

# **The role of mental imagery as driver to purchase intentions in a virtual supermarket**

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## **Abstract**

### **Introduction**

Virtual Reality (VR) has offered a large potential for a long time, but those opportunities are just beginning to come true, not only by the hands of retailers but also by the ones of shoppers. Though marketing experts see the evolution of VR with high hopes for companies, there are no clear guidelines as to how they should integrate it on their marketing mix (Tom Dieck et al., 2018). So, more research is needed to understand the potential of this tool. Virtual Reality is based on three key characteristics: immersion, interactivity mix (Tom Dieck et al., 2018). Firstly, when exposed to a virtual environment, the individual experiences the sense of immersion or presence within that environment. The user feels like being there and escaping or becoming isolated from the real world. Beside immersion, VR provides a very dynamic environment (Loureiro et al., 2019), which is important to create consumer involvement. Hence, the current study explores mental imagery as driver to emotions and purchase intentions in virtual supermarket

### **Hypotheses**

Following Miller, Hadjimarco and Miciak (2000), mental imagery is an activation of perceptual knowledge stored in a long-term memory and related to a personal experience. Imagery can be evoked by different types of sensory stimulus: tactile, visual, auditory, olfactory or gustatory. This dimension is called modality (Miller, Hadjimarco, & Miciak, 2000). Analysing all Mental Imagery characteristics, it is believed in literature that there is a relationship between mental imagery and consumer behavioural intentions (Yoo & Kim, 2014), that is emotional states and purchase intentions. Therefore, the following hypotheses are formulated:

H1: Mental imagery is positively associated to Purchase Intention

H2: Mental imagery is positively associated to Emotions

Product involvement reflects the amount of interest, attention, excitement and motivation of the consumer toward a product (Porral, Vega, & Mangin, 2018).

So, it is important to understand how to communicate with products with different levels of involvement, because it influences the way customers want to engage with the brands (Porral, Vega, & Mangin, 2018). Based on this assumption, it is expected that:

H3: Product involvement is positively associated to Purchase Intention

H4: Product involvement is positively associated to Emotions

The feeling of presence brought out by the virtual reality stimulus usually creates a highly involvement with the store atmosphere (Boyd & Koles, 2018). People can experience the feeling of escaping and telepresence without moving (Kerrebrock, Brengman, & Willems, 2017) and influence their behaviour. Based on this the following hypothesis arise:

H5: Presence is positively associated to Purchase intention

H6: Presence is positively associated to Emotions

### **Methodology**

A quasi-experimental between-subjects design was implemented to test the proposed model. The quasi-experimental manipulation comprised a virtual grocery store, using VR. A quantitative approach was followed using a questionnaire to get data to test the model. The questionnaire was fulfilled after the participants visualize the scenario through VR. The respondents are regular shoppers who were selected to test a virtual shopping. A virtual scenario was created where the participant experienced a virtual supermarket. The scenario displayed the product assortment, prices and promotions. Participants were requested to wear Oculus Rift, which includes an appropriate oculus to emerge in a virtual world and two motion sensors that detect the movement. Besides, a computer with the software to design the virtual scenario was used. The virtual supermarket was based on an existing shelf layout and real brands in order to resemble the physical experience. The laundry care category was chosen, specifically, HDD – Hard Duty Detergent – and FFI – Fabric Finishers. It is important to refer that to ensure maximum fidelity and allow participants to do the correct comparison, the virtual planogram was based on an existing shelf layout and real brands (Pizzi *et al*, 2019). Furthermore, the point of sales environment was reproduced, such as shelves, floor and lighting.

### **Results**

PLS (the partial least squares) approach is used to test the model. PLS is suitable for this study since it is used for constructs under condition of nonnormality and for small-medium sample sizes. The analysis was conducted on two levels: the first-order constructs level and second-order construct level. The latter correspond to mental imagery with four factors: vividness, quantity, valence and modality. After analysing the measurement model, convergent and discriminant validity, the structured model is appraisal. Concerning the established hypotheses, at a significant level  $p < 0.05$  ( $t > 1.96$ ), hypothesis H1, H2, H3, H5 and H6 are fully supported, only H4 is excluded.

### **Conclusions**

The results show that mental imagery leads to a purchase intention ( $\beta = 0.307$ ), the positive relationship means that, when in the shopping experiences, and images are evoked to our mind, we tend to be more propitious to buy the product. Thus, mental imagery explains the purchase intention variable and H1 is supported. Concerning the emotions, the results show that there is a relationship between both ( $\beta = 0.611$ ), which means that, when in the shopping experiences and images are evoked to our mind, the emotional reactions to the stimulus are positive and agreeable. Thus, mental imagery explains the emotions variable and H2 is supported. It is crucial to highlight that the positive effect of mental imagery in emotion is the strongest direct effect of whole hypotheses, pointing out the crucial role that mental imagery may play in the emotions generated. Actually, this result is already expected, having in mind the findings in literature review. Emotional responses occur when our cognitive sense is stimulated (Miller, Hadjimarcou, & Miciak, 2000) and according mental imagery definition, this is exactly what happens when the mental images come to our mind.

Although each consumer has a different level of involvement depending on the product we are talking about, product involvement is not the same for all consumers. The level of involvement will determinate the consumer attitude towards the product. Researchers consider that brands should approach differently the audience according the level of involvement. This is where VR has an important role.

The results show that product involvement leads to a purchase decision ( $\beta = 0.203$ ), the positive relationship means that, when in the shopping experiences, and consumer who is highly involved with the product/brand, tends to be more propitious to buy the product. Thus, product involvement explains the purchase intention variable and H3 is supported. It can be explained due to the category chosen for this study – laundry care.

This type of category includes products with high involvement level. Consumers of this category mostly look for the maximum information possible, such as benefits, prices, environmental issues, among others... and tend to compare between the different brands which is the best option that will fulfil their needs. The variable product involvement presents a mean of 4.54, meaning that even not totally involved, the sample shows a positive level.

The positive or negative emotions stimulated depend product involvement (Vega and Mangin, 2018). On one hand high involvement leads to a positive and pleasurable emotions, on the other hand low involvement leads to a negative emotions. This is justified by the fact that people feel more linked with products that elicit to a pleasure emotions rather than unpleasant emotions. Thus, hedonic value of the product also influences the involvement and the emotions triggered, since in hedonic value people look for pleasurable experiences. In Porral, Vega and Mangin (2018) case the products involved are wine (high involvement) and coffee (low involvement).

Regarding presence, this leads to a purchase decision ( $\beta = 0.491$ ), the positive relationship means that, when the consumers feels physical present in a virtual world, tends to be more propitious to buy the product. Thus, presence explains the purchase intention variable and H5 is supported. Concerning to the impact of presence on emotions, as expected, the relationship is significant and positive ( $\beta = 0.191$ ). This means that the interactivity and immersion experienced on virtual supermarket enhances the emotions generated. Therefore, presence explains the emotion variable and H5 is supported. It is crucial to highlight that the positive effect of presence in emotion was the weakness direct effect of whole model, in other words the role that presence may play in the emotions is not the most important in the whole model.

VR still be a very new tool that people are not used to and it must be applied in marketing step by step. On the one hand, consumers need to be educated for this new shift from traditional to innovative marketing. On the other hand, companies need to take the best part of it and surely create the best atmosphere condition to lead positive emotions and finalizing with a purchase decision. How more involved is the consumer with the product, the more he needs to be engaged with the brand. So, creating the appropriated atmosphere, where the consumer feels immersive and part of the process is a key driver to his satisfaction and increase the purchase intention, and as demonstrated here, VR is a good effect on it.

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