Effects of Different Types of Schematic Support on Item and Associative Memory For Brands in Older Consumers

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We show across two studies in a branding context that different types of schematic support alleviate episodic memory deficits in elderly consumers differently. While meaningfulness of brand elements attenuates item (vs. associative) memory deficits in older (vs. younger) consumers, relatedness between brand elements mitigates differences in associative (vs. item) memory.

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EXTENDED ABSTRACT

Brand memory is central to brand equity (Keller 1993) (Keller 1993) as well as consumer decision making (Hoyer and Brown 1990; Warlop, Ratneshwar, and van Osselaer 2005; Yoon et al. 2005). It is well established that memory declines with age (Kausler 1994; Saltzhouse 1991). But episodic memory; that retains contextual information about personally experienced events in one’s life, such as the contents, time, and place of the occurrences (Lachman, Lachman, and Butterfield 1979; 215), seems to be especially vulnerable to aging (Light 1991). Given that brand-based experiences with products—whether with the products themselves or marketing communications thereof—get stored in the episodic memory system of the consumer (Alba, Hutchinson, and Lynch Jr 1991; Kahn and Wansink 2004), the issue of memory deficits in older consumers is particularly problematic for marketers targeting the elderly, a very important consumer segment today.

In this context, an important distinction needs to be made between two types of episodic memory related to brand information, i.e., item memory and associative memory (Clark 1992; Hockley 1991). Note that consumer researchers have overlooked this distinction in the past. Item memory pertains to memory for single units of information, e.g., memory for a brand name or a brand logo graphic individually, whereas associative memory is memory for the co-occurrence of units in a prior event, e.g., memory for a specific brand name and a brand logo graphic together (Old and Naveh-Benjamin 2008). The basic units can be two items; an item and its context; two contextual elements; or more generally, the representation of two mental codes (Naveh-Benjamin 2000). Additionally, and very germane to the present research, it has been shown that aging affects the two types of memory differentially such that memory deficit in older (vs. younger) adults are usually larger in the case of associative recognition memory than item recognition memory (Old and Naveh-Benjamin 2008).

The overarching objective of this paper is to study ways to reduce episodic memory deficits in brand memory in older consumers. Other researchers have investigated the role of schematic support in learning environments to reduce episodic memory deficits in older adults (Arbuckle et al. 1994; Castel 2007). Schematic support refers to the finding that schemas or prior knowledge within a domain can serve to enhance memory by supporting encoding and retrieval processes within that domain (Craik and Bosman 1992). We study the effects of two types of schematic support, meaningfulness of brand elements and relatedness between brand elements, on item and associative recognition memory differences between older and younger consumers. Meaningfulness of a brand element is the extent to which a specific concept is known and represented in a person’s semantic network (Anderson 1983; Collins and Loftus 1975). Relatedness between brand elements, on the other hand, represents an aggregate of the interconnections between two elements in a person’s semantic network (Collins and Loftus 1975). The more properties the two brand elements have in common, and the more links there are between the two elements via these properties, the more closely related are the two elements.

Our research seeks to make several important contributions. First, we introduce the key distinction between item and associative memory to consumer researchers and empirically demonstrate its significance in a branding context. Second, although it has been shown in prior studies that schematic support can boost memory performance in older adults, our work helps resolve some major conundrums in the existing literature. The most common type of schematic support that has been studied is related (schema consistent) versus unrelated (schema inconsistent) information (Castel 2007; Naveh-Benjamin et al. 2003). But schematic support in the form of meaningfulness of stimuli has not been examined before. In study 1, we hypothesize and show that meaningfulness of brand logo graphics helps attenuate item (but not associative) memory deficits in older consumers. Third, whether schematic support leads to larger improvement in memory performance in older adults (Naveh-Benjamin et al. 2003), or whether they and their younger counterparts benefit equally from schematic support (Verhaeghen, Marcoen, and Goosens 1993), has been a controversial issue (Naveh-Benjamin, Craik, and Ben-Shaul 2002). In study 2, we try and find an explanation for these discrepant findings. Finally, only two studies (Badham and Maylor 2011; Naveh-Benjamin et al. 2003) so far have assessed the relative effects of schematic support on item and associative memory. This is the first investigation to make a comprehensive assessment of the effects of two important types of schematic support in attenuating item (vs. associative) memory deficits in elderly consumers, and that too in a branding context.

Study 1 (N = 50) used a 2 (older vs. younger consumers, between-subjects) x 2 (associative memory for brand information vs. item memory for brand logo graphics, within-subject) x 2 (more vs. less meaningful brand logo graphics; within-subject) mixed factorial design. The dependent variable was recognition accuracy as measured by the proportion of hits minus false alarms (Law, Hawkins, and Craik 1998; Morrin and Ratneshwar 2003). The stimuli were pairs of brand logo graphics and brand names. On the one hand, in study 1, we found a statistically significant three-way interaction between meaningfulness of brand logo graphics, type of memory, and age group (F (1, 48) = 5.42, ηp² = 0.10, p < .03). We show that meaningfulness of brand elements attenuates deficits in item memory for brand elements but not deficits in associative memory in older (vs. younger) consumers. On the other hand, in study 2 (N=69), using a similar procedure as study 1, we find support for a statistically significant three-way interaction between type of memory (item memory vs. associative memory), age group (elderly consumers vs. younger consumers), and relatedness between brand elements (unrelated vs. related) (F (1, 67) = 7.30, ηp² = 0.11, p < .01). However, relatedness between brand logo graphics and brand names reduces differences in associative (but not item) memory in older versus younger consumers.

REFERENCES


