



Virtual shopping and unconscious persuasion: The priming effects of avatar age and consumers' age discrimination on purchasing and prosocial behaviors



Seung-Chul Yoo^{a,*}, Jorge F. Peña^{b,1}, Minette E. Drumwright^{c,2}

^a Division of Communication and Media, Ewha Womans University, POSCO #106, 52 Ewhayeodae-gil, Seodaemun-gu, Seoul 120-750, Republic of Korea

^b Department of Communication, University of California, Davis, 367 Kerr Hall, Davis, CA 95616, United States

^c Department of Advertising and Public Relations, The University of Texas at Austin, 300 West Dean Keeton, A1200, BMC 4.338, Austin, TX 78712, United States

ARTICLE INFO

Article history:

Available online 9 February 2015

Keywords:

Computer mediated communication
Virtual environment
Shopper psychology
Shopper behavior
Consumer behavior
Digital shopping

ABSTRACT

This study examined how operating elderly or young avatars affected shoppers' product perceptions and purchasing behaviors. It also investigated how virtual shopping experiences translated into prosocial behavior regarding a nonprofit organization supporting the elderly. Operating elderly avatars influenced shoppers' product choice and walking speed while shopping compared to operating younger avatars. In addition, operating elderly avatars positively affected participants' attitudes and willingness to donate to and volunteer for a nonprofit organization supporting the elderly. Statistical interactions between avatar age and a shopper's ageism on behavioral and persuasion outcomes were also confirmed, and these findings implied an assimilation/contrast effect influenced by a shopper's preexisting prejudices toward the elderly.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

1.1. Virtual stores

Successful retailing is no longer only about physical stores. Virtual stores currently account for approximately \$343 billion in sales (eMarketer, 2013), and that number is expected to grow steadily in the next few years as shoppers from far and wide easily cross virtual borders to shop online (eMarketer, 2013). Avatars, which are graphical representations of shoppers or salespeople, are considered the most important marketing elements in virtual stores (Jin & Bolebruch, 2009), and they offer ways to influence shoppers through both overt and subtle cues. For instance, merely providing shoppers with avatars leads to more satisfaction with the retailer, more positive attitudes toward the product, and increased purchase intentions (Holzwarth, Janiszewski, & Neumann, 2006). The advent of new technology now provides retailers with great latitude in the types of avatars that they use and the cues provided. For example, an avatar's appearance can

be crafted to fit the shopping occasion (e.g., physically attractive avatars when shopping for jewelry), and an avatar's physical characteristics can even be adapted to match the appearances of individual shoppers. Consider that using attractive avatars is more effective at moderate levels of product involvement, but using an avatar that looks like an expert is more effective at high levels of product involvement (Holzwarth et al., 2006). In addition, seeing an avatar with one's own face endorsing a product in online advertising leads to more positive brand attitudes and higher purchase intentions than seeing an avatar with someone else's face endorsing a product (Ahn & Bailenson, 2011).

No doubt, the effective use of avatars in 3D virtual stores will be key to successful virtual retailing, but many questions remain unanswered regarding the use of avatars to enhance virtual retail experiences. For example, much of the research on the effects of avatars has been done in non-retail settings, and thus little is known about how these factors would play out in virtual stores. Also, the findings of studies on the potential of certain avatars in affecting virtual experiences have been mixed. For instance, Yee and Bailenson (2006) found no effect of using elderly avatars in terms of changing biased attitudes against the elderly. In addition, studies on the effects of avatars that have been done in virtual store settings have used self-report measures of attitudes and intentions and, thus, little is known about the effect of avatars on outcome variables such as product choice or shopping behaviors

* Corresponding author. Tel.: +82 2 3277 2233; fax: +82 2 3277 4010.

E-mail addresses: marketing0technology@gmail.com (S.-C. Yoo), jpena@ucdavis.edu (J.F. Peña), mdrum@mail.utexas.edu (M.E. Drumwright).

¹ Tel.: +1 530 752 3464; fax: +1 530 752 3156.

² Tel.: +1 512 471 2367; fax: +1 512 471 7018.

when in a virtual store (e.g., Ahn & Bailenson, 2011; Yoo & Peña, 2011). Finally, to the best of our knowledge, no study has yet investigated how pre-existing biases, prejudices, and stereotypes can moderate the effects of avatar priming in either retail or nonretail settings.

This study examines four phenomena. First, it examines how avatars can provide cues that are so subtle as to be unconscious and how those cues influence shoppers' perceptions and behaviors in a 3D virtual store. It is based on the theory and empirical findings of previous priming research that has demonstrated the unconscious effects of environmental cues (Bargh, 1994; Bargh & Chartrand, 1999). Specifically, this study investigates the possible unconscious influence of primes that remind participants of age differences in a 3D virtual store. Consider that consumers of different ages take different approaches in off-line shopping (Cox, Cox, & Anderson, 2005) as well as online shopping (Kau, Tang, & Ghose, 2003). Further, though employing primes related to the elderly can reliably affect people's behaviors including walking speed (Bargh, Chen, & Burrows, 1996), studies have failed to find a reliable effect of elderly avatars on users' attitudes and behaviors. For instance, Yee and Bailenson (2006) only found one out of three expected persuasive effects of using elderly avatars. Thus, it is yet unclear whether using elderly or young avatars can affect people's virtual behaviors, especially in online retail contexts. Second, though previous studies have used self-report measures, here we employ behavioral measures in line with Bargh et al. (1996), such as the walking speed of the avatar controlled by the shopper, along with the shopper's product choice. Third, this study explores how the influence of avatar age may carry over and affect users' attitudes and intentions after a virtual shopping experience. For example, does using an elderly avatar make people more likely to volunteer for elderly care organizations? Fourth, this study also examines how shoppers' pre-existing biases regarding age interact with the effects of operating old and young avatars. So far, the moderating role of preexisting age biases in virtual experiences has not been explored. Ageism is a widespread form of discrimination among young adults and teenagers, and understanding and reducing it is important to the well-being of society (International Longevity Center-USA, 2007).

1.2. Priming effects

1.2.1. Priming research

Priming research focuses on how environmental cues (i.e., primes such as words, colors, pictures) influence an individual's cognition, affect, and behavior (Bargh et al., 1996). Social primes are factors such as age, gender, race, or occupation that automatically activate associated representations, increase accessibility (Higgins, Rholes, & Jones, 1977), and trigger related constructs via an associative network (Anderson & Spellman, 1995; Collins & Loftus, 1975; Neely, 1977). For example, Chambon (2009) showed that participants exposed to words related to the elderly evaluated distances as significantly longer than non-elderly primed participants. In addition, participants exposed to concepts linked to the elderly (e.g., "Florida," "bingo") subsequently walked more slowly compared to those exposed to age-neutral concepts (Bargh et al., 1996).

A main assumption in priming research is that behavior is not always guided by conscious intentions or acts of will. That is, perceivers may not notice the automatic activation effects of exposure to a specific social concept (e.g., elderly people). Additionally, automatic activation effects have increased impact in conditions of chronic accessibility. Chronic accessibility refers to the consistent readiness and high accessibility of a cognitive construct among perceivers (Bargh & Pratto, 1986; Fazio, Sanbonmatsu, Powell, & Kardes, 1986). Repeated exposure and longer duration of exposure

increases chronic accessibility (Higgins, Bargh, & Lombardi, 1985). For example, prolonged exposure to violent videogames increases accessibility of violent thoughts and behaviors (Anderson & Bushman, 2001). In conditions of chronic accessibility, the priming process can be more easily triggered by the mere presence of a prime (Bargh & Pratto, 1986). For example, people who operate elderly avatars in a virtual store may be affected by their avatar's appearance due to their previous history of exposure to elderly people and their attitudes about the elderly. Avatar priming and age discrimination effects are further detailed below.

1.2.2. Priming effect of operating avatars

There is evidence that the mere act of operating an avatar can influence an operator's cognition, emotion, and behavior in various non-retail virtual settings (Yee & Bailenson, 2006). In particular, Peña (2011) argued that priming effects provide a theoretical explanation for how operators (i.e., people who control the avatars) are affected by their avatars' physical attributes. In essence, an avatar's appearance serves as a social prime that affects avatar operators' perceptions and behaviors. For example, operating an avatar in a black uniform increased aggressive attitude formation (Peña, Hancock, & Merola, 2009). In another study, participants were invited to write stories about a day in the life of their avatar, among other tasks (Peña, McGlone, & Sanchez, 2012). In the study, half of the individuals operated a female avatar dressed formally and called a "professor," and the other half controlled the same avatar dressed glamorously and called a "supermodel." As a result, operators of the "supermodel" avatar generated spontaneous narratives with exotic names and exclusive brands. In contrast, operators of the "professor" avatar mentioned concepts related to books and education (Peña et al., 2012). Overall, subjects' mere perception of their avatar's appearance activated related knowledge.

Congruent with the conceptualizations of priming research, participants assigned to elderly avatars should be more likely to walk slowly in a virtual store compared to participants assigned to young avatars. Moreover, spreading activation mechanisms (Anderson & Spellman, 1995; Collins & Loftus, 1975) predict that exposure to elderly avatars may extend to the choice of products by activating related constructs stored in memory. Thus, it is possible that the physical features of shoppers' avatars may temporarily change participants' product preferences and in-store behaviors. For example, people using elderly avatars are expected to walk more slowly and select age-congruent products compared to those operating younger avatars. Thus:

H1. Participants who operate elderly avatars will walk more slowly in a 3D virtual store than participants assigned to operate young avatars.

H2. Participants who operate elderly avatars will be more likely to choose a virtual product closely related to the elderly in a 3D virtual store than those assigned young avatars.

In addition, attitudinal outcomes could be prompted. Participants who control elderly avatars (i.e., elderly prime) could be more likely to identify with them as they see the virtual world from their avatar's perspective (see also Yee & Bailenson, 2006). This can be explained by an incorporation of the elderly prime into participants' active selves. In particular, as they operate the elderly avatars, participants could automatically adopt values, beliefs, and attitudes that are relevant to the elderly (Wheeler, DeMarree, & Petty, 2007). If so, these participants should process prime-relevant messages more fully and form substantially more positive attitudes and intentions toward a nonprofit organization that helps senior people. For example, they could be more willing to become a Facebook friend of the organization, and they could be more likely

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات