Journal of Retailing 90 (4, 2014) 524–537

Is Beauty in the Aisles of the Retailer? Package Processing in Visually Complex Contexts

Ulrich R. Orth [a,*], Roberta C. Crouch [b,1]

[a] A&F Marketing – Consumer Psychology, Christian-Albrechts-Universität Kiel, Wilhelm-Seelig-Platz 6/7, 24098 Kiel, Germany
[b] School of Business, University of Adelaide, Rm 1013, 10 Pulteney St, Adelaide, South Australia 5000, Australia

Abstract

Visual appeal is an important consideration in the design of brand packages because attractiveness guides behavior. The visual complexity of a context (i.e., the quantity, irregularity, detail, and dissimilarity of objects) in which a retailer displays a package may impact its attractiveness by influencing attention and processing fluency. Employing consumer samples, and stimuli ranging from the abstract to the realistic, three studies provide evidence that people process a package more fluently, thus increasing its attractiveness, when it is presented in a low rather than high complexity context. This effect is more pronounced with inherently appealing packages, and with people who are more field-dependent or pursuing utilitarian shopping goals. Study 1 establishes effects by employing psychometric measures and abstract stimuli; study 2 corroborates findings with another product category and realistic stimuli; and study 3 complements psychometric measures with eye tracking data to demonstrate that visually more complex contexts divert viewer attention, hereby lowering processing fluency and target attractiveness. The authors discuss the theoretical contribution and strategic insights the research provides for retailers, brand managers, and designers.

Keywords: Attractiveness; Design; Field dependence; Fluency; Shopping goal; Visual complexity

Introduction

Products and brand packages are often designed to visually appeal to buyers (Bloch 1995). Attractive designs capture attention (Pieters, Wedel, and Batra 2010), generate liking (Cho and Schwarz 2010), create value (e.g., Chitturi, Raghunathan, and Mahajan 2008), support brand positioning (Orth and Malkewitz 2008) and, ultimately, aid in building strong brands (Henderson et al. 2003). Conversely, designing less attractive brand packages may be desirable for communicating lower prices (Orth, Campana, and Malkewitz 2010), appealing to shoppers who do not seek esthetic value (Creusen and Schoormans 2005), or in order to position store against national brands (Ailawadi, Neslin, and Gedenk 2001).

Capturing positive dimensions such as liking, goodness, and prettiness (Winkielman et al. 2006) 'attractiveness', or the hedonic value of a package, may also be a starting point for the formation of consumer bonds with the brand (Chitturi, Raghunathan, and Mahajan 2008). Sometimes it can even override product attributes when consumers form preferences (Stoll, Baecke, and Kenning 2008) and behavioral intention (Vieira 2010). Although a deep relationship with a brand hinges on extended experiences (Verhoef et al. 2009), initial liking begins at the first encounter and this is where attractiveness plays a pivotal role.

A key driver of attractiveness is how fluently viewers process the stimulus (Reber, Schwarz, and Winkielman 2004). Fluency is the subjective experience of ease with which a person processes a stimulus (Reber, Wurtz, and Zimmermann 2004) and an important source of information (Schwarz 2004). The fluency signal is hedonically marked with high fluency eliciting a positive affective reaction (Reber, Schwarz, and Winkielman 2004; Reber, Wurtz, and Zimmermann 2004); people misattribute the fluency to the stimulus and associate more fluent stimuli with greater attractiveness (Schwarz 2004).

Among the stimulus characteristics that drive processing fluency (for a review, see Reber, Schwarz, and Winkielman 2004; Reber, Wurtz, and Zimmermann 2004), visual complexity plays

* Corresponding author. Tel.: +49 0431 880 4417; fax: +49 0431 880 2044.
E-mail addresses: uorth@ae.uni-kiel.de (U.R. Orth), roberta.crouch@adelaide.edu.au (R.C. Crouch).
[1] Tel.: +61 08 8303 6892.

http://dx.doi.org/10.1016/j.jretai.2014.05.004
0022-4359/

a key role. Visual complexity captures the concept of richness or lack thereof (Creusen, Veryzer, and Schoormans 2010), relating to the quantity (Keller 1991; Kent and Allen 1994), irregularity, detail, and dissimilarity of elements (Pieters, Wedel, and Zhang 2007), the asymmetry of element arrangement (Pieters, Wedel, and Batra 2010), and variation in colors and contrasts (Leder and Carbon 2005). Despite findings that visual complexity plays a pivotal role in viewer processing of products (Creusen, Veryzer, and Schoormans 2010), packages (Orth and Malkewitz 2012), advertisements (Pieters, Wedel, and Batra 2010), and websites (e.g., Geissler, Zinkhan, and Watson 2006), at least three significant gaps remain in our understanding of how consumers process objects presented in retail contexts.

First, the present study focuses on how the visual complexity *of a context* influences processing fluency and the perceived attractiveness of *a target presented within this context*. Research has examined how people respond to the visual complexity of contexts such as automobile interiors (Leder and Carbon 2005), private homes (Bafina 2008), hospitality facilities (Ryu and Jang 2007) and brandscapes (Brakus, Schmitt, and Zarantonello 2009) but, critically, not to specific targets presented within this context. Fluency studies have established drivers of fluency under closely controlled conditions, where a target was displayed with contextual variation considered a distorting factor to be minimized (e.g., Cho and Schwarz 2010; Hekkert, Snelders, and van Wieringen 2003; Reber, Winkielman, and Schwarz 1998). Similarly, designers conceive package designs in isolation (Meyers and Lubliner 1998) with little consideration for the environments where consumers typically view them. Integrating complexity and fluency research, our work accounts for visual complexity as a key characteristic of retail environments (Titus and Everett 2002), and acknowledges that packages are typically displayed in the presence of other packages, shelves, and visual artifacts, hence, in contexts varying in visual complexity.

Second, we provide insight into the underlying mechanism, by examining fluency as a mediator of the context complexity – target attractiveness relationship. While strong evidence exists for the overall positive effect of fluency on attractiveness (Reber, Schwarz, and Winkielman 2004; Reber, Wurtz, and Zimmermann 2004), research on metacognitive experiences suggests that the processing experience (fluency) must be affectively congruent with the valence of the stimulus to have an effect (Winkielman and Cacioppo 2001). We extend this perspective to retail environments to suggest that high-fluency contexts facilitate processing and target attractiveness, particularly with inherently appealing targets.

Third, our work examines the impact of individual and situational differences as potential moderators. Specifically, we focus on individual field dependence/independence (Goodenough 1987) and shopping goals (Dhar and Wertenbroch 2000). Cultural (Masuda and Nisbett 2001) and situational (Zhu and Meyers-Levy 2009) influences can lead people to engage in field dependent versus independent processing of visuals or, more specifically, to view objects detached from or embedded within a context. Similarly, consumers may enter retail outlets with specific goals in mind: hedonic or utilitarian (Dhar and Wertenbroch 2000). These differences are likely to affect how context complexity impacts target processing and attractiveness.

While there may be some overlap in how assortment composition (Simonson 1999), variety (Hoch, Bradlow, and Wansink 1999), size (Boyd and Bahn 2009), or choice option number (Scheibehenne, Greifeneder, and Todd 2010) relate to the visual complexity of a retail environment, our work contrasts in at least three ways from assortment research. First, our focus on the visual complexity of the context in which a target package is presented captures the influence of the design properties of other objects displayed in the target's vicinity that may, or may not, reflect assortment properties. Second, we focus on visual (i.e., extrinsic) attributes of brand packages rather than intrinsic product attributes. Unlike studies of decision conflict, researching fluency as a process mechanism does not require changing the attributes of the alternatives or the composition of the choice sets (Novemsky et al. 2007). Finally, we study consumer pre-purchase evaluation of a design's attractiveness rather than preference (Simonson 1999), choice (Chernev 2006), or satisfaction (Mogilner, Rudnick, and Iyengar 2008).

In summary, this study makes three contributions. First, this study examines the effects of context visual complexity on target attractiveness. Second, it offers novel insights into the underlying mechanism of processing fluency as a mediator. Third, this study examines one target characteristic (inherent appeal), one individual variable (field dependence), and one situational variable (hedonic/utilitarian shopping goals) that could potentially moderate effects. We explore these issues in two psychometric studies and one eye-tracking experiment. Fig. 1 shows the conceptual framework and its operationalization in our three studies.

Conceptual Framework and Hypotheses Development

Visual Complexity and Viewer Processing

Visual complexity is common to many service interiors (Orth, Heinrich, and Malkewitz 2012), and a key input to consumer information processing in retail environments (Titus and Everett 2002). Defined as the degree of difficulty in providing a verbal description of an image (Oliva et al. 2004), visual complexity combines high degrees of elaboration, activity and depth, and captures the concept of richness or lack thereof (Creusen, Veryzer, and Schoormans 2010). In general, complexity increases with the number of visible objects (Pieters, Wedel, and Batra 2010), irregularity, detail, and dissimilarity of objects (Nadal et al. 2010), and the asymmetry and irregularity of object arrangement (Nadal et al. 2010). Environmental esthetics has related visual complexity to the amount of information recognized by a viewer, and has further established positive relationships with the number and dissimilarity of colors, scales, and shapes (Stamps 2002). In retail contexts, visual complexity can relate to the similarity of packages presented on a shelf (Hoch, Bradlow, and Wansink 1999), and the variety in shapes, signs, colors, and letters present (Nasar 1987).

Visual complexity is an established influencer of processing fluency and attractiveness (Reber, Schwarz, and Winkielman 2004; Reber, Wurtz, and Zimmermann 2004). Less complex