The Effects of Dynamic Product Presentation and Contextual Backgrounds on Consumer Purchase Intentions: Perspectives from the Load Theory of Attention and Cognitive Control

Yakun Zhang (Corresponding Author)

Lecturer in Advertising and Marketing Communications

Queen Anne Court 244

University of Greenwich

Old Royal Naval College, Park Row

London, SE10 9LS

Telephone: +44(0)20 8331 8663

Yakun.Zhang@greenwich.ac.uk

Sarah Hong Xiao

Associate Professor in Marketing

MHL 533

Durham University Business School

Mill Hill Lane

Durham

Telephone: +44 (0)191 33 46353

hong.xiao@durham.ac.uk

Michael Nicholson

Professor in Marketing

MHL 504

Durham University Business School

Mill Hill Lane

Durham

Telephone: +44 (0)191 33 45329

mike.nicholson@durham.ac.uk

Yakun Zhang (Ph.D., Durham University), Lecturer in Advertising and Marketing Communications, University of Greenwich, Yakun.Zhang@greenwich.ac.uk

Sarah Hong Xiao (Ph.D., Durham University), Associate Professor in Marketing, Durham University, hong.xiao@durham.ac.uk

Michael Nicholson (Ph.D., Durham University), Professor in Marketing, Durham University, mike.nicholson@durham.ac.uk

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ABSTRACT

Dynamic imagery (e.g., frozen motion images) is widely used in high imagery ads to enhance consumer engagement. However, little is known as to whether and how product presentation dynamism influences the effectiveness of ads with other visual stimuli. Given that different visual elements compete for finite attentional resources, this paper proposes that product presentation dynamism interacts with contextual backgrounds and advertising slogans in a visual ad. Study One reveals that dynamic product presentation diverts attentional resources away from the background image, making contextual backgrounds less effective in enhancing imagery fluency than a plain background. Study Two extends these findings by exploring the complicating effect of the presence of a slogan and revealing important product category differences. For hedonic products, congruent (incongruent) slogan-background meanings increase imagery fluency under stationary (dynamic) product presentation, which further increases purchase intentions. For utilitarian products, incongruent slogan-background meanings increase purchase intentions under dynamic product presentation. The conceptual and practical implications of these findings are discussed.

Visual ads often use product images, contextual background images and slogans to communicate product attributes or consumption experiences (Walters, Sparks and Herington 2007; Yoo and Kim 2014). Product images are typically presented in either a static format or a dynamic format (e.g., frozen motion pictures) with either a contextual or a plain background. For example, *Corona* uses a static image of its beer against a background image of a beach with the slogan "Find Your Beach", while *Coca Cola* presents a frozen motion picture of splashing coke against a plain background with the slogan "Open Happiness". High-imagery ads such as these can be seen everywhere, from printed ads to billboard ads to social media ads, and for many types of products. However, little is known about how different product presentations and their combined effects with other visual stimuli, particularly contextual backgrounds and ad slogans, influence the effectiveness of advertisements. The answer to this question is compelling to advertisers because the design of multiple visual advertising stimuli is critical for communicating advertising messages and enhancing consumers' desire for depicted products (Elder and Krishna 2012; Farace et al. 2020; Lee and Shin 2019).

Previous research suggests that imagery-provoking stimuli such as contextual backgrounds and advertising slogans increase mental imagery and consumers' product evaluations (Maier and Dost 2018a; Walters et al. 2007; Yoo and Kim 2014). However, research on the ads' effectiveness of these stimuli with dynamic product presentation is scarce. An emerging stream of advertising research has documented that dynamic imagery (e.g., frozen motion images) captures consumers' attention and encourages deeper information processing, thereby increasing product evaluations (e.g., Cian, Krishna and Elder 2014). Although these studies provided insights on the antecedents and consequences of dynamic imagery, its interaction effect with other visual stimuli was not examined (Cian et al. 2014; Cian, Krishna and

Elder 2015). In this research, we focus on the product presentation dynamism. Dynamic product presentation refers to a product image the viewer perceives to have a sense of movement (Cian et al. 2014).

Specifically, considering the wide range of dynamic product images used in visual ads, there is a need for new insights into the mechanisms underpinning the relationships between product presentation dynamism, contextual background images, and advertising slogans in visual ads information processing. Previous research suggests that the positive effect of contextual backgrounds on product evaluation is mediated by mental imagery and fluency (Maier and Dost 2018b). In this research, we propose product presentation dynamism interacts with other visual stimuli that influence consumer imagery fluency and purchase intentions. We seek to determine if dynamic product presentation influences attention allocation in an ad with a contextual background and affects visual ad processing. Furthermore, we explore whether the increased cognitive load caused by the inclusion of an advertising slogan changes the role of the dynamic product presentation and the way that viewers process information.

Our research contributes to the advertising literature in several ways. Firstly, we offer new insights into the underlying mechanism of how visual stimuli compete for attentional resources and are processed in a visual ad. Our research examines when and why contextual backgrounds and slogan-background meaning congruence increase purchase intentions, drawing from the literature on load theory of attention and mental imagery (Lavie et al. 2004; Orús, Gurrea and Flavián 2017). We identify product presentation dynamism as an important moderator of the effect of contextual backgrounds and slogan-background meaning congruence on purchase intentions in visual ad processing. Secondly, we reveal that the inclusion of textual stimuli will change how product presentation dynamism affects the processing of other visual

stimuli. We show that in pictorial stimuli only ads, product presentation dynamism affects how the consumer allocates his/ her attention. On the other hand, the addition of textual stimuli reduces ad viewers' ability to prioritize attention allocation. Therefore, all visual stimuli in a single ad will be registered. Product presentation dynamism, in this case, influences the extent to which meanings from both pictorial and textual stimuli will be integrated. Additionally, we offer supporting evidence that imagery fluency is the underlying mechanism that explains the differential effects of contextual background images and slogan-background meaning congruence on purchase intentions. However, such effects depend on whether a product is presented in a dynamic format. Thirdly, we further enhance the generalizability of our findings by examining the joint effects of multiple stimuli in visual ad processing, as information processing may vary across different product categories (Homburg, Koschate and Hoyer 2006). Finally, and more practically, this research offers some guidance for companies to help identify the most effective combinations of different visual stimuli in ads that increase purchase intentions.

CONCEPTUAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Prior studies suggest that the presentation and positioning of visual ad stimuli significantly influence consumers' attention, cognitive evaluation, and affective and behavioral responses (Farace et al. 2020; Lee and Shin 2019; Maier and Dost 2018b). For example, researchers have shown the importance of visual stimuli presentation such as product location, dynamic presentations (e.g., animation and video), product alignment, background concreteness (e.g., consumption background), and image-text meaning congruence on imagery processing and product evaluation (Lee and Choi 2019; Orús et al. 2017; Saluja and Adaval 2018). As humans have a limited information processing capacity, not all stimuli will be weighted the same in terms

of attentional resource allocation and level of information processing. However, the underlying mechanism of how different visual stimuli are processed simultaneously in a single visual ad, and their interaction effects, require further investigation (Farace et al. 2020). To extend research on advertising effectiveness of multiple stimuli processing, we rely on studies of load theory of attention and cognitive control (Lavie 2010; Lavie and Dalton 2014), dynamic imagery (Cian et al. 2014; Cian et al. 2015), contextual backgrounds (Maier and Dost 2018a; Maier and Dost 2018b; Yoo and Kim 2014), and text-image congruence (Lee and Choi 2019; Van Rompay, Pruyn and Tieke 2009; Van Rompay, De Vries and Van Venrooij 2010) to derive our conceptual framework and propose hypotheses.

Load Theory of Attention and Cognitive Control

The load theory of attention and cognitive control explains the processing of both central and peripheral stimuli when multiple stimuli are competing for attention (Lavie et al. 2004). Previous studies consider central stimuli to be that direct relevance to the current task, whereas peripheral stimuli are those indirectly relevant or irrelevant to the current task (Lavie and De Fockert 2005). When processing the information in a visual ad, all stimuli can be relevant. However, different stimuli compete for attentional resources. Therefore, in this research, we define central stimuli as the stimuli that viewers allocate more attentional resources to. Research on load theory posits that attentional capacity is limited but always involuntarily filled (Lavie and Dalton 2014). This stream of research argues that during information processing, observers assign meanings to peripheral stimuli but that these stimuli are not given high priority. If the observer realizes that peripheral stimuli are important, then he/she will shift his/her attention to the peripheral stimuli.

The load theory of attention argues that the processing of central and peripheral stimuli depends on the level and type of information load involved in a task (Lavie and De Fockert (2005). The theory posits that the extent to which peripheral visual information is perceived depends on the perceptual load of the task. Perceptual load refers to the amount of information involved in the perceptual processing of stimuli (Macdonald and Lavie 2011). An increased level of perceptual load decreases the processing of peripheral stimuli (Lavie and De Fockert 2005). On the other hand, when perceptual load associated with central stimuli is low, perceptual resources are not completely occupied and automatically spill over to allow perceptual processing of peripheral visual information. For example, gamers are more likely to ignore product placements in the background if they need to track a moving vehicle in a game, as their attentional resources are exhausted (Peters and Leshner 2013).

Load theory also posits that the prioritization of attentional resources depends on the availability of cognitive load such as working memory (Lavie 2010). Cognitive load refers to the degree to which resources required for mental processing are constrained (Shiv and Fedorikhin 1999). An increased cognitive load increases peripheral visual processing due to the reduced ability to be selective in processing visual stimuli (Lavie et al. 2004). For instance, tasks such as remembering directions in a video driving game reduce a player's ability to prioritize attention to the central tasks (vehicles, pedestrians, road signs, etc.) and cause him/her to notice distractors (billboards) (Lavie 2010).

Dynamic Imagery and Visual Attention

In the context of visual ad processing, advertisers present focal products against contextual backgrounds and sometimes with advertising slogans to communicate about consumption experiences and product attributes and to encourage consumer desire to purchase

the products (Kim and Lennon 2000). During the visual ad processing process, there are no predefined central stimuli or peripheral stimuli. However, due to their limited attentional resources, ad viewers are selective in their attention allocation with multiple visual stimuli (Lavie 2005). Dynamic imagery (i.e., frozen motion product images) is found to be effective in capturing observers' attention to visual stimuli as observers imagine the movement (Cian et al. 2014). Previous studies have manipulated perceptual load by changing the level of demand on attentional capacity, such as increasing visual competition (Lavie 2010). Drawing from load theory of attention, we argue that when only pictorial stimuli are presented (i.e., focal products and background images), dynamic product presentation occupies ad viewers' attentional resources, making contextual background processing less salient. Therefore, dynamic product presentation makes the focal product become the central stimulus, and the contextual background becomes a peripheral stimulus in a visual ad. On the other hand, stationary product presentation is less effective in capturing observers' attention. Thus, spare capacity spill overs involuntarily to the contextual background during the processing of a visual ad.

Product Presentation Dynamism and Contextual Backgrounds

Effectiveness of Contextual Backgrounds: Mediating Role of Imagery Fluency

Visual information plays an important role in consumer decisions (Kim and Lennon 2008). Contextual backgrounds offer consumers concrete information on the consumption environment, occasion, and/or benefits of a product (Krishnamurthy and Sujan 1999). For example, presenting a swimsuit against a relevant background such as a beach may evoke a vision of wearing the swimsuit on vacation (Yoo and Kim 2014). Presenting a detergent against the background of a clean and natural environment communicates the environmentally friendly nature of the detergent (Matthes, Wonneberger and Schmuck 2014).

Previous studies suggest that contextual background can facilitate mental fluency, defined as the ease with which related mental imagery comes to mind (Kleine III and Kernan 1991; Maier and Dost 2018a; Maier and Dost 2018b). The more easily consumption-related activities come to mind, the easier it is for consumers to generate relevant mental imagery from memory and respond positively to an ad (Chang 2013; Petrova and Cialdini 2005). Therefore, ads with contextual backgrounds should lead to higher imagery fluency than ads with a plain background.

MacInnis and Price (1987) argue that imagery processing can induce a strong and concrete sensory experience, which in turn increases the desire for a product. Mental simulations lead to higher accessibility of simulated events and involve self-enacting, detailed, product-related behaviors (Anderson 1983; Phillips, Olson and Baumgartner 1995). The imagery fluency therefore should increase purchase intentions. Thus, the positive effect between contextual (vs. plain) backgrounds and purchase intentions should be mediated by imagery fluency.

However, due to the attentional resource competition among different stimuli in a visual ad, we argue that the effectiveness of contextual backgrounds may be conditional on other visual stimuli. We propose that product presentation dynamism moderates the indirect effects of contextual (vs. plain) backgrounds on the purchase intentions for both hedonic and utilitarian goods (see FIGURE 1 for Study One's conceptual models).

Effectiveness of Contextual Backgrounds: Moderating Role of Product Presentation Dynamism

Motion plays an important role in determining what people attend to (Pratt et al. 2010). Prior research suggests that our perceptual system can capture the implied transitions in static pictures where no movement is actually taking place (Freyd 1983). For example, pictures that "freeze" moving objects, including people, can induce a mental representation of movement. The

dynamism of the focal object should lead to a more vivid and elaborated image of the movement depicted (Callow, Roberts and Fawkes 2006). Cian et al. (2014) find that perceived movement in a static image is very effective in maintaining viewers' attention to a selected object (Cian et al. 2014; Pieters and Wedel 2007). These findings suggest that the amount of sensory information involved (i.e., the degree of perceptual load) is higher under dynamic presentations than under stationary presentations (Macdonald and Lavie 2011).

According to load theory of attention, dynamic product presentation occupies more attentional resources, making a contextual background less effective in generating mental images than a plain background. On the other hand, when a focal product is presented in a stationary format, it is less attention-grabbing. Therefore, the level of demand on attentional capacity or perceptual load – is lower for stationary product presentation than for dynamic product presentation. Attentional resources are not exhausted and automatically spill over to the background processing. Therefore, when a product is presented in a stationary format, the influence of a contextual background on imagery fluency is stronger than that of a plain background. Consequently, we expect imagery fluency to mediate the relationship between contextual (vs. plain) backgrounds and purchase intentions under stationary product presentation but not under dynamic presentation.

Previous research suggests that product category may influence the effectiveness of contextual backgrounds (Maier and Dost 2018a; Maier and Dost 2018b). To enhance the generalizability of our findings, we examine two common product categories: hedonic and utilitarian products. Hedonic products are primarily characterized by an affective and sensory experience of aesthetic or sensual pleasure, fantasy, and fun (Holbrook and Hirschman 1982).

Utilitarian products are more cognitively driven, instrumental, and goal-oriented, accomplishing a functional or practical task (Strahilevitz and Myers 1998).

Additionally, to extend the understanding of the effects of different types of contextual backgrounds in visual ad processing, this research investigates both transformational and informational backgrounds in comparison to a plain background (Kane et al. 2001). Transformational background images emphasize the creation of emotional and hedonic experiences associated with using an advertised product – for example, a beer placed on a relaxing beach. By contrast, informational backgrounds focus on the presentation of factual information about the brand's utilitarian value and the functional attributes of a product – for example, a detergent in front of a clean shirt (Aaker and Stayman 1992; Gavilan, Avello and Abril 2014).

PLACE FIGURE 1 ABOUT HERE

Hedonic Products and Transformational Background The matching principle suggests that a match between product type and advertising information improves the ad persuasion (Maio and Haddock 2007). Ad viewers therefore should be more sensitive to hedonic aspects when processing information about hedonic products. Previous research has found that transformational content is more effective in enhancing mental imagery as it is more abundant in detail, more exciting, and more enjoyable (Gavilan et al. 2014). A transformational background image that communicates a positive consumption experience is more accessible and leads to greater elaboration than a plain background would (Mitchell 1983; Tversky and Kahneman 1973).

Drawing from discussions related to load theory of attention, under the stationary product presentation, a transformational (vs. plain) background should lead to a higher level of imagery

fluency for hedonic products as more attentional resources are allocated to the background processing. However, under dynamic product presentation, the effectiveness of a transformational (vs. plain) background in enhancing imagery fluency is reduced as the dynamic product image occupies attentional resources. Therefore, we propose the following:

H1a. The positive effect of a transformational (vs. plain) background on imagery fluency under stationary product presentation is weakened under dynamic product presentation for hedonic products.

H1b. Product presentation dynamism moderates the indirect effect of a transformational (vs. plain) background on purchase intentions via imagery fluency, such that this indirect effect is weakened under dynamic product presentation for hedonic products.

Hedonic Product and Informational Background When evaluating hedonic products, consumers employ more holistic processing and are more likely to rely on readily available information stored in memory (Holbrook and Hirschman 1982). When there is no textual information for referent, a message from an informational background fits less easily with consumers' hedonic needs and, therefore, is less mentally accessible (Puto and Wells 1984). Thus, the positive effect of an informational (vs. plain) background on imagery fluency for hedonic products is limited, even when ad viewers have sufficient attentional resources to process the information in the background image (i.e., under stationary product presentation). We therefore expect that the strength of the relationship between an informational (vs. plain) background and imagery fluency for hedonic products does not differ across stationary and dynamic product presentations. Hence, we propose the following:

H2a. The strength of the relationship between an informational (vs. plain) background and imagery fluency does not differ between stationary and dynamic product presentations for hedonic products.

H2b: Product presentation dynamism does not moderate the indirect effect of an informational (vs. plain) background on purchase intentions via imagery fluency for hedonic products.

Utilitarian Products and Transformational Background While a transformational background does not fit with the expected consumption goal of a utilitarian product, the processing of hedonic information is systematically more engaging and fun than the processing of utilitarian information (Gill 2008). Because utilitarian products are easier to justify than hedonic ones (Okada 2005), consumers may also consider other factors, such as hedonic aspects, when evaluating utilitarian products (Klein and Melnyk 2016). Visual stimuli, especially transformational background images that communicate hedonic experiences, are more effective in evoking mental imagery (MacInnis and Price 1987). Therefore, with attentional resources spilling over to the background image (i.e., under stationary presentation), a transformational background should lead to higher imagery fluency than a plain background for utilitarian products. However, this effect is diminished when attentional resources are directed to the focal product (i.e., under dynamic presentation). Hence, we propose the following:

H3a: The positive effect of a transformational (vs. plain) background on imagery fluency under stationary product presentation is weakened under dynamic product presentation for utilitarian products.

H3b: Product presentation dynamism moderates the indirect effect of a transformational (vs. plain) background on purchase intentions via imagery fluency, such that this indirect effect is weakened under dynamic product presentation for utilitarian products.

Utilitarian Products and Informational Background Information processing for utilitarian products is based on more effortful cognitive processing, paying attention to more diagnostic information relevant to the utilitarian benefits (Homburg et al. 2006; Petty and Cacioppo 1986). Utilitarian products fulfill more functionality-related goals for consumers (Chitturi, Raghunathan and Mahajan 2008). An informational background that communicates the product benefits matches consumers' expectations for utilitarian products. An informational background provides more accessible mental imagery for utilitarian products when attentional resources are allocated to background image processing. Therefore, we hypothesize the following:

H4a: The positive effect of an informational (vs. plain) background on imagery fluency under stationary product presentation is weakened under dynamic product presentation for utilitarian products.

H4b: Product presentation dynamism moderates the indirect effect of an informational (vs. plain) background on purchase intentions via imagery fluency such that this indirect effect is weakened under dynamic product presentation for utilitarian products.

Textual Information and Visual Attention

Previous research demonstrates that the combination of textual information (e.g., advertising slogans) and imagery often determine the extent to which and how consumers process and respond to ads (Farace et al. 2020; Lee and Choi 2019; MacInnis and Price 1987). Tversky (1977) argues that when people compare two pieces of information, one piece becomes

the subject of comparison and the other acts as a referent. Prior research has suggested that when pictorial and textual stimuli are both presented, people's comprehension behavior is largely text-driven, and they rely on text information for a reference to set their expectations (Lee and Wu 2018; Schmidt-Weigand, Kohnert and Glowalla 2010). Therefore, the information from advertising slogans in visual ads attract attention and be processed.

When textual information is added, connecting and integrating verbal and nonverbal processing requires working memory, as textual information visualization requires holding images in working memory (Mayer et al. 2005; Paivio 1990). Previous research suggests that working memory tasks such as identifying matching objects can increase cognitive load (Wang and Duff 2016). Load theory posits that high cognitive load reduces ad viewers' ability to prioritize stimuli processing (Lavie et al. 2004; Murphy, Groeger and Greene 2016; Wang and Duff 2016). Therefore, ad viewers' attentional resources are dispersed to all stimuli in a visual ad instead of focusing on one stimulus.

Product Presentation Dynamism and Slogan-Background Meaning Congruence

Effectiveness of Slogan-Background Meaning Congruence: Mediating Role of Imagery Fluency

Based on the above discussion, the addition of advertising slogans changes ad viewers' information processing patterns such that all relevant information in a visual ad is registered. Meaning congruence between textual and pictorial stimuli plays a vital role in information processing as individuals strive for internal consistency (Festinger 1957). Previous studies suggest that congruence between product/service appearance and description (Van Rompay et al. 2010), between product visual features and advertising slogans (Van Rompay et al. 2009), and between verbal and visual stimuli (Son, Reese and Davie 1987; Unnava, Agarwal and Haugtvedt 1996) can enhance processing fluency and lead to better ad recall. The dual-coding literature

suggests that information presented in both verbal and nonverbal modalities can better generate mental images during information processing (Lwin, Morrin and Krishna 2010; Paivio 1990). These mental images can lead to higher accessibility of stimulated events and positive change in behavioral intentions and actual behavior (Phillips et al. 1995). Therefore, we expect that the positive effect between slogan-background meaning congruence and purchase intentions is mediated by imagery fluency.

Nevertheless, the existing literature also provides mixed evidence on the impact of text-image meaning congruence on information processing. For example, Meyers-Levy, Louie and Curren (1994) find that text-image incongruence results in deeper information processing, thereby prompting further message elaboration of the ad content. When products are presented in a dynamic format, ad viewers are encouraged to engage in active processing (Mayer et al. 2005). Therefore, we expect the relationship between slogan-background meaning congruence and purchase intentions through imagery fluency to be moderated by product presentation dynamism.

In this research, we define slogan-background meaning congruence as instances where both the ad's slogan and its background are either transformational or informational rather than a mixture of the two. Similarly, slogan-background meaning incongruence occurs when the slogan is transformational and the background is informational, or vice versa.

Effectiveness of Slogan-Background Meaning Congruence: Moderating Role of Product Presentation Dynamism

Although the increased cognitive load from the inclusion of advertising slogans allows all information (focal product, background image, and advertising slogan) in visual ads to enter into ad viewers' sensory register (Lavie and Dalton 2014), the extent to which relevant stimuli generate mental imagery can be influenced by product presentation dynamism (Cian et al. 2015).

Additionally, as discussed above, the information processing for hedonic and utilitarian products is different. Consequently, the role of product presentation dynamism is also expected to change across two product categories (see FIGURE 2 for Study Two's conceptual models).

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Hedonic Products and Slogan-Background Meaning Congruence Imagery processing is more salient for hedonic products because they are more related to enjoyment, experience, and sensations than utilitarian products (Okada 2005). Previous research has suggested that mental imagery increases hedonically superior product preferences (Roggeveen et al. 2015). Vivid information from pictorial and textual stimuli fosters the generation of mental images, which leads to further behavioral responses. Therefore, imagery fluency should be an important mediator of the relationship between slogan-background meaning congruence and purchase intentions for hedonic products (Shiv and Fedorikhin 2002).

When a focal product is presented in a stationary format, the lack of ad engagement decreases elaborate information processing (Cian et al. 2015; Mayer et al. 2005). An ad viewer becomes less motivated to interpret and integrate incongruent meanings between textual and pictorial information under this condition. Hence, an additional background image that exemplifies the textual information is needed for meaning interpretation and mental imagery generation (Unnava and Burnkrant 1991). Consequently, congruent slogan-background meanings should lead to higher imagery fluency than incongruent slogan-background meanings under stationary product presentation.

Prior research suggests that people are likely to shift their attention to their surroundings when dynamic warning signs are present (Cian et al. 2015). Similarly, as the increased cognitive load (due to the addition of textual information) makes ad viewers register all stimuli, dynamic

product presentation attracts ad viewers' attention and motivates deeper processing of relevant information centered around the focal product. The focal product serves as a medium through which to link related concepts from long-term memory (Mitchell 1983). The positive consumption experience and product attributes communicated by the slogan and background can therefore be effectively integrated with the focal product. Incongruent slogan-background meanings further attract attention and lead to interpretation and elaboration of the information (e.g., Meyers-Levy et al. 1994). The richness and vividness of different stimuli allow consumers to better mentally visualize all information related to an advertised product (Roggeveen et al. 2015). Therefore, under dynamic presentation, incongruent slogan-background meanings should lead to higher imagery fluency than congruent slogan-background meanings due to more elaborate processing of ad content (Craik and Lockhart 1972; Maheswaran and Chaiken 1991).

Taken together, we anticipate that product presentation dynamism moderates the relationship between slogan-background meaning congruence and purchase intentions via imagery fluency.

H5a: Product presentation dynamism moderates the relationship between slogan-background meaning congruence and imagery fluency for hedonic products such that congruent (incongruent) meanings lead to a higher level of imagery fluency under stationary (dynamic) product presentation.

H5b: Product presentation dynamism moderates the indirect effect of slogan-background meaning congruence on purchase intentions via imagery fluency for hedonic products such that congruent (incongruent) meanings increase purchase intentions via imagery fluency under stationary (dynamic) product presentation.

Utilitarian Products and Slogan-Background Meaning Congruence Information processing is more cognitively-driven for utilitarian products than for hedonic products (Homburg et al. 2006). Previous research suggests that text-image meaning congruence enhances processing fluency (whereby information comes to mind more easily) for consumers who are high in need for cognition and need for structure (Van Rompay et al. 2009; Van Rompay et al. 2010). This means that under effortful cognitive processing conditions such as information processing for utilitarian products, ad viewers rely on congruent slogan-background meanings to generate mental images (Cacioppo et al. 1986). Congruent slogan-background meanings therefore increase imagery fluency. Imagery fluency further increases behavioral intentions due to the ease of mental accessibility (Bone and Ellen 1990; Tversky and Kahneman 1973). Therefore, we expect that slogan-background meaning congruence increases purchase intentions via imagery fluency for utilitarian products, regardless of product presentation formats:

H6: Imagery fluency mediates the relationship between slogan-background meaning congruence and purchase intentions for utilitarian products.

The reliance on imagery processing during decision-making is limited for utilitarian products as consumers engage in more extensive cognitive information processing, especially when textual information is involved (Homburg et al. 2006; Schlosser 2003). The final purchase decision therefore relies more on the strength of the message, such as multiple positive arguments about the product (e.g., Kim and Lennon 2008). Therefore, we expect a moderation effect of product presentation dynamism for utilitarian products on the direct relationship between slogan-background congruence and purchase intentions.

Similar to the information processing of hedonic products, dynamic product presentation leads to elaborate information processing, the knowledge that the product is effective

(informational meaning), and the expectation that the consumption experience will be pleasant (transformational meaning), thus increasing purchase intentions. However, under stationary presentation conditions, the lack of active information processing hinders the processing of a product's or ad's meaning interpretation (Mayer et al. 2005). Incongruent slogan-background meanings confuse viewers' perceptions of product characteristics, leading to lower levels of purchase intentions.

On the other hand, information processing for hedonic products relies heavily on imagery processing (MacInnis and Price 1987). We therefore do not expect a moderation effect of product presentation dynamism on the direct relationship between slogan-background congruence and purchase intentions. We hypothesize the following:

> **H7:** Product presentation dynamism moderates the relationship between slogan-background meaning congruence and purchase intentions for utilitarian products such that congruent (incongruent) meanings increase purchase intentions under stationary (dynamic) product presentation.

METHOD

Study Overview

We test our hypotheses through two studies on two product categories. In Study One, we test whether the indirect effect of contextual background images on purchase intentions through imagery fluency is moderated by product presentation dynamism for both hedonic and utilitarian products (H1a - H4b). In Study Two, we test whether the indirect effect of slogan-background meaning congruence on purchase intentions through imagery fluency depends on product presentation dynamism for hedonic products (H5a & H5b). Additionally, Study Two examines

the mediation effect of slogan-background meaning congruence on purchase intentions via imagery fluency (H6) and the moderation effect of product presentation dynamism on the relationship between slogan-background meaning congruence and purchase intentions (H7) for utilitarian products. Both hedonic and utilitarian product categories are examined in our studies to enhance the generalizability of our findings. FIGURE 1 and FIGURE 2 depict our conceptual models for each study.

Study One

Study One proposes that product presentation dynamism moderates the relationship between contextual backgrounds and imagery fluency. Additionally, the mediation effect of imagery fluency on the relationship between contextual background images and purchase intentions depends on whether a product is presented in a dynamic or stationary format.

Participants, Procedures, and Measures

Study One employed a 2 (Product presentation dynamism: stationary vs. dynamic) x 3 (Background image: plain vs. transformational vs. informational) between-group design for hedonic and utilitarian product categories (see APPENDIX A for the stimuli used in Study One). A Plain background was used in the control group. Data for hedonic and utilitarian products were collected at separate time points. Each participant was randomly assigned to one of the six conditions for each product category. The perceived movement of the ad, imagery fluency, purchase intentions, and need for cognition were measured after each treatment.

Participants for this study were recruited from MTurk (U.S.) ($N_{Hedonic}$ = 211, 48% females, mean age range = 35 – 44; $N_{Utilitarian}$ = 210, 60% females, mean age range = 35 - 44). Instructional manipulation checks (IMCs) were implemented for all experiments. Participants

who misinterpreted the instructions did not progress to the experiments ($N_{Excluded}$ = 546) (Oppenheimer, Meyvis and Davidenko 2009).

All measurement scales in this research used seven-point Likert scales. Cronbach's alpha values were all above the cut-off point of 0.7 (see APPENDIX C for measurements and sources).

Stimuli, Pre-test, and Manipulation Checks

A pretest with 31 participants from MTurk was conducted to assess the nature of the product used in the stimuli. Participants evaluated how they felt about the product on a seven-point bipolar scale ranging from "utilitarian" [1] to "hedonic" [7]. Beer was deemed more hedonic and washing detergent was rated more utilitarian (M_{Beer} = 5.16, $M_{Detergent}$ = 1.84, t = 7.62, $p < .001$).

Participants were asked to rate the presented ads in terms of the perceived transformativeness and perceived informativeness of the background image meanings for both product categories. The definitions of informational and transformational meanings were provided to participants (Gavilan et al. 2014). For the hedonic product (beer), an image of a bar was used for the transformational background, and an image of a natural wheat field was used for the informational background to emphasize the natural ingredients of the beer. For the utilitarian product (detergent), an image conveying happiness in a laundry room was used as a transformational background, and an image of dirty and clean t-shirts was used for the informational background to emphasize the cleaning power of the detergent (APPENDIX A for stimuli used in Study One).

The pretest results showed that participants exposed to informational background images rated these images as providing more information on product attributes for hedonic (M_{Info} = 6.1,

M_{Trans} = 3.9, M_{Plain} = 4.12; $F_{(2, 44)}$ = 10.7, p < .001) and utilitarian (M_{Info} = 5.2, M_{Trans} = 3.4, M_{Plain} = 3.4; $F_{(2, 95)}$ = 15, p < .001) products. Transformational background images were rated higher in experiential content for both hedonic (M_{Info} = 3.6, M_{Trans} = 5.3, M_{Plain} = 3.6; $F_{(2, 44)}$ = 5.1, p < .05) and utilitarian (M_{Info} = 4.6, M_{Trans} = 5.6, M_{Plain} = 3.5; $F_{(2, 95)}$ = 13.9, p < .001) products. Pretest results also indicated that the stationary product presentation conditions differed from the dynamic product presentation conditions in terms of perceived movement for both hedonic ($M_{stationary}$ = 2.44, $M_{Dynamic}$ = 4.33, p < .001) and utilitarian ($M_{stationary}$ = 2.8, $M_{Dynamic}$ = 3.86, p < .001) products.

Results

As the processing of pictorial stimuli relies on imagery processing (Rossiter 1982), we expected that the moderation effect of product presentation dynamism would exist only between contextual background and imagery fluency. Model 8 in SPSS PROCESS (Preacher and Hayes 2004) was used to verify that product presentation dynamism did not moderate the direct effect of contextual backgrounds on purchase intentions for either product category. The results indicated that the moderating effects of product presentation dynamism on the direct relationship between contextual background and purchase intentions were insignificant for both hedonic (ΔR^2 = .004, $F_{(2, 204)}$ = .58, p = .56) and utilitarian (ΔR^2 = .017, $F_{(2, 203)}$ = 2.05, p = .131) products.

Hypotheses 1a to 4b were tested through conditional process analysis with Model 7 in SPSS PROCESS (5000 bootstrap samples) after we ruled out the moderation effect of product presentation dynamism on the direct relationship between contextual backgrounds and purchase intentions to increase model parsimony.

The tests results of highest-order unconditional interaction suggest a significant moderation effect of product presentation dynamism on the relationship between contextual

background types and imagery fluency for hedonic products ($\Delta R^2_{\text{Hedonic}} = .04$, $F_{(2, 205)} = 4.42$, $p = .01$) (see FIGURE 3 for conditional means of imagery fluency and TABLE 1 for coefficients).

PLACE FIGURE 3 ABOUT HERE

Hedonic Products and Transformational Background The interaction effect between product presentation dynamism and the transformational (vs. plain) background on imagery fluency is significant or hedonic products ($\beta = -1.15$, $t = -2.8$, $p < .01$), supporting *hypothesis 1a*. Under stationary product presentation, the transformational (vs. plain) background generates a higher level of imagery fluency for hedonic products ($\beta = 1.33$, $t = 4.55$, $p < .001$). Under dynamic product presentation, the level of imagery fluency does not differ between the transformational background and the plain background for hedonic products ($p > .05$). Therefore, the effect of the transformational background on imagery fluency is weakened under dynamic product presentation. Additionally, the index of moderated mediation indicates that dynamic product presentation weakens the indirect effect of the transformational background on purchase intentions via imagery fluency for hedonic products (Index= -.59, 95% CI [-1.05, - .16]), *supporting hypothesis 1b*. Specifically, the bootstrapping results suggest that this indirect effect is significant under stationary product presentation ($\beta = .68$, 95% CI [.34, 1.09]), but is insignificant under dynamic product presentation ($\beta = 0.1$, 95% CI [-.16, .38]).

Hedonic Products and Informational Background The interaction between product presentation dynamism and the informational (vs. plain) background on imagery fluency is insignificant for hedonic products ($p > .05$). No significant differences between the level of imagery fluency across informational and plain backgrounds are detected when product presentation dynamism changes. Therefore, *hypothesis 2a is supported*. Furthermore, the insignificant index of moderated mediation indicates no moderating effect of product

presentation dynamism on the indirect effect between the informational (vs. plain) background and purchase intentions via imagery fluency for hedonic products (Index= -.11, 95% CI [-.59, .32]), *supporting hypothesis 2b*. Although the moderated mediation effect is insignificant, compared with a plain background, an informational background leads to higher purchase intentions (β = .78, t = 3.2, p = .001).

The tests results of the highest-order unconditional interactions suggest a significant moderation effect of product presentation dynamism on the relationship between contextual background types and imagery fluency for utilitarian products ($\Delta R^2_{\text{Utilitarian}}$= .043, $F_{(2, 204)}$ = 5, p = .01) (see FIGURE 4 for conditional means of imagery fluency and TABLE 1 for coefficients).

PLACE FIGURE 4 ABOUT HERE

Utilitarian Products and Transformational Background The interaction effect between product presentation dynamism and the transformational (vs. plain) background on imagery fluency is significant for utilitarian products (β = -1.34, t = -3.09, p < .01), *supporting hypothesis 3a*. Under stationary product presentation, the transformational background generates a higher level of imagery fluency than the plain background for utilitarian products (β = 1.53, t = 5.01, p < .001). Under dynamic product presentation, the transformational background generates the same level of imagery fluency as the plain background for utilitarian products (p > .05), suggesting that dynamic product presentation weakens the effect of the informational (vs. plain) background on imagery fluency. Moreover, the index of moderation mediation suggests that the indirect effect of the informational background on purchase intentions via imagery fluency is weakened under dynamic product presentation for utilitarian products (Index= -.6, 95% CI [-1.05, - .2]). Therefore, *hypothesis 3b is supported*. Specifically, the bootstrapping results suggest

that this indirect effect is significant under stationary product presentation (β = .68, 95% CI [.36, 1.06]) but insignificant under dynamic product presentation (β = .087, 95% CI [-.19, .37]).

Utilitarian Products and Informational Background The interaction effect between product presentation dynamism and the informational background on imagery fluency is significant for utilitarian products (β = -.91, t = -2.1, p < .05), *supporting hypothesis 4a*. The informational (vs. plain) background leads to a higher level of imagery fluency (β = 1.21, t = 3.89, p < .001) under stationary product presentation. However, no differences in the levels of imagery fluency are detected between the informational background and the plain background (p > .05) under dynamic product presentation, suggesting a weakening moderation effect for dynamic product presentation. Additionally, the index of moderation mediation suggests a significant conditional indirect effect of the informational background on purchase intentions via imagery fluency for utilitarian products (Index= -.41, 95% CI [-.84, -.01]). Hence, *hypothesis 4b is supported*. Specifically, this indirect effect is significant under stationary product presentation (β = .54, 95% CI [.21, .91]) but insignificant under dynamic product presentation (β = .13, 95% CI [-.14, .42]).

Additionally, the direct effects between dynamic product presentation and imagery fluency are significant for both hedonic (β = .73, t = 2.51, p = .01) and utilitarian (β = .93, t = 3.05, p < .01) products. These findings suggest that dynamic product presentation leads to higher overall imagery fluency than stationary product presentation.

PLACE TABLE 1 ABOUT HERE

Control Variables Following findings from prior studies (e.g., Cian et al. 2014; Janiszewski and Meyvis 2001), we tested the same models with the control variables of previous consumption frequency, perceived movement, gender, and need for cognition for both hedonic

and utilitarian products to control for the confounding effects. The results are consistent with those of the models without the control variables (see APPENDIX D for coefficients). However, the conditional mediation effect is insignificant for the utilitarian product with the informational (vs. plain) background on purchase intentions when all covariates are controlled. The insignificant results may be attributed to the informational background being less imagery-provoking. Nevertheless, there is a marginally significant interaction effect of product presentation dynamism and the informational background (β = -.71, p = .097), which is consistent with hypothesis 4a. The insignificant moderated mediation index may be due to the sample size.

Study Two

Study Two extends the sensory modality from pictorial stimuli to both pictorial and textual stimuli, and it examines the impact of advertising slogan-background meaning congruence on imagery fluency and purchase intentions for both hedonic and utilitarian products. Study Two also investigates the moderating role of product presentation dynamism on the relationship between slogan-background meaning congruence and purchase intentions via imagery fluency.

Participants, Procedures, and Measures

Study Two employed a 2 (Product presentation dynamism: stationary vs. dynamic) x 2 (Advertising slogan type: transformational vs. informational) x 2 (Background image type: transformational vs. informational) between-group design for both hedonic and utilitarian products, respectively (see APPENDIX B for the stimuli used in Study Two). The same variables were measured after each treatment condition as Study One.

Participants were recruited from MTurk (U.S.) with a small monetary incentive. Total of 550 participants attended this study ($N_{Hedonic}$ = 279, 63% females, mean age range = 35 - 44; $N_{Utilitarian}$ = 271, 64% females, mean age range = 35 - 44). Participants who failed the IMCs were screened out from this study ($N_{Excluded}$ = 474). Participants were randomly assigned to one of the eight versions of ads for each product category. Data for hedonic and utilitarian products were collected at separate time points.

Stimuli, Pre-test, and Manipulation Check

A pretest similar to that in Study One was conducted due to the inclusion of the additional stimuli, that is, advertising slogans. The background images for both product categories were consistent with those in Study One, and advertising slogans were added as textual stimuli (see APPENDIX B for the stimuli used in Study Two). For the hedonic product (beer), the transformational slogan focused on the experience of consuming the beer (i.e., an enjoyable social experience with friends), and the informational slogan focused on the product attributes (i.e., natural ingredients). For the utilitarian product (detergent), the transformational slogan emphasized a happy and relaxing laundry experience, and the informational slogan focused on product attributes (i.e., strong cleaning ability).

The pretest results showed that participants rated informational slogans higher on product attributes for the hedonic (M_{Info} = 5.3, M_{Trans}= 3.8, $p < .01$) and utilitarian (M_{Info} = 5.4, M_{Trans} = 4, $p < .001$) products. Participants rated the transformational slogans higher in experiential content for the hedonic (M_{Info} = 3.5, M_{Trans}= 5.7, $p < .001$) and utilitarian (M_{Info} = 3.3, M_{Trans}= 4.8, $p < .01$) products.

The pretest results also indicated that the stationary product presentation conditions differed from the dynamic product presentation conditions in terms of perceived movement for

both the hedonic ($M_{\text{stationary}}$ = 2.12, M_{Dynamic} = 4.85, $p < .001$) and utilitarian ($M_{\text{stationary}}$ = 1.86, M_{Dynamic} = 3.86, $p < .001$) products.

Results

SPSS PROCESS Model 8 (moderated mediation model) was used to verify that product presentation dynamism did not moderate the effect of slogan-background meaning congruence on purchase intentions for hedonic products or the effect of slogan-background meaning congruence on imagery fluency for utilitarian products. Then, to test hypotheses 5a to 7, Model 7 and Model 5 were applied for hedonic and utilitarian products, respectively, to enhance the model parsimony (5000 bootstrap samples). For simplicity, when the advertising slogan and background conveyed the same meaning, the meaning congruence was coded as 1 (congruent); when the advertising and background conveyed different meanings (i.e., a transformational slogan with an informational background or an informational slogan with a transformational background), the meaning congruence was coded as 0 (incongruent).

Using Model 8, the test results of highest-order unconditional interaction suggest a significant moderation effect of product presentation dynamism on the relationship between contextual background images and imagery fluency for hedonic products but not for utilitarian products ($\Delta R^2_{\text{Hedonic}}$= .07, $F_{(1, 275)}$ = 19.37, $p < .001$; $\Delta R^2_{\text{Utilitarian}}$= .000, $F_{(1, 267)}$ = .041, p = .84).

The indexes of moderated mediation suggest that product presentation dynamism moderates the indirect effect between slogan-background meaning congruence and purchase intentions via imagery fluency for hedonic products (Index = -.69, 95% CI [-1.08, -.35]), but not for utilitarian products (Index = .034, 95% CI [-.28, .38]). Additionally, the tests of highest-order unconditional interactions suggest that product presentation dynamism moderates the direct relationship between slogan-background meaning congruence and purchase intentions for

utilitarian products ($\Delta R^2_{\text{Utilitarian}}$= .015, $F_{(1, 266)}$ = 5.08, p = .025) but not for hedonic products ($\Delta R^2_{\text{Hedonic}}$= .002, $F_{(1, 274)}$ = .53, p = .47).

PLACE FIGURE 5 ABOUT HERE

Hedonic Products and Slogan-Background Meaning Congruence Based on the above results, Model 7 is applied for hedonic products to improve model parsimony. The test results of highest-order unconditional interactions suggest a significant moderation effect of product presentation dynamism on the relationship between slogan-background meaning congruence and imagery fluency ($\Delta R^2_{\text{Hedonic}}$= .07, $F_{(1, 275)}$ = 19.37, p < .001) (see FIGURE 5 for conditional means of imagery fluency). The interaction between product presentation dynamism and slogan-background meaning congruence is significant for hedonic products (β = -1.28, t = -4.4, p < .001), *supporting hypothesis 5a.* Under stationary presentation, congruent slogan-background meanings increase imagery fluency (β = .52, t = 2.53, p < .05). Under dynamic product presentation, incongruent slogan-background meanings increase imagery fluency (β = -.76, t = -3.68, p < .001).

The index of moderated mediation suggests that product presentation dynamism moderates the indirect effect between slogan-background meaning congruence and purchase intentions via imagery fluency for hedonic products (Index = -.71, 95% CI [-1.11, -.34]). Specifically, this indirect effect is significant with a positive sign under stationary product presentation (β = .29, 95% CI [.08, .52]) and with a negative sign under dynamic product presentation (β = -.41, CI95% [-.69, -.18]). Therefore, *hypothesis 5b is supported* (see TABLE 2 for coefficients).

PLACE FIGURE 6 ABOUT HERE

Utilitarian Products and Slogan-Background Meaning Congruence To ensure model parsimony, Model 5 is employed for utilitarian products for further investigation. The indirect effect of slogan-background meaning congruence on purchase intentions via imagery fluency is significant for utilitarian products (β = .17, 95% CI [.01, .35]), *supporting hypothesis 6*. The test results of highest-order unconditional interactions indicate that product presentation dynamism moderates the relationship between slogan-background meaning congruence and purchase intentions ($\Delta R^2_{\text{Utilitarian}}$= .02, $F_{(1, 266)}$ = 5.08, p = .025) (see FIGURE 6 for conditional means of purchase intentions). The interaction between product presentation dynamism and slogan-background meaning congruence is significant (β = -.8, t = -2.25, p < .05). Under stationary product presentation, congruent slogan-background meanings increase purchase intentions; however, this increase is not statistically significant (β = .25, t = 1, p > .05). Under dynamic presentation, incongruent slogan-background meanings increase purchase intentions (β = -.55, t = -2.16, p < .05). Therefore, *hypothesis 7 is partially supported* (see TABLE 2 for coefficients).

PLACE TABLE 2 ABOUT HERE

Control Variables The same models with the control variables of previous consumption frequency, perceived movement, gender, and need for cognition were tested for both hedonic and utilitarian products. The findings were consistent with those of the models without the control variables (see APPENDIX E for coefficients).

GENERAL DISCUSSION

This research examined the interaction effects between product presentation dynamism and other advertising stimuli on imagery fluency and purchase intentions. Consistent with the load theory of attention and cognitive control, Study One found that dynamic presentation diverts attentional resources to the advertised product, diminishing the positive effects of contextual

backgrounds on imagery fluency for both hedonic and utilitarian products. The indirect effect of contextual backgrounds on purchase intentions via imagery fluency appears to be conditional on dynamic product presentation. Dynamic presentation weakens the indirect effect of a transformational (vs. plain) background on purchase intentions for both hedonic and utilitarian products as well as the indirect effect of an informational (vs. plain) background on purchase intentions for a utilitarian product.

Holbrook and Hirschman (1982) argue that product image alone can stimulate pleasurable imagery of product usage. Our results suggest although using contextual backgrounds to enhance imagery fluency is not as compelling as using a plain background image under dynamic product presentation, dynamic product presentation leads to higher imagery fluency than stationary product presentation.

Study Two subsequently revealed that dynamism plays different roles in the information processing of hedonic and utilitarian products. The results suggested that for hedonic products, congruent slogan-background meanings increase purchase intentions by enhancing image fluency when product presentation is stationary. However, incongruent slogan-background meanings are more effective in enhancing image fluency under dynamic product presentation, which further increases purchase intentions. For utilitarian products, dynamic presentation moderates the direct effects of slogan-background congruence on purchase intentions. No significant direct effect was found under stationary product presentation. However, incongruent meanings increase purchase intentions under dynamic product presentation.

The results from Study Two suggest that the interaction effect of product presentation dynamism and incongruent slogan-background meanings significantly increases purchase intentions through imagery fluency for hedonic products but leads directly to an increase in

purchase intentions for utilitarian products. The explanation behind these findings lies in information processing modes differences for hedonic and utilitarian products. Although consumers can process information with both cognitive and imagery processing modes, the processing of utilitarian products relies more on cognitive processing (Homburg et al. 2006; Schlosser 2003). Our research thus broadens the understanding of multiple stimuli interactions in visual ads and offers explanations for the inconsistent findings of advertising information integration from the perspective of load theory of attention and cognitive control.

Theoretical Implications and Contributions

We extend the literature in three main ways of particular importance to advertising research. First, our research advances understanding of multiple stimuli visual ad processing by examining the joint effects of contextual backgrounds, slogan-background meaning congruence and product presentation dynamism on information processing. Drawing from load theory of attention and the cognitive control, we offer insights into how multiple visual stimuli compete for attentional resources and are processed in a single visual ad. Previous research has mainly investigated advertising stimuli such as contextual backgrounds and slogans under stationary product presentation. Additionally, research on verbal and visual stimuli has focused primarily on: (1) dual-coding theory (Chang 2013; Nielsen and Escalas 2010; Paivio 1990); (2) processing fluency theory (Peracchio and Meyers-Levy 2005; Van Rompay and Pruyn 2008); and (3) consistency principles (Festinger 1957; Heckler and Childers 1992; Lee 2000). Despite their significant contributions, these studies did not investigate how different advertising stimuli compete for attention and influence information processing due to changes in perceptual and cognitive load.

Our study extends research on advertising effectiveness by identifying product presentation dynamism as an important moderator of the effects of visual stimuli on purchase intentions via imagery fluency. Although previous studies show that dynamic presentation is effective in capturing visual attention, prior studies have not explored the moderating role of product presentation dynamism in visual ad processing when combined with other visual elements (Cian et al. 2014; Cian et al. 2015). The results of Study One revealed that when the product is presented in a dynamic format, the use of contextual backgrounds is unnecessary. A plain background to highlight the advertised product would be sufficient. Study Two showed that incongruent (congruent) slogan-background meanings should be used under dynamic (stationary) product presentation.

Second, our research shows that the inclusion of textual stimuli will change how dynamic product presentation affects the processing of other visual stimuli. Dynamic product presentation in pictorial stimuli only ads will influence viewers' allocation of attentional resources to different visual stimuli. This reduces the attentional resources that are being allocated to the contextual backgrounds. On the other hand, when slogans are included, the increased cognitive load from text-image integration makes consumers register all stimuli in the visual ads for processing as their ability to prioritize attentional resources to a central stimulus is attenuated. Dynamic product presentation in pictorial and textual stimuli ads affects viewers' levels of information processing. In this case, dynamic product presentation enhances elaborate information processing, making incongruent slogan-background meanings more effective in enhancing both imagery fluency and purchase intentions.

Additionally, we offer an explanation of why contextual backgrounds and slogan-background meaning congruence actually influence purchase intentions. Consistent with

previous literature on mental imagery (Gavilan et al. 2014; Maier and Dost 2018a; Richardson 1980), we identify imagery fluency as an important mediator between contextual backgrounds and purchase intentions and slogan-background meaning congruence and purchase intentions during visual ad information processing. We provide supporting evidence to suggest that the mediation effects are moderated by product presentation dynamism. By identifying this moderated mediation effect in the relationship among slogan-background meaning congruence, imagery fluency, purchase intentions and product presentation dynamism, our research offers a possible explanation to address past inconsistencies in the text-image congruence literature.

Finally, our research finds product category differences in the influence of contextual backgrounds on information processing. Previous research has argued only that experience products could benefit from a contextualized background but not search products (Maier and Dost 2018b). Our research reveals that as long as contextual background images convey helpful semantic meanings (e.g., transformational and informational), both hedonic and utilitarian products can benefit from the use of contextual backgrounds. Although informational backgrounds are not as effective as transformational ones in enhancing image fluency for hedonic products, they nevertheless directly increase purchase intentionss.

However, when slogans are added, the roles of product presentation dynamism in information processing differ between hedonic and utilitarian products. For hedonic products, product presentation dynamism inversely moderates the indirect effects of slogan-background meaning congruence on purchase intentions via imagery fluency. Congruent stimuli meanings are more effective in enhancing fluency under stationary presentation, whereas incongruent stimuli meanings are more effective under dynamic presentation conditions. For utilitarian products, presentation dynamism moderates the direct relationship between slogan-background

meaning congruence and purchase intentions. Incongruent advertising stimuli meanings are more persuasive under dynamic presentation conditions. Previous research has suggested that the processing of information on hedonic products is more imagery-driven, whereas the processing of information on utilitarian products is more cognitively-driven (MacInnis and Price 1987). Our results suggest that dynamic product presentation plays an important role in both hedonic and utilitarian product advertising through different underlying mechanisms due to the different processing modes.

Managerial Implications

The effective design of multiple stimuli in a single visual ad is critical for advertisers as different pieces of information play different roles in information processing. Past work has shown that transformational meaning is more effective in engaging the target audience, whereas informational meaning offers greater advertisement value for a company (Cadet, Aaltonen and Kavota 2017). Finding a way to combine these two elements in advertising design would clearly be beneficial for marketers. Our findings suggest that advertisers should adopt different tactics based on their specific campaign objectives. When the goal is to use background images for storytelling, for instance, it would be better to present the focal product in a stationary format. A meaningful background image enhances imagery fluency when the product is presented in a stationary format and no additional textual information is included. Our findings also suggest that both hedonic and utilitarian products could benefit from contextual (both transformational and informational) background images.

Similarly, in cases where advertisers want to reduce the cost of producing contextualized backgrounds, utilizing the dynamic product presentation format can be a cost-effective means to enhance imagery fluency and increase purchase intentions. However, if advertisers want to

communicate multiple meanings (e.g., positive consumption experiences and product attributes) of their brands by utilizing background images and slogans, they should consider using dynamic presentation for both the hedonic and utilitarian product categories. Moreover, if advertisers want to emphasize a single unique selling point through the background image and accompanying slogan, they should consider the stationary product presentation, particularly for hedonic products.

Our research revealed that dynamic product presentations work better for advertisers when high-contrast stimuli are involved. For example, a frozen-motion product image against a plain background can produce high visual contrast, whereas incongruent slogan-background meanings can produce high meaning contrast.

LIMITATIONS AND FUTURE RESEARCH

Although this research offers new insights into perceptual and cognitive load theories, as well as the optimal stimulus combination in fast-moving consumer goods advertising, several limitations should be addressed in future research.

First, we used product presentation dynamism for perceptual load manipulation, as a moving object can attract more attention due to humans' survival instinct. However, dynamic presentation may also result in an increased level of cognitive load as consumers 'mentally complete' the movement. It is challenging to delineate perceptual and cognitive loads (Murphy and Greene 2017). While the opposite effect of two loads is a crucial element in the design of any load theory study, the degree of perceptual load (high vs. low) is not objectively defined (Murphy et al. 2016). Future research may consider employing more appropriate experimental designs to isolate individual effects.

Second, our manipulation of the transformational background image for the utilitarian product featured people in the stimuli. Including humans in visual ads may lead to an increased positive effect of the transformational background on image fluency, as consumers can relate to the stimuli more vividly. Consumers may even perceive movement from the background image with a change in visual attention in the ads.

Third, we argued earlier that dynamic product presentation does not moderate the relationship between stimuli congruence and image fluency for utilitarian products because the processing of imagery is less salient for such products. An alternative explanation – the role of analytical processing – was not explored in this research and requires further investigation.

Additionally, we explained the moderating role of product presentation dynamism from a load theory of attention perspective. However, an alternative explanation could be affordance theory (Hoffman and Novak 2017; Jones 2003). This theory argues that the world is perceived in terms of objects' possibilities for action (affordance), indicating that perception drives action (Jones 2003). Objects in motion can trigger a sense of agency or the subjective awareness of initiating, executing, and controlling one's own volitional actions (Riva 2009). Therefore, consumers may mentally simulate what can be done to/with an object (Adaval, Saluja and Jiang 2019). This sense of agency can trigger a corresponding sense of presence (Riva 2009). Although studies in the context of virtual reality have investigated the relationship between sense of agency and presence (e.g., Kilteni, Groten and Slater 2012), whether static images can trigger a sense of agency and/or presence for ad viewers remains unclear. Future research should isolate the effects of perceived movement and perceived agency in empowering consumers to experience a sense of control, which could have a significant impact on storytelling. For example, future experiments could use different stimuli to indicate the self-initiated movement of

an object to examine whether it is perceived movement or perceived agency that facilitates information processing. Furthermore, we tested only one type of product within each category in our experiments; multiple items should be examined to help generalize the findings of this research.

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TABLES AND FIGURES

TABLE 1
Model Coefficients for Study One (Model 7 for both Hedonic and Utilitarian Products)

	Hedonic Products						**Utilitarian Products**						**Hypothesis Testing**
Predictors	Effects on M(Imagery Fluency)			Effects on Y(Purchase Intentions)			Effects on M(Imagery Fluency)			Effects on Y(Purchase Intentions)			
	Coeff	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*	
X1(Transformational vs. Plain Background)	1.33	.29	< .001	.41	.24	.096	1.53	.31	< .001	.34	.26	.2	
X2(Informational vs. Plain Background)	.73	.29	.01	.78	.24	.001	1.21	.31	< .001	.05	.26	.86	
W1(Dynamic Presentation)	.73	.29	.01				.93	.31	.003				
X1 x W1	-1.15	.41	.01				-1.34	.43	.002				H1a&H3a supported
X2 x W1	-.24	.41	.59				-.91	.43	.037				H2a&H4a supported
M(Imagery Fluency)				.51	.08	< .001				.344	.08	< .001	
Constant	4.38	.21	< .001	1.06	.41	.98	4.23	.22	< .001	1.17	.42	.006	
Model Summary	R = .34, R^2 = .11 $F_{(5, 205)}$ = 5.28, p < .001			R = .49, R^2 = .24 $F_{(3, 207)}$ = 21.77, p < .001			R = .36, R^2 = .13 $F_{(5, 204)}$ = 5.9, p < .001			R = .4, R^2 = .16 $F_{(3, 206)}$ = 12.94, p < .001			
Test(s) of highest order unconditional interaction(s) on M(Imagery Fluency):													
	ΔR^2	*F*	*df1*	*df2*	*p*		ΔR^2	*F*	*df1*	*df2*	*p*		
X(Contextual Background) x W (Products Presentation)	.04	4.42	2	205	.01		.04	4.99	2	204	.01		
Index of moderated mediation X1(Transformational vs. Plain Background):													
	Index	*SE*	*LLCI*	*ULCI*			*Index*	*SE*	*LLCI*	*ULCI*			
W1(Dynamic Presentation)	-.59	.23	-1.05	-.16			-.6	.22	-1.05	-.2			H1b&H3b supported
Index of moderated mediation X2(Informational vs. Plain Background):													
	Index	*SE*	*LLCI*	*ULCI*			*Index*	*SE*	*LLCI*	*ULCI*			
W1(Dynamic Presentation)	-.11	.23	-.59	.32			-.41	.21	-.84	-.01			H2b&H4b supported

TABLE 2
Model Coefficients and for Study Two (Model 7 for Hedonic Products and Model 5 for Utilitarian Products)

	Hedonic Products						**Utilitarian Products**						**Hypothesis Testing**
Predictors	Effects on M(Imagery Fluency)			Effects on Y(Purchase Intentions)			Effects on M(Imagery Fluency)			Effects on Y(Purchase Intentions)			
	Coeff	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*	
X1(Congruent Slogan-Background Meanings)	.52	.21	.012	.2	.24	.41	.31	.15	.038	.25	.25	.32	H5a supported; H7 partially supported
W1(Dynamic Presentation)	.5	.2	.016	-	-	-	-	-	-	.41	.24	.1	
X1 x W1	-1.28	.29	< .001	-	-	-	-	-	-	-.8	.36	.025	
M(Imagery Fluency)				.53	.07	< .001	-	-	-	.56	.07	< .001	
Constant	4.87	.14	< .001	1.12	.36	.001	5.17	.11	< .001	.91	.42	.03	
Model Summary	R = .27, R^2 = .071 $F_{(3, 275)}$ = 6.96, p < .001			R = .44, R^2 = .19 $F_{(4, 276)}$ = 33.22, p < .001			R = .13, R^2 = .016 $F_{(3, 269)}$ = 4.36, p = .038			R = .44, R^2 = .19 $F_{(4, 266)}$ = 15.84, p < .001			
Test(s) of highest order unconditional interaction(s) on M(Imagery Fluency):													
	ΔR^2	*F*	*df1*	*df2*	*p*		ΔR^2	*F*	*df1*	*df2*	*p*		
X (Slogan-Background Meanings Congruence) x W(Products Presentation)	.07	19.37	1	275	< .001		-	-	-	-	-		
Test(s) of highest order unconditional interaction(s) on Y(Purchase Intentions):													
	ΔR^2	*F*	*df1*	*df2*	*p*		ΔR^2	*F*	*df1*	*df2*	*p*		
X (Slogan-Background Meanings Congruence) x W(Products Presentation)	-	-	-	-	-		.02	5.08	1	266	.025		
Index of moderated mediation:													
	Index	*SE*	*LLCI*	*ULCI*			*Index*	*SE*	*LLCI*	*ULCI*			
W1(Dynamic Presentation)	-.71	.19	-1.1	-.34			-	-	-	-			H5b supported
Indirect effect(s) of X(Slogan-Background Meanings Congruence) on Y(Purchase Intentions):													
	Effect	*BootSE*	*LLCI*	*ULCI*			*Effect*	*BootSE*	*LLCI*	*ULCI*			
W1(Dynamic Presentation)	-	-	-	-			.17	.09	.01	.35			H6 supported

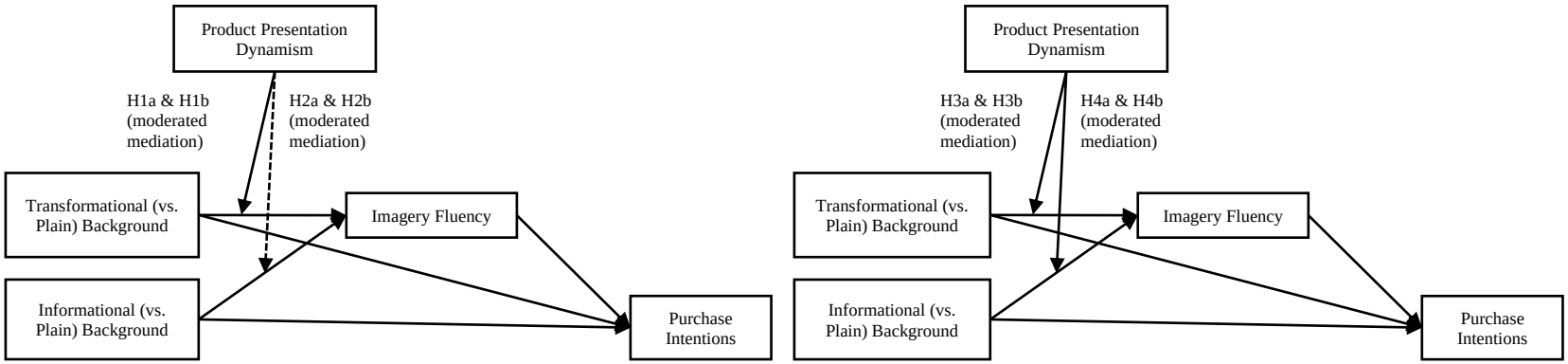


FIGURE 1
Conceptual Models for Study One for Hedonic (Model 7) & Utilitarian Products (Model 7)

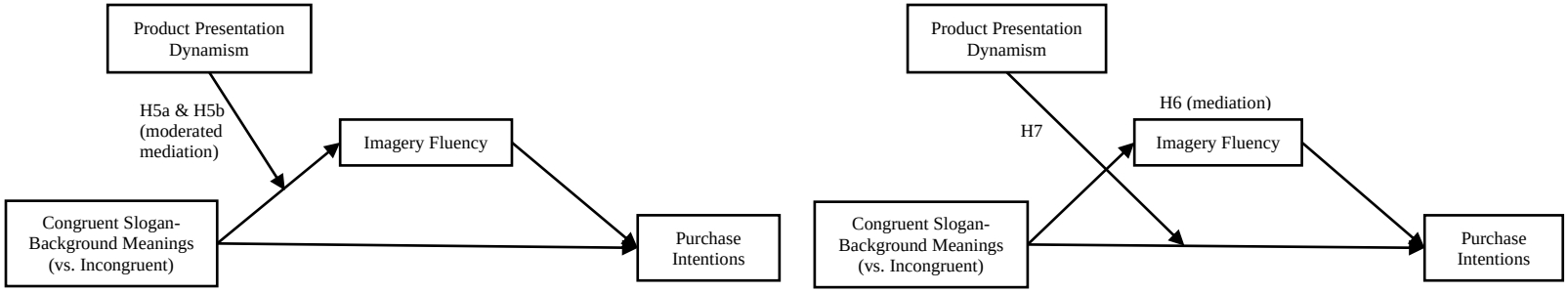


FIGURE 2
Conceptual Models for Study Two for Hedonic (Model 7) and Utilitarian Products (Model 5)

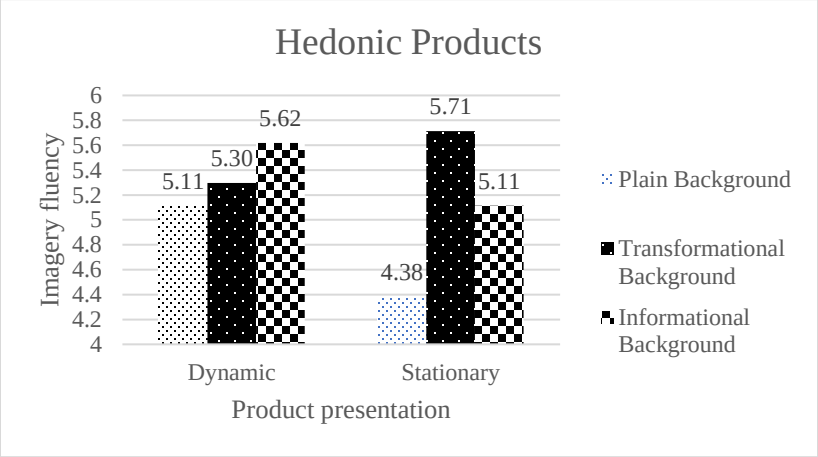


FIGURE 3
Conditional (Product Presentation) Imagery Fluency Means for Hedonic Products (Study One)

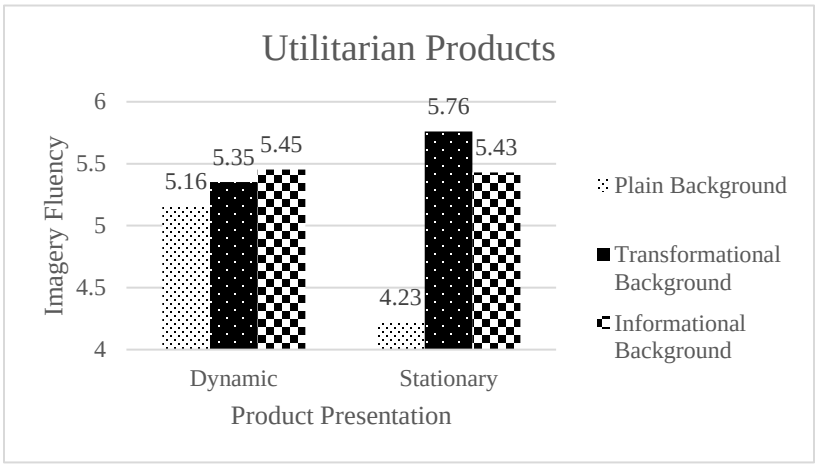


FIGURE 4
Conditional (Product Presentation) Imagery Fluency Means for Utilitarian Products (Study One)

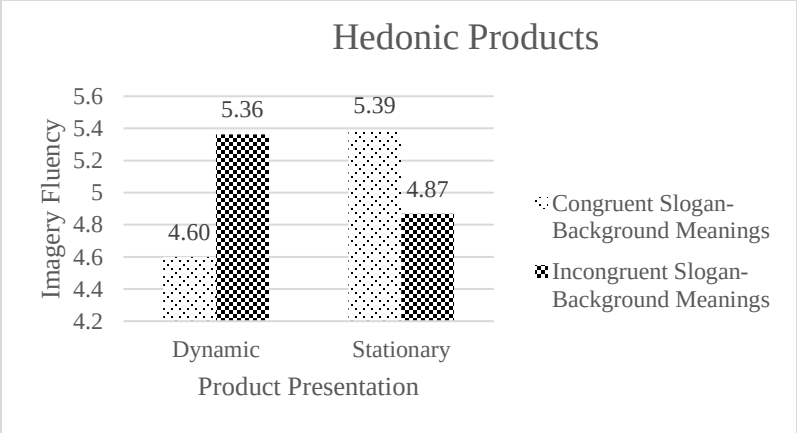


FIGURE 5
Conditional (Product Presentation) Imagery Fluency Means for Hedonic Products (Study Two)

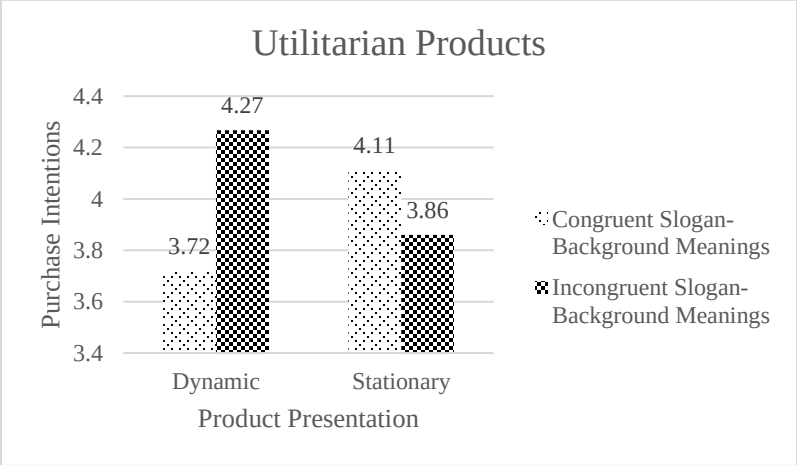
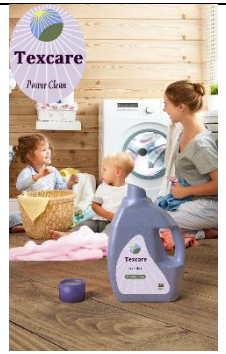
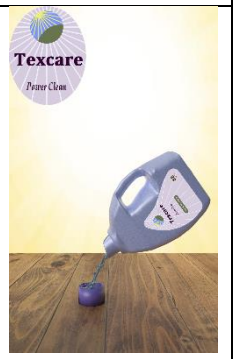


FIGURE 6
Conditional (Product Presentation) Purchase Intentions Means for Utilitarian Products (Study Two)

APPENDIX A. STIMULI USED IN STUDY ONE (HEDONIC & UTILITARIAN PRODUCTS)

	Transformational Background		Informational Background		Plain Background	
	Stationary Presentation	Dynamic Presentation	Stationary Presentation	Dynamic Presentation	Stationary Presentation	Dynamic Presentation
Hedonic Products						
Utilitarian Products						

APPENDIX B. STIMULI USED IN STUDY TWO (HEDONIC & UTILITARIAN PRODUCTS)

	Hedonic Products		Utilitarian Products	
Transformational Background				
	Stationary Presentation	**Dynamic Presentation**	**Stationary Presentation**	**Dynamic Presentation**
Transformational Slogan				
Informational Slogan				
Informational Background				
Transformational Slogan				
Informational Slogan				

Note:
Transformational slogan for the hedonic products: Hard Working. Good Beering. If You're in the Mood for a Cold Craft Brew, We've Got You Covered. Beers with Your Peers.
Informational slogan for the hedonic products: 100% Malt. No Additives and Preservatives. Beer. It's Only Natural.
Transformational slogan for the utilitarian products: Happy Laundry. Better Living. A Happy Relief – Every Laundry Day. We Will Give You the Peace of Mind that You Deserve.
Informational slogan for the utilitarian products: Smart Dirt Removal System. Sparkling Fresh. Fabric Protect. Ultra Clean. Relentlessly Powerful Formula.

APPENDIX C. MEASUREMENTS & CRONBACH'S ALPHA VALUES

Variables	Items	α for Study One		α for Study Two		Sources
		Hedonic	Utilitarian	Hedonic	Utilitarian	
Perceived Movement	How much movement did you perceive in this ad?	-	-	-	-	Cian et al., (2014)
Imagery Fluency	I quickly generated images of what was depicted in the ad I had difficulty imagining the depicted scene in my head (r) I found it difficult to generate mental images as depicted in the ad (r)	0.914	0.903	0.830	0.889	Bone and Ellen (1992)
Purchase Intentions	Please indicate the extent to which you would like to purchase the advertised beer (anchored by Never – Definitely) Please indicate the extent to which you would like to purchase the advertised beer (anchored by Definitely do not intend to buy – Definitely intend to buy) Please indicate the extent to which you would like to purchase the advertised beer (anchored by Very low purchase interest – High purchase interest)	0.966	0.958	0.955	0.957	Spears and Singh (2004)
Need for Cognition	I don't like to have to do a lot of thinking (r) I try to avoid situations that require thinking in depth (r) Thinking hard and for a long time about something gives me little satisfaction	0.78	0.779	0.791	0.757	Epstein, Pacini, Denes-Raj, and Heier (1996)
Beer consumption Frequency	How often do you consume beer?	-	-	-	-	-
Laundry Frequency	How often do you wash your laundry?	-	-	-	-	-

APPENDIX D. MODEL COEFFICIENTS FOR STUDY ONE WITH COVARIATES (MODEL 7 FOR HEDONIC & UTILITARIAN PRODUCTS)

Predictors	Hedonic Products						Utilitarian Products					
	Effects on M(Imagery Fluency)			Effects on Y(Purchase Intentions)			Effects on M(Imagery Fluency)			Effects on Y(Purchase Intentions)		
	Coeff	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*
X1(Transformational Background)	1.46	.27	< .001	.46	.22	.039	1.36	.3	< .001	.17	.25	.5
X2(Informational Background)	.75	.28	.008	.74	.22	.002	1.05	.3	< .001	.127	.25	.61
W1(Dynamic Presentation)	.52	.29	.07				.65	.31	.036			
X1 x W1	-1.27	.38	.001				-1.14	.43	.008			
X2 x W1	-.24	.39	.54				-.71	.42	.097			
M(Imagery Fluency)				.46	.08	< .001				.34	.08	< .001
Consumption Frequency	.06	.05	.28	.27	.06	< .001	.21	.09	.015	.03	.1	.76
Perceived Movement	.19	.05	< .001	.23	.02	.001	.16	.05	.001	.31	.05	< .001
Gender	-.49	.17	.003	.14	.19	.65	.21	.19	.26	.31	.21	.14
Need for Cognition	.24	.06	< .001	-.11	.07	.13	.16	.07	.012	-.03	.08	.67
Constant	2.65	.45	< .001	-.01	.53	.98	1.7	.7	.015	.61	.8	.045
Model Summary	R = .49, R^2 = .24 $F_{(9, 201)}$ = 7.16, p < .001			R = .62, R^2 = .39 $F_{(7, 203)}$ = 18.12, p < .001			R = .46, R^2 = .21 $F_{(9, 200)}$ = 5.83, p < .001			R = .53, R^2 = .28 $F_{(7, 202)}$ = 11.25, p < .001		
Test (s) of highest order unconditional interaction (s) on M(Imagery Fluency):												
	ΔR²	*F*	*df1*	*df2*	*p*		*ΔR²*	*F*	*df1*	*df2*	*p*	
X(Contextual Background) x W (Product Presentation)	.05	6.05	2	201	.003		.03	3.65	2	200	.028	
Index of moderated mediation X1(Transformational Background):												
	Index	*SE*	*LLCI*	*ULCI*			*Index*	*SE*	*LLCI*	*ULCI*		
W1(Dynamic Presentation)	-.56	.19	-1	-.22			-.39	.17	-.76	-.09		
Index of moderated mediation X2(Informational Background):												
	Index	*SE*	*LLCI*	*ULCI*			*Index*	*SE*	*LLCI*	*ULCI*		
W1(Dynamic Presentation)	-.11	.19	-.48	.26			-.24	-.17	-.58	.07		

APPENDIX E. MODEL COEFFICIENTS FOR STUDY TWO WITH COVARIATES (MODEL 7 FOR HEDONIC PRODUCTS & MODEL 5 FOR UTILITARIAN PRODUCTS)

	Hedonic Products						Utilitarian Products					
Predictors	**Effects on M(Imagery Fluency)**			**Effects on Y(Purchase Intentions)**			**Effects on M(Imagery Fluency)**			**Effects on Y(Purchase Intentions)**		
	Coeff	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*	*Coeff*	*SE*	*p*
X1(Congruent Slogan-Background Meanings)	.51	.2	.01	.17	.15	.25	.36	014	.01	.29	.22	.19
W1(Dynamic Presentation)	.49	.2	.015	-	-	-	-	-	-	.3	.22	.17
X1 x W1	-1.19	.28	< .001	-	-	-	-	-	-	-.8	.32	.013
M(Imagery Fluency)				.54	.06	< .001	-	-	-	.47	.07	< .001
Consumption Frequency	.04	.05	.45	.25	.05	< .001	.16	.06	.01	.09	.07	.21
Perceived Movement	.07	.04	.09	.22	.04	< .001	.11	.04	.004	.36	.04	< .001
Gender	-.37	.15	.012	.08	.16	.64	-.52	.15	< .001	.13	.17	.45
Need for Cognition	.25	.06	< .001	-.1	.06	.09	.18	.05	< .001	-.1	.06	.1
Constant	3.37	.41	< .001	-.28	.48	.56	3.02	.52	< .001	-.15	.64	.82
Model Summary	R = .4, R^2 = .16			R = .6, R^2 = .36			R = .39, R^2 = .15			R = .61, R^2 = .37		
	$F_{(7, 271)}$ = 7.36, p < .001			$F_{(6, 272)}$ = 25.92, p < .001			$F_{(5, 265)}$ = 9.37, p < .001			$F_{(8, 262)}$ = 19.49, p < .001		
Test(s) of highest order unconditional interaction(s) on M(Imagery Fluency):												
	ΔR²	*F*	*df1*	*df2*	*p*		*ΔR²*	*F*	*df1*	*df2*	*p*	
X (Slogan-Background Meanings Congruence) x W(Product Presentation)	.06	18.02	1	271	< .001		-	-	-	-	-	
Test(s) of highest order unconditional interaction(s) on Y(Purchase Intentions):												
	ΔR²	*F*	*df1*	*df2*	*p*		*ΔR²*	*F*	*df1*	*df2*	*p*	
X (Slogan-Background Meanings Congruence) x W(Product Presentation)	-	-	-	-	-		.02	6.33	1	262	.013	
Index of moderated mediation (difference between conditional indirect effects):												
	Index	*SE*	*LLCI*	*ULCI*			*Index*	*SE*	*LLCI*	*ULCI*		
W1(Dynamic Presentation)	-.65	.18	-1	-.33			-	-	-	-		
Indirect effect(s) of X(Slogan-Background Meanings Congruence) on Y(Purchase Intentions):												
	Effect	*BootSE*	*LLCI*	*ULCI*			*Effect*	*BootSE*	*LLCI*	*ULCI*		
W1(Dynamic Presentation)	-	-	-	-			0.17	0.07	0.04	0.32		