Augmented shopping in a socially situated context: The role of augmentation on purchase decision satisfaction in an online shopping environment

Purpose: In this study we examine the current role of augmented reality (AR) as an enabler for consumer purchase satisfaction in an online store. The consumer's inability to assess contextual information about products, such as product-fit for fashion products, eye-wear or jewellery, is still one of the major shortcomings of online retail stores compared to physical stores. We argue that AR can overcome this shortcoming, however only if consumers have the potential to virtually try the product and share the information they receive during the try-on with peers to receive feedback during their shopping process (H1). This interaction hypothesis is based on the theory of socially situated cognition which states that cognition and action are the emergent outcome of dynamic processes of the interaction between an agent and a (shopping) environment. Furthermore, we argue that AR increases the value of the information available for the consumer; hence information value acts as a mediator for the relationship of AR on purchase decision satisfaction (H2).

Methodology: We utilize the AR application of a large eye-wear online retailer from Germany to empirically test our hypotheses in an online experiment. The application allows participants to use their webcam to virtually try-on sunglasses in real-time by filming themselves and virtually projecting sunglasses on the participant's heads. The study employed a 2 (augmented reality: absent, present) x 2 (social cognition: individual shopping, social shopping) between-subject design with 534 Amazon MTurk participants. Participants in the AR absent group were instructed to use the website of the eye-wear retailer to search for a pair of sunglasses of their choice by comparing different product pictures, whereas participants in the AR present condition were instructed how to use the virtual-try on application and encouraged to use the application for every pair of sunglasses they tried before making a decision. In the individual shopping condition, participants indicated which choice they made and received a series of scales to answer. In the social condition, participants were asked to upload a picture of their pair of sunglasses of choice and indicate the names of friends whom they would ask for shopping advice. On the next page, they received comments, supposedly from their friends, designed in the form of Facebook comments.

Findings: We tested our hypothesis using a moderated mediation analysis, confirming the positive interaction between AR and a social shopping situation on purchase decision satisfaction (b = .269, SE = .131, p < .05). Furthermore, AR is a significant predictor if information value (b. 547, SE = .098, p < .001), and that informational value was a significant predictor of purchase decision satisfaction (b = .390, SE = .029, p < 0.001). Those results support our mediating hypothesis.

Value: Purchase decision satisfaction can be significantly improved when employing AR in online environments; given users have the ability to share their shopping experience with others. Retailers are interested to increase purchase decision satisfaction, as it is one important antecedent for loyalty, product recommendations and word-of-mouth.