# Impact of product presentation and background congruency on consumer purchase intention: the mediating role of imagery fluency

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# Impact of product presentation and background congruency on consumer purchase intention: the mediating role of imagery fluency

**Abstract**

Brands use different product presentation strategies involving varying levels of background complexity and congruency to influence consumer purchase intention. Some use simple images, presenting their product on a plain background. Others prefer the use of complex images presenting their product on a matching background or on a mismatching one. The aim of this study is to examine the effects of such strategies on consumer purchase intention. The study also examines the mediating role of imagery fluency. The findings of three experiments illustrate that complex images are less imagery fluent than simple images. However, the study demonstrates that complex congruent images trigger higher levels of imagery fluency than complex incongruent images. Finally, the results of the study show that imagery fluency mediates the relationship between visual complexity and consumer purchase intention. The study made several contributions to the literature and provides several managerial implications.

*Key words: Imagery fluency, visual complexity, purchase intention*

*Track: Consumer Behaviour*

## 1. Introduction

Imagine you are on Instagram and scroll through different pictures of your friends, celebrities and brands. You encounter an image of the clothing brand Mohito, presenting a black bag on a plain background. Then, you scroll down, and you encounter an H&M image presenting similar product on a matching atmosphere. Later, you are exposed to a Zara bag on a mismatching and surprising background. If the price point and the style of those bags are similar, which product would you be more interested in buying?

The outcome of consumer browsing experience can be predicted and even influenced by the way people process the images. Specifically, during visual processing, a number of cognitive and metacognitive experiences take place. One of them is mental imagery, which represents "a mental event involving visualisation of a concept or relationship" (Lutz and Lutz, 1978, p. 611). This cognitive experience is accompanied by imagery fluency, which represents the ease with which people generate a mental imagery. Past literature offers insights on the effects of imagery fluency on behavioural intention (Levav and Fitzsimons, 2006, Petrova and Cialdini, 2005; Zhao, Hoeffler and Dahl, 2007). However, the effects of visual complexity and congruity on imagery fluency and purchase intention lack scrutiny. Moreover, Yoo and Kim (2014) point out the need for future research exploring how fluency and information richness of images affect the effectiveness of product presentation.Therefore, the current research aims to fill that gap by testing the relationship between visual stimuli with different levels of complexity and congruity, consumer purchase intention and imagery fluency. As a result, the research makes several contributions to the literature. Firstly, the research offers clarity on the effects of different visual stimuli with varying levels of complexity on imagery fluency. Secondly, the study makes a novel contribution to the literature by exploring the role of background congruity on imagery fluency. Thirdly, the study demonstrates that the relationship between visual complexity and consumer purchase intention is not direct but mediated by imagery fluency. Additionally, the study provides several insights for the entrepreneurs regarding the way they should use visual stimuli to influence consumer purchase intention.

## 2. Theoretical Background

Brands adopt different product presentation strategies involving varying levels of visual complexity and congruity to influence consumer purchase intention. One of those strategies is the use of simple images, displaying a product on a plain background. Another strategy is presenting the product within a contextual background. Due to the increased number of elements (Snodgrass and Venderwart, 1980), the range of the objects, materials and surfaces

(Heylighen, 1999), the number of colours presented (Leder and Carbon, 2005), and low level of symmetry and the arrangement in the images (Pieters, Wedel and Batra, 2010, Mayer and Landwehr, 2014), this image is considered as complex. It is worth noting that the complex images could differ in their levels of congruity. Specifically, sometimes brands use complex congruent images showing their product on a congruent background as well as complex incongruent images displaying the same product within an incongruent and unmatching background. With the use of some or all of those strategies, brands aim to increase the effectiveness of their product presentation and to influence consumer purchase intention.

It is crucial to note that the way consumers process a visual stimulus forms their purchase intentions. Visual processing involves a number of cognitive and metacognitive processes. One of those cognitive processes is mental imagery, which is a powerful tool for influencing behavioural intention (Bone and Ellen, 1992). Mental imagery goes hand in hand with the metacognitive process of imagery fluency. It represents the ease with which people imagine something (Mandel, Petrova and Cialdini, 2006). Just like any other type of fluency, imagery fluency is not "…the process itself but, rather, information about how efficient or easy that process feels." (Oppenheimer, 2008, p. 238). Hence, it is a metacognitively monitored process as it represents an evaluation of the cognitive process (Reber, Schwarz and Winkielman, 2004).

Past literature investigated the way people process visual stimuli and demonstrate that complex images require substantial cognitive effort for capturing and perceiving all the presented elements as well as for understanding the idea of the picture (Larsen et al., 2004, Reber et al.,2004). In other words, it has been already established that complex images are not always fluently processed due to their nature and the cognitive effort required (Reber, Schwarz and Winkielman, 2004, Wu et al., 2016). Based on the claim that all types of fluency lead to "…remarkably uniform judgements across a range of domains" (Alter and Oppenheimer, 2009, p. 220), we posit that visual complexity will negatively affect imagery fluency, such that simple images will be more imagery fluent than complex images.

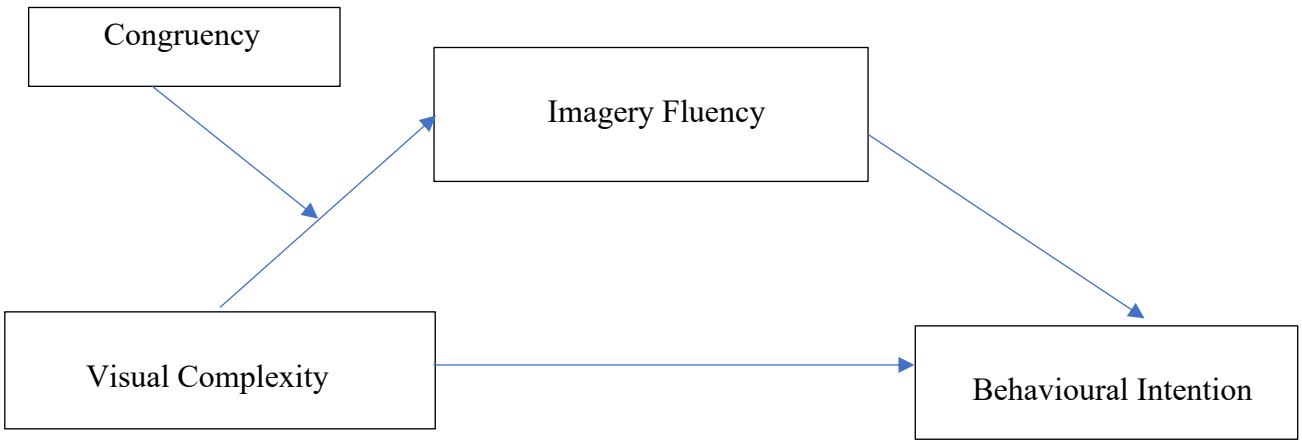
Secondly, due to the richness of information, a complex image could also influence multiple schemas where each of them could consist of associations, memories, and past experiences (Bartlett, 1932, Mandler, 1982). Hence, consumer could relive them in a form of a mental imagery and form a story. Such "narrative transportation" (Green and Brock, 2000) requires substantial cognitive effort. In contrast, to generate a mental imagery would be significantly easier when consumers are exposed to an image with a single object on it. Interestingly, Chang (2013) claimed that simple images are less imagery fluent compared to

complex images, however, in that study, the simple image referred to a sketch of a product, not an image.

We propose that product-background congruity will positively impact imagery fluency, such that complex congruent image will influence significantly higher levels of imagery fluency, compared to complex incongruent image. We theorise this based on the schema theory and the premise that people store schemas in their minds based on their prior experiences of events (Bartlett, 1932). This includes contextual associations related to where a certain object could appear. In fact, past literature demonstrates that people tend to generate mental imageries easier when they are based on stored schemas (Wyer, Hung and Jiang, 2008, Wyer and Radvansky, 1999). Therefore, when people are exposed to a scene where the object appears in its natural setting, then the scene is consistent with their contextual associations and stored schemas. As a result, it would be easier for them to generate a mental imagery, i.e imagery fluency would increase.

Finally, consistent with past research suggesting that imagery fluency positively influence behavioural intention (Levav and Fitzsimons, 2006) and purchase intention (Petrova and Cialdini, 2005; Zhao, Hoeffler and Dahl, 2007), we propose that imagery fluency will influence consumer purchase intention. Specifically, simple images will influence higher levels of imagery fluency, which will trigger consumer purchase intention.

Figure 1: Conceptual framework




**3.Overview of the study**

The research employs an experimental research design to research the effects of visual complexity (simple, complex congruent and complex incongruent) on imagery fluency and consumer purchase intention. In Study 1, we test the effect of visual complexity on imagery fluency. In Study 2, we investigate the relationship between background congruency and

imagery fluency. In Study 3, we study the relationship between visual complexity, background congruity, imagery fluency and consumer purchase intention.

*3.1 Study 1*

Study 1 aims to test the effects of visual complexity on imagery fluency. The study used two images (simple and complex), displaying a black business bag. The simple image presents the bag on a white background, while the complex image displays it within a matching background (among black and elegant business accessories).

In Study 1 participated 108 people (39% male and 61% female participants). They were approached around universities or shopping centers and asked to volunteer in a study investigating consumer behaviour on social media. After providing informed consent, participants filled a questionnaire. At the beginning they answered some socio-economic questions as well as some questions regarding their behaviour on social media. Then, they were exposed to either the simple or the complex image and asked to rate on a 7 point scale (from "Strongly Disagree" to "Strongly Agree") the following options: "I had difficultly imagining the depicted image in my head", "I quickly generated images of what was depicted in the image", "I found it easy to imagine the depicted image" (Bone and Ellen, 1992).

*3.1.1 Results and Discussion*

The ANOVA analysis demonstrates that simple images influence significantly higher levels of imagery fluency ($M_{simple}$ =5.48) than the complex images ($M_{complex}$ =4.23; F (1, 103)=15.604, p<0.001). Therefore, the findings of this research contradict Chang's (2013) study by demonstrating that people find complex images harder to imagine compared to simple images. Moreover, this study contributes to fluency literature by demonstrating that complex images are not only harder to process (Reber et al., 2004) but also harder to imagine.

*3.2 Study 2*

Study 2 researched the link between background congruency and imagery fluency involving 147 participants (55% female, 45% male). Similar to Study 1, at the beginning, participants answered some socio-economic questions as well as some questions related to their preferences and sharing behaviour on social media. After that they were exposed to either a complex congruent image presenting a women's bag in a living room, or a complex incongruent image displaying the same bag with a background of a river. Participants were then asked to rate the level of imagery fluency using the Bone and Ellen scale (1992).

*3.2.1 Results and Discussion*

The findings of ANOVA illustrate that background congruency has a positive effect on imagery fluency. Specifically, the complex congruent image is more imagery fluent ($M_{congruent}$ =3.90) compared to the complex incongruent image ($M_{incongruent}$ =4.07; F(1, 147)=13.925, p<0.001). The findings of the study support the past research suggesting that it is easier for people to imagine something that is relevant to their stored schemas (Wyer, Hung and Jiang, 2008, Wyer and Radvansky, 1999). To elaborate, the complex congruent image represents a scene where the product is placed on a predictive and unsurprising background, hence the setting is familiar and fitting to the already existing schemas in consumers' mind. Therefore, it is easier to imagine a scene that is congruent to the stored schemas, compared to an incongruent one.

*3.3 Study 3*

The aim of Study 3 is to research the effects of visual complexity and background congruity on consumer purchase intention as well as to investigate the mediating role of imagery fluency. For these purposes, the study used three types of pictures displaying the same product, a black luggage. In the simple image, the luggage was presented on its own with a blank background; in the complex congruent setting was placed in the airport, while in the complex incongruent setting the luggage appeared in a forest.

In total, 197 participants took part in this experiment. The setting and the procedure of the experiment were similar to the previous two studies. The participants were exposed to a single image (simple, complex congruent or complex incongruent) and asked to rate the level of imagery fluency using the Bone and Ellen scale (1992). Later, they were asked to rate on a bipolar scale the possibility to purchase the product in a future on the following criteria: "Unlikely-Likely", "Improbable-Probable" and "Impossible -Possible" (Smith et al., 2007).

*3.3.1 Results and Discussion*

Similarly, to Study 1 and Study 2, ANOVA was used to analyze the effect of visual complexity on imagery fluency. The results show that imagery fluency is significantly higher in simple image ($M_{simple}$ = 5.40; SD = 1.09) than in complex images ($M_{complex}$ = 4.19; SD = 1.45; F (1, 196) = 35.68; p<0.001). Moreover, the results demonstrate that the complex congruent image influences significantly higher levels of imagery fluency ($M_{congruent}$ = 4.61; SD = 1.36) compared to the complex incongruent image ($M_{incongruent}$ = 3.77; SD = 1.42; F (1, 129) = 12.10; p<0.005).

To explore the effects of imagery fluency on consumer purchase intention Process Model 7 was used. The findings demonstrate that imagery fluency mediates the relationship between visual complexity and consumer purchase intention (β= 0.38, SE= .08, t=4.60, p<0.01).

Additionally, the results show that congruency moderates the effects of imagery fluency (95% CIs, -0.11- 0.02, β = 0.04, BootSE = 0.03).

The results of Study 3 confirmed the results of Study 1 by showing that simple images influence higher levels of imagery fluency. Moreover, the findings of Study 3 confirmed the results of Study 2, by demonstrating that complex congruent images influence higher levels of imagery fluency. Further, the study shows that imagery fluency positively affects consumer purchase intention. In this way the study confirmed past research results stating the positive link between the ease with which people imagine something and their behavioural intentions (Levav and Fitzsimons, 2006, Petrova & Cialdini, 2005; Zhao, Hoeffler, & Dahl, 2007). In other words, when consumers easily generate a mental imagery of the stimulus, their intentions to purchase the product increase. Additionally, the study illustrates that imagery fluency plays a mediating role in the effect of visual complexity on consumer purchase intention.

## 4.General Discussion

The aim of this article was to investigate the effect of visual complexity and background congruity on imagery fluency and consumer purchase intention. The results of the study make several contributions to the literature. Firstly, the study revealed that simple images are easier to imagine, compared to complex images. Therefore, these results contradict Chang's (2013) assertion that complex images lead to greater levels of imagery fluency. Secondly, the study makes a novel contribution to the literature by proving the positive effects of background congruity on imagery fluency. In other words, complex congruent images influence greater levels of imagery fluency, compared to complex incongruent images. Lastly, the study demonstrates that the effect of visual complexity on purchase intention is mediated by imagery fluency. In doing so, the study extends prior research examining the relationship between imagery fluency and behavioural intention (Levav & Fitzsimons, 2006, Petrova & Cialdini, 2005).

Additionally, our study provides managerial insights in the use of visual stimuli. We recommend managers to employ simple images when presenting their products as they are easier to imagine, compared to complex images. However, due to the increased competition, brands may have to use complex images to distinguish their products further. In such cases, we recommend the use of complex congruent images than complex incongruent images as it is easier for consumer to imagine the picture that is congruent to their stored schemas and scene expectations. Based on these findings, brands could strategically mix simple and complex congruent images to increase consumer purchase intentions.

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