20.

Cho, Chang-Hoan (2004), "Why do people avoid advertising on the internet?" Journal of Advertising, 33(4), 89-97.

Choi, Boreum, Uiju Choi, and Ji Hee Song (2021), "Multitasking and location-based advertising: effects of perceived intrusiveness, location proximity, and product durability on avoidance," *International Journal of Advertising*, 40(8), 1385-1401.

Edwards, Steven M., Hairong Li, and Joo-Hyun Lee (2002), "Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-up ads," *Journal of Advertising*, 31(3), 83-95.

eMarketer (2019), "Breaking Down Mobile Video Ad Spending: Video remains the only digital ad format that isn't majority mobile," available at: https://www.emarketer.com/content/breaking-down-us-digital-video-ad-spending (accessed January 14, 2020).

Farace, Stefania, Tom van Laer, Ko de Ruyter, and Martin Wetzels (2017), "Assessing the effect of narrative transportation, portrayed action, and photographic style on the likelihood to comment on posted selfies," *European Journal of Marketing*, 51(11), 1961-1979.

Forbes (2019), "How Marketing Teams Unlock the Value of Location Data," available at https://www.forbes.com/sites/paultalbot/2019/11/15/how-marketing-teams-unlock-the-value-of-location-data/ (accessed January 14, 2020).

Grewal, Lauren, and Andrew T. Stephen (2019), "In Mobile We Trust: The Effects of Mobile Versus Nonmobile Reviews on Consumer Purchase Intentions," *Journal of Marketing Research*, 56(5), 791-808.

Ketelaar, Paul E., Stefan F. Bernritter, Thabo J. van Woudenberg, Esther Rozendaal, Ruben P. Konig, Arief Ernst Hühn, Marnix S. Van Gisbergen, and Loes Janssen (2018), "'Opening' location-based mobile ads: How openness and location congruency of location-based ads weaken negative effects of intrusiveness on brand choice," *Journal of Business Research*, 91, 277-285.

Maier, Erik and Lennard Schmidt (2022), "Interactive Ad Avoidance on Mobile Phones," *Journal of Advertising*, xx(x), xx-xx. THIS ISSUE

Maseeh, Haroon Iqbal, Charles Jebarajakirthy, Robin Pentecost, Md Ashaduzzaman, Denni Arli, and Scott Weaven (2021), "A meta-analytic review of mobile advertising research." Journal of Business Research, 136, 33-51.

Melumad, Shiri, J. Jeffrey Inman, and Michel Tuan Pham (2019), "Selectively Emotional: How Smartphone Use Changes User-Generated Content," *Journal of Marketing Research*, 56(2), 259-275.

Ogury (2019), *The Reality Report: Consumer Attitudes Towards Mobile Marketing 2019*, accessed on March 31, available from https://ogury.com/resources/l-consumers-attitudes-mobile-marketing-2019/

Okazaki, Shintaro, Hairong Li, and Morikazu Hirose (2009), "A Study of Mobile Advertising in Japan," *Journal of Advertising*, 38(4), 63-77.

Osinga, Ernst C., Menno Zevenbergen, and Mark W.G. van Zuijlen (2019), "Do mobile banner ads increase sales? Yes, in the offline channel." *International Journal of Research in Marketing* 36(3), 439-453

Peters, Cara, Christie H. Amato, and Candice R. Hollenbeck (2007), "An exploratory investigation of consumers' perceptions of wireless advertising," *Journal of Advertising*, 36(4), 129-145.

Segijn, Claire M., Hilde AM Voorveld, and Khadija Ali Vakeel (2021), "The Role of Ad Sequence and Privacy Concerns in Personalized Advertising: An Eye-Tracking Study into Synced Advertising Effects," *Journal of Advertising*, 50(3), 320-329.

StatCounter (2022), "Desktop vs Mobile Market Share Worldwide," March, Retrieved from https://gs.statcounter.com/platform-market-share/desktop-mobile/worldwide/#monthly-201202-202202, accessed on April 24, 2022.

Statista (2022), "Number of smartphone subscriptions worldwide from 2016 to 2027," February 23, retrieved from https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/, accessed on April 24.

Terlutter, Ralf, and Michael L. Capella (2013), "The gamification of advertising: analysis and research directions of in-game advertising, advergames, and advertising in social network games." *Journal of Advertising,* 42(2-3), 95-112.

van Berlo, Zeph M.C., Eva A. van Reijmersdal, and Martin Eisend (2021), "The gamification of branded content: A meta-analysis of advergame effects." *Journal of Advertising,* 50(2), 179-196.