

# **MOVING VIRTUAL RETAIL INTO REALITY: EXAMINING METAVERSE AND AUGMENTED REALITY IN THE ONLINE SHOPPING EXPERIENCE**

Esther Swilley, Kansas State University, USA

## **INTRODUCTION**

Online retailing has proven to be advantageous to retailers in terms of revenue building. Consumers are spending time and money on retailer e-commerce sites, and now, m-commerce sites. In fact, Cyber Monday, the Monday after Thanksgiving, is exceeding revenue goals previously sought on Black Friday (Internet Retailer 2011). However, the online shopping experience has not kept pace with the offline experience. Brick and mortar allows for more experiential shopping that creates engagement, brand experience, as well as excitement. Catalog and television shopping affords the comfort of shopping at home. Now, many shoppers are turning to their tablet computers for online shopping. However, the shopping experience on tablets must compete with other online activities, including games and other interesting applications. Retailers should respond to needs of the consumer by developing a more robust online shopping experience. This can also enhance the experiences of shoppers in both electronic commerce and mobile commerce.

## **BACKGROUND**

Multichannel retailing allows for an enhancement of service for consumers by firms, in order to enhance customer satisfaction (Wallace et al. 2004). Consumers can find different value in various channels (Noble et al. 2005). Each of the virtual channels offers its own benefits for both the retailer and the consumer. Electronic commerce (e-commerce) allows shopping at home in a relaxed atmosphere, as well as an interactive experience. E-commerce, the use of the Internet for transactional exchanges, was a disruptive technology that took off once firms realized the Internet's potential as a marketing channel. E-commerce has offered consumers the ability to shop online, at a convenient place and time. It has allowed retailers to offer merchandise not found in physical locations, freeing up the costs of inventory. Software and music downloads afford the consumer instant gratification. Consumers can purchase merchandise that is not located in physical locations online, as small town consumers now have access to merchandise found only in metropolitan areas. M-commerce refers to the ability to offer value through mobile transactions allowing for location-specificity and time-sensitivity, as well the ability to build personalized relationships with the customer. It is not a by-product of e-commerce. M-commerce has advantages with respect to location specificity and personalization. Firms looking to use m-commerce as another service for customers can seize the m-commerce opportunities of location, time and personalization. This ubiquity in location and time allow for the marketing of products and services to individuals anytime and anywhere. If the competencies learned through e-commerce, as well as the relational resources, are translated to an m-commerce platform, retailers can gain a faster and stronger foothold in the m-commerce arena.

In discussing the future of virtual shopping, Burke (1997) urged managers to take an active role in defining and managing the future of the Internet. Technology plays an important role in the shopping process and the optimization of technology should be taken into consideration when defining a virtual shopping experience (Burke 2002). Now retailers can develop websites with three-dimensionality. Metaverse retailing, three-dimensionality, allows for a more robust shopping experience of the three virtual channels. Based on virtual world technology, a three-dimensional graphic representation of the consumer, or avatar, is used with a metaverse. Unlike e-commerce websites, metaverse sites simulate real world retail outlets (Cagnina and Poian 2009). Users can move throughout the 3-D site as if they were moving through the aisles of a brick-and-mortar establishment. Recent technological advances also allow more than one user to shop together. This allows for shopping with friends while online for more engaging shopping experiences (Cagnina and Poian 2009). Augmented reality (AR) is similar as it combines both virtual and real-world environments with 3-dimensional software.

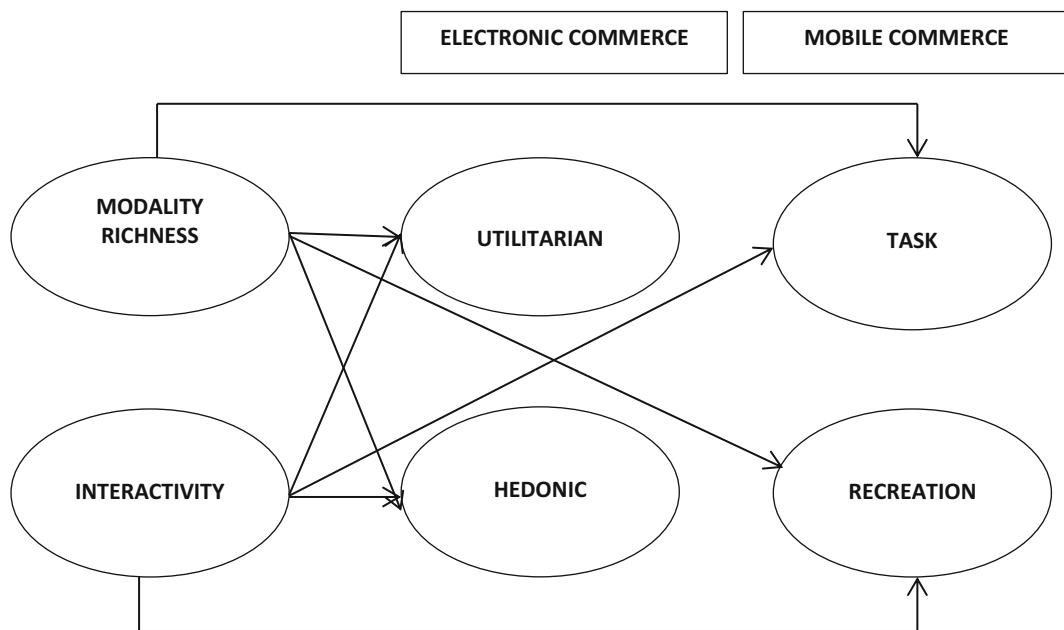
The marketing potential of a metaverse lies in the ability to draw consumers through three-dimensional technology. This 3-D technology has many implications for marketers. Unlike e-commerce websites, metaverse and AR sites simulate real world retail outlets (Cagnina and Poian 2009). This technology can show consumers interacting with products, moving through aisles, and choosing products. Instead of reading transaction logs, as is done for online shopping, or even tracking how someone navigates through a site, marketers can now have a visual representation of consumer movements throughout the virtual store. Virtually, marketers can see the experience of shopping as it is happening. Interaction between shoppers,

employees and others can be seen and heard. The information gleaned from a virtual world store can be used further to develop either the “brick” or “click” store for many retailers.

Both metaverse and augmented reality (AR) have been studied, however, only AR has been studied in terms of retailing. Lu and Smith (2007) compared AR to traditional e-commerce and though their results were limited, AR seems to aid in providing more direct product information for consumers. Schwartz (2011) found a direct relationship between AR and attitude, as well as purchase intent. In examining rotational visual simulation used to create the 3D experience as product presentation on an e-commerce site, Park, Stoel and Lennon (2008) found rotation to influence perceived information quality, mood, attitude, and purchase intention. In this vein, the investigation of virtual channels, in terms of multi-channel retailing implications for the firm is the purpose of this research. Is there enough consumer motivation for retailers to invest in metaverse or augmented reality retailing? Specifically, what are the responses to metaverse and AR in a retail setting? As both cognitive and affective responses have been found to be important in online shopping in terms of atmospherics (Eroglu, Machleit and Davis 2003) and product display (Jiang and Benbasat 2007), we surmise that these responses will be significant to both metaverse and AR. We also propose that AR and metaverse retailing are equally as important in both e-commerce and m-commerce retail settings.

### CONCEPTUAL FRAMEWORK AND HYPOTHESES

Consumers interacting with 3D advertising were more likely to experience an elevated sense of presence (Li, Daugherty and Biocca 2002). Those who used 3D virtual worlds more likely influenced by modality richness when highly involved (Jin 2009). We posit that modality, or information richness, “the intensity with which a mediated environment is able to present information to the senses” (Li, Daugherty and Biocca 2002, p 151), will motivate consumers to use a virtual reality site. We also argue that the ability of a site to enhance the senses, in terms of presence, both audio and visual, allows for a more vivid shopping experience. Interactivity, a determinant of responsiveness, allows for the exchange of responses in real time, content and control (Li, Daugherty and Biocca 2002). In order to understand the motivations of consumers to use these websites, we acknowledge the value of a website as the culmination of a shopping experience, with the benefits being either hedonic (pleasurable experience) and/or utilitarian (useful experience) (Wang et al 2007), as well as task (problem solving) and/or recreationally oriented (amusing experience) (Kaltcheva and Weitz 2006).



## DISCUSSION

As retailing moves from traditional to electronic to virtual, so does its transformation. From product-oriented, to customer-oriented, to experience-oriented, the retailer must evolve as such (Papagiannidis and Bourlakis 2010). The purpose of this research is to develop and discover how to implement best this coupling of retailing and technology in order to capture the interest of the consumer. Investigations using quantitative and qualitative methods will aid in understanding the metaverse and AR experiences in both electronic and mobile marketing.

## REFERENCES

- Burke, R. R. (1997). "Do you see what I see? The Future of Virtual Shopping." *Journal of the Academy of Marketing Science*, 25(4), 352-360.
- Burke, R. R. (2002). "Technology and the Customer Interface: What Consumers Want in the Physical and Virtual Store." *Journal of the Academy of Marketing Science*, 30(4), 411-432.
- Cagnina, M. R., & Poian, M. (2009). "Beyond E-business Models: The Road to Virtual Worlds." *Electronic Commerce Research*, 9(1), 49-75.
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). "Empirical Testing of a Model of Online Store Atmospherics and Shopper Responses." *Psychology & Marketing*, 20(2), 139-150.
- Jiang, Z. J., & Benbasat, I. (2007). "The Effects of Presentation Formats and Task Complexity on Online Consumers' Product Understanding." *MIS Quarterly*, 31(3), 475-475.
- Jin, S. A. A. (2009). "Modality Effects in Second Life: The Mediating Role of Social Presence and the Moderating Role of Product Involvement." *CyberPsychology & Behavior*, 12(6), 717-721.
- Kaltcheva, V. D., & Weitz, B. A. (2006). "When Should a Retailer Create an Exciting Store Environment?" *Journal of Marketing*, 107-118.
- Li, H., T. Daugherty, and F. Biocca, "Impact of 3-D Advertising on Product Knowledge, Brand Attitude, and Purchase Intention: The Mediating Role of Presence." *Journal of Advertising*, 2002. 31(3): p. 43-58.
- Lu, Y., & Smith, S. (2007). "Augmented Reality E-commerce Assistant System: Trying while Shopping." *Human-Computer Interaction. Interaction Platforms and Techniques*, 643-652.
- Noble, S. M., Griffith, D. A., & Weinberger, M. G. (2005). "Consumer Derived Utilitarian Value and Channel Utilization in a Multi-channel Retail Context." *Journal of Business Research*, 58(12), 1643-1651.
- Papagiannidis, S. and Bourlakis, M. (2010). "Staging the New Retail Drama: at a Metaverse near you!" *Journal of Virtual Worlds Research*, 2(5), 425-446.
- Park, J., Stoel, L., & Lennon, S. J. (2008). "Cognitive, Affective and Conative Responses to Visual Simulation: The Effects of Rotation in Online Product Presentation" *Journal of Consumer Behaviour*, 7(1), 72-87.
- Schwartz, A. (2011). "Augmenting Purchase Intent: An Empirical Study on the Effects of Utilizing Augmented Reality in Online Shopping." *Available at SSRN 1858976*.
- Wallace, D. W., Giese, J. L., & Johnson, J. L. (2004). Customer Retailer Loyalty in the Context of Multiple Channel Strategies. *Journal of Retailing*, 80(4), 249-263.
- Wang, L. C., Baker, J., Wagner, J. A., & Wakefield, K. (2007). Can a Retail Web Site be Social? *Journal of Marketing*, 71(3), 143-157.