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**HOW ONLINE CONSUMER REVIEWS AND THE PRODUCT POSITIONING  
AFFECT CONSUMERS ATTITUDES**

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## RESUMO

Os reviews on-line são uma importante fonte de informação para consumidores que compram em ambientes virtuais. Esta forma de e-WOM tem recebido muita atenção na literatura. No entanto, algumas inconsistências relacionadas aos efeitos do conteúdo e formato dos reviews são encontradas. Este estudo explora as influências de diferentes tipos de reviews sobre as intenções dos consumidores, demonstrando que esse efeito é mediado pela diagnosticidade dos reviews. Os resultados mostram que os reviews baseados em atributos são percebidos como mais diagnósticos do que os reviews baseados em experiências e também os ratings dos consumidores e, portanto, levam a maiores intenções de compra do consumidor. Também se investiga o impacto do posicionamento do produto sobre a relação entre o tipo de review e as respostas dos consumidores. Além disso, a diagnosticidade dos reviews é prevista como o mecanismo que explica por que diferentes combinações entre posicionamento do produto e tipo de review levam a intenções distintas do consumidor. Dois estudos experimentais corroboram essas previsões. As descobertas desta pesquisa oferecem contribuição para a literatura e-WOM, à medida que estendem o conhecimento atual sobre as influências do formato de comentários e características dos produtos sobre as intenções dos consumidores. Além disso, a pesquisa também contribui para a literatura de processamento de informações, enriquecendo a compreensão do papel da diagnosticidade da informação nas configurações de avaliações on-line.

Palavras-chave: reviews on-line, tipo de review, posicionamento do produto, diagnosticidade dos reviews.

## ABSTRACT

Online reviews are an important source of information for consumers who purchase online. This form of e-WOM has been receiving much attention in the literature. Yet, some inconsistencies relating to the effects of review content and format are found. This study explores the influences of different types of review on consumer intentions, demonstrating that this effect is mediated by the reviews diagnosticity. The results show that attribute-based reviews are perceived as more diagnostic than experience-based reviews and customer ratings, and thus, lead to higher consumer purchase intentions and willingness to buy. It also investigates the product positioning impact on the relationship between review type and consumer responses. Further, the review diagnosticity is predicted as the mechanism which explains why different matches between product positioning and review type lead to distinct consumer intentions. Two experimental studies corroborate these predictions. The findings of this research offer contribution to the e-WOM literature as they extend the current knowledge regarding the influences of reviews format and products characteristics on consumer intentions. Moreover, the research also contributes to the information processing literature by enriching the understanding of the information diagnosticity role in online reviews settings.

Key-words: Online reviews, Review type, Product positioning, Review diagnosticity.

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## INTRODUCTION

The Word-of-mouth is known as an important marketing element, and with the emergence of the internet, which turned information exchange more easier, it has gained more strength (Trusov, Bucklin, & Pauwels, 2009). The internet created the possibility to consumers exchange opinions and reviews through social media and retailer online stores, being this form of communication known as the electronic word-of-mouth (e-WOM) (Lee & Koo, 2012). Consumer reviews are an essential element for online retail stores, as consumers are relying each time more on their peers' opinions to create their own evaluation of products (Pan & Zhang, 2011).

With the increased popularity of online consumer reviews, extensive research has been conducted to understand how they affect consumer behaviors (Y. Huang, Li, Wu, & Lin, 2017). Many studies have explored the role of objective metrics in online reviews – e-WOM volume, variance, and valence – in predicting sales (King, Racherla, & Bush, 2014). More recently, a new stream of research has focused on exploring the influences of the review type (content and format) on consumer responses (e.g. Mudambi & Schuff, 2010; Pan & Zhang, 2011; Schindler & Bickart, 2012). Previous studies have investigated the different outcomes of the content nature, some arguing that objective information in reviews is perceived as more helpful by consumers (D. Park & Lee, 2008), while others indicate that the subjective information is considered more diagnostic (Yin, Bond, & Zhang, 2016). There is also work regarding the format of reviews, which demonstrated that text reviews are perceived as more diagnostic compared to numerical ratings (Filiari, 2015), while there are findings in the communication literature suggesting that statistical evidence tend to be more persuasive than narrative evidence (Allen & Preiss, 1997). Thus, a lack of agreement concerning the influences of these different types of reviews on consumer responses is found. Furthermore, as indicated above, much work explored the effects of review type on review helpfulness, but

there is little evidence in the marketing and information systems literature showing how different types of reviews can influence consumer intentions (e.g. D. Park & Lee, 2008).

To address these issues found in the aforementioned studies, we draw on literature concerning the diagnosticity of information to demonstrate that different types of reviews (attribute-based reviews, experience-based reviews and customer ratings) will have distinct influences on consumer intentions (purchase intentions and willingness to pay). We show that reviews that are perceived as more diagnostic by consumers have a higher impact on their intentions. By doing so, this research intends to contribute to the e-WOM literature by showing how different types of reviews influence consumer intentions due to their perceived review diagnosticity.

Another topic that has been receiving attention in the literature is the product role in the relationship between review types and consumer responses. Previous studies have reported that the product type (search or experience) would interact with the type of review to influence the perceived diagnosticity of information (L. Huang, Tan, Ke, & Wei, 2013, 2014). Yet, they failed to control for price and risk factors in their experiments, as they used different products with distinct prices and perceived risks (search products: digital camera and cell phone; experience products: clothing and shoes). Price and perceived risk are found to increase consumer skepticism toward an information provided (Darby & Karni, 1973; Nelson, 1970, 1974). Thus, a doubt can be raised to whether the effect found was due to the type of product or the price and risk attributed to them.

Concerning this question, we extend these previous findings by exploring the role of product positioning, rather than the product type. Taking into account the same product, but emphasizing different functional or symbolic benefits, we intend to offer a better conceptualization of the combined effects of the product nature and the review type. We also broaden these past finding by demonstrating that the review diagnosticity is the mechanism

which explains why different matches between product positioning and review type lead to distinct consumer intentions. Therefore, we aim to contribute to the online reviews literature as we explore the product moderation on the relationship between e-WOM and consumer intentions. Furthermore, the findings from this research can help marketing managers and architects of review platforms to better understand how different aspects of the online reviews can influence their consumers' purchase intentions and willingness to pay.

This dissertation is organized as follows. First, we elaborate the conceptual framework of this research. We then formulate and empirically test our hypothesis by conducting experimental studies. Finally, we present a discussion concerning our findings as we offer theoretical and managerial implications, demonstrating the limitations of our studies and pointing directions for future research.

## **CONCEPTUAL FRAMEWORK**

### **Electronic Word of Mouth**

As online selling ambient make it impossible to consumers to make contact with the product before the purchase, the reviews from other consumers who already bought and used the product become an important source of information (D. Park, Lee, & Han, 2007). In fact, online consumer reviews are known to positively influence purchase intentions (Jalilvand & Samiei, 2012). One essential feature of reviews is their diagnosticity, as consumers expect that the information read help them to make decisions (Qiu, Pang, & Lim, 2012). This diagnosticity of reviews is so important that often websites provide consumers with the opportunity to rate the reviews they see, indicating with a vote whether the comment was helpful and, therefore, the most voted tend to appear first in the review platform (Cao, Duan, & Gan, 2011).

Much work has been done concerning the influence of the observable metrics of e-WOM ratings on sales outcomes (see King, Racherla, & Bush, 2014). A meta-analysis from Babić et al. (2015), which included 55 articles, has demonstrated that past research on e-WOM indicated that sales are positively influenced by reviews volume, valence (when positive) and variance. But as the e-WOM gains more importance in the online marketplace, researchers are changing their attention to explore the influences of the qualities of e-WOM, rather to its quantity (Mudambi & Schuff, 2010). In the past few years, several studies explored ways to increase the perceived helpfulness of e-WOM (Schindler & Bickart, 2012; Schlosser, 2011). Factors such as the authorship of reviews (Li, Huang, Tan, & Wei, 2013), the presence of emotional cues (Yin et al., 2016) and the perceived psychological distance to the reviewer (Hernández-ortega, 2017) have been pointed to influence the helpfulness of online reviews. Further, a recent stream of research has been focusing on the impacts that content and format characteristics of reviews have on review diagnosticity and consumer responses (Filieri, 2015; L. Huang et al., 2013, 2014; Luan, Yao, Zhao, & Liu, 2016). Our work adds to this line of studies exploring how the type of reviews and their combined influence with the type of product reviewed impacts the consumer's intentions in online purchase settings.

### **Types of consumer reviews: attribute-based, experience-based and customer ratings**

The marketing and information systems literature indicate two forms of online reviews presentation: text reviews and numerical ratings (Filieri, 2015; Qiu et al., 2012).

Characteristics of text reviews - such as review length, valence, and content - have been accounted to influence consumer's perception of helpfulness and product sales (Cao, Duan, & Gan, 2011; Chevalier & Mayzlin, 2006; Mudambi & Schuff, 2010). Text reviews are usually segmented in academic studies based on their content, to improve the knowledge concerning

its influence on consumer responses. For example, Holbrook (1978) divided the content of a message into factual and evaluative content, Park and Lee (2008) decoded the content of a review between simple-recommendation reviews and attribute-value reviews, while Huang et al. (2013) used the attribute-based and experience-based review categories. In some way, they all seem to be divided into an objective/subjective dimension of content.

Other studies have focused on the influence of numerical ratings' volume, valence and variance on product sales (Dellarocas, Zhang, & Awad, 2007; Sun, 2012; Ye, Law, & Gu, 2009). Numerical ratings are provided in online retailers stores and consumer review sites to indicate the summarized opinion of consumers, being used to indicate overall rankings across different products or ratings concerning the consumer opinion about a product and/or its specific attributes (Filieri, 2015). Due to their different forms of information presentation and content nature, we explore the impact of three distinct types of reviews on consumer intentions: Attribute-based review, experience-based review and customer ratings.

The attribute and experience-based reviews are text statements posted by a consumer who already bought a product, offering their opinion and evaluations (Luan et al., 2016). Attribute-based reviews are more objective, centered on the description of the product attributes, while the experience-based reviews represent the overall assessment of the product made by the reviewer, being more subjective and containing more emotions (L. Huang et al., 2013). On the other hand, customer ratings are a numerical score (stars) provided by reviewers to indicate their overall opinion about the product (Pan & Zhang, 2011). These different types of reviews could lead to distinct outcomes over consumer intentions. For instance, one study from Flanagin and Metzger (2013) showed that higher customer ratings have a positive influence on consumer intentions, while Filieri (2015) found that text reviews are more helpful to consumers compared to customer ratings. Further, some authors argue that, concerning the content of text reviews, attribute-based reviews have a higher influence

on consumer intentions (D. Park & Lee, 2008), whereas others indicate that positive experience-based reviews would lead consumers to higher product intentions and purchase intentions (Wang, Cunningham, & Eastin, 2015). Clarifying such differences could help academics and practitioners to understand when and how to leverage such consumer opinions on online sales.

A literature review concerning the relative differences between attribute-based and experience-based reviews seems to point to higher influences on consumer intentions for the previous one. Past research suggested that factual content, defined as more objective and describing product attributes, would lead consumers to better attitudes in relation to an evaluative content, referred as a subjective interpretation of intangible product characteristics, as the factual content uses logical and verifiable arguments, improving the review adoption (Holbrook, 1978). Following this line of thinking, D. Park and Lee (2008) have demonstrated that objective reviews are perceived as more informative and lead to higher purchase intentions compared to subjective reviews. Consumers also tend to present lower skepticism (Ford, Smith, & Swasy, 1990; Smith, 1990) and more positive cognitive responses (Edell & Staelin, 1983) to objective information when compared to subjective information. Moreover, Objective information in reviews results in higher credibility compared to subjective information, due to the measurability of the content that would lead to a lower misinterpretation (Lee & Koo, 2012). In this regard, reviews with a high emotion intensity have a negative impact on review credibility, due to violations of the consumer expectancy (Jensen, Averbek, Zhang, & Wright, 2013). Since the attribute-base review is more factual and objective in its nature compared to the experience-based review, we expect that its influence on attitude formation, such as purchase intentions, would be positively higher when compared to the experience-based review.



Other papers have argued that the experience-based reviews would lead consumers to a higher perception of credibility, due to the personal experiences the content indicated and the ease of interpretation (Wang et al., 2015). In their experiment, Wang et al. (2015) manipulated the type of review and found that, for positive valence reviews, experience-based reviews have a higher influence on purchase intentions and product attitudes, when compared to attribute-based reviews. Supporting this argument, evidence in the literature shows that reviews with more emotional cues are likely to be perceived as being elaborated with more effort by reviewers and, as a consequence, are considered more helpful (Yin et al., 2016).

However, the subjectivity presented in the experience-based reviews is another reason to expect the lower influence of this type of review on consumer intentions. When a review contains subjective product information, it becomes dependent on the interpretation of each person, since the intangibles characteristics of a product are not measured equally by all individuals (Edell & Staelin, 1983). Even if a product is considered beautiful by many consumers, the reasons why this beautifulness is perceived may be different for each individual, and thus, such subjective information may not be considered useful to other consumers (Sen & Lerman, 2007). Therefore, the experience-based reviews may not be perceived as diagnostic as the attribute-based review due to its subjective content, reducing its influence on the consumer intentions.

Another topic that has received little attention in the literature is the relative influence of customer ratings compared to the text reviews. Past studies indicate that the text reviews result in higher credibility (Pavlou & Dimoka, 2006) and diagnosticity perceived by the consumer (Filiberti, 2015), compared to the customer ratings, due to the capacity of the text comments in providing more information to customers (King et al., 2014). In addition, Wu et al. (2015) demonstrated that consumers derive higher utility value in making choices when they see text reviews rather than customer ratings. Meanwhile, evidence from a meta-analysis

with 15 studies point to a more pronounced persuasive influence for statistical evidence rather than narrative evidence (Allen & Preiss, 1997).

Yet, there is still an opportunity to understand how the different types of content present in a comment will relate to customer ratings (King et al., 2014). This higher influence of text reviews on consumer responses will hold for both attribute-based review (objective) and experience-based review (subjective), compared to the customer ratings? The customer rating may affect consumer's opinions and intentions as it indicates the overall opinion of reviewers about the quality of the product (Filiberti, 2015; Sun, 2012). Whereas text reviews are a complex set of information, assessing the product by many angles, the customer rating is a summary score, representing the opinion of the consumer in a single dimension of evaluation (Archak, Ghose, & Ipeirotis, 2011). Compared to text reviews, customer ratings contain less detailed information, which would lead to a lower influence on diagnosticity, and further, on consumer intentions (Filiberti, 2015). Following this line of thinking, past research has demonstrated that consumers perceive detailed information in a review to be diagnostic when evaluating a product (Herr, Kardes, & Kim, 1991; Jiménez & Mendoza, 2013) and this could be taken as an evidence that all forms of text reviews would have higher influences on consumer responses compared to customer ratings. However, reviews offering particular product attribute details are found more persuasive (attribute-based) than overall reviews with insufficiency of such attribute's detailed information (experience-based) (Herr et al., 1991; Jiménez & Mendoza, 2013). Just as the customer ratings, the experience-based review provides consumers with the overall evaluation of the product (L. Huang et al., 2013). When seeing the experience-based review, the consumer will evaluate the product based on general attitudes and summary impressions (Mantel & Kardes, 1999). It is possible that a similar assessment occurs when consumers observe a customer rating, since this rating work as a shortcut inference, demonstrating the overall impressions of other consumers (Filiberti, 2015).

Based on these previous studies, we suggest that only the attribute-based reviews will have a higher influence on consumer intentions compared to the customer ratings.

Thus, we propose the following hypothesis, concerning the review type influence on consumer intentions (purchase intentions and willingness to pay):

**H1:** Consumer intentions towards a product (purchase intentions and willingness to pay) will be higher when consumers receive an attribute-based review when compared to experience-based reviews and customer ratings.

### **The diagnosticity mediation**

Consumers use online reviews in order to obtain useful information about a specific product or service (Schindler & Bickart, 2012). The content of the online consumer reviews has a direct impact on the diagnosticity perceived by the consumer since they extract the information directly from the messages posted by reviewers (Zhu, Benbasat, & Jiang, 2010). Consumers' confidence to make decisions tends to be higher when they perceive the high diagnostic information (Mudambi & Schuff, 2010). The diagnosticity of a review is based on the capacity of such message to increase the knowledge of a consumer about the product analyzed in the review, sometimes indicated as the level of information helpfulness (Filieri, 2015). Following this previous definition, we assume in this work the diagnosticity of information and the helpfulness of information as synonymous.

Both text reviews and customer ratings have a positive influence on information diagnosticity (Filieri, 2015). Research concerning the impact of review content on diagnosticity of information has demonstrated that objective information is considered more helpful than subjective information in a review (D. Park & Lee, 2008). Others have argued that subjective reviews are dependent upon the interpretation of each consumer, thus having a

weaker influence on diagnosticity compared to objective reviews (Edell & Staelin, 1983). Furthermore, consumers perceive a higher diagnosticity when viewing text reviews, compared to the customer ratings (Filiari, 2015). These studies suggest that the type of review will lead to different perceptions of information diagnosticity. Following our previous argumentation, we suggest that attribute-based reviews would lead to higher diagnosticity of information when compared to experience-based reviews and customer ratings.

The higher the information diagnosticity, more prone consumers are to adopt information, indicating that they would follow the opinions offered by reviewers to help in their decision assessments (Filiari, 2015). Further, previous work suggested that the perceived information diagnosticity in a product presentation has a positive influence on consumer attitudes towards the product and on purchase intentions (Jiang & Benbasat, 2007). In the same line of reasoning, the diagnosticity of a review has also a positive impact on consumer purchase intentions (D. Park & Lee, 2008). Therefore, the literature offers initial evidence to our prediction that the information diagnosticity would positively influence the consumer intentions. Taken together, these previous findings offer evidence for the mediation of information diagnosticity on the relationship between review type and consumer intentions. Thus, we offer the second hypothesis of this research:

**H2:** The reviews diagnosticity will act as the underlying mechanism that explains the influence of review type on consumer intentions (purchase intentions and willingness to pay).

### **The product positioning moderation**

The importance of product type on the relationship between the eWOM and consumer's perception has already been demonstrated in previous research (Mudambi & Schuff, 2010; Pan & Zhang, 2011; Sen & Lerman, 2007). For instance, consumers tend to

present more skepticism to an information about an experience product than a search product (Franke, Huhmann, & Mothersbaugh, 2004). They also find negative reviews more useful when concerning a utilitarian product than a hedonic one (Sen & Lerman, 2007). Following these previous studies, we intend to further explore the role of the product type in the relationship between review type and consumer intentions.

Past research from Huang et al. (2013) showed that when the product type matches the review type (search product with attribute-based review vs. experience product with experience-based review) the helpfulness perceived by consumers is higher. In addition, when both attribute and experience-based reviews are given to the consumer, their presentation order influence the perceived helpfulness (L. Huang et al., 2014). Yet, these past researches did not account for the influence of different products price and purchase risk on the perceived diagnosticity of information, as products with different prices were used in representing search and experience products (e.g. Huang et al., 2013). As noted by Nelson (1970, 1974), the product price should influence the skepticism of a consumer toward an information concerning it. Consumers perceive a lower risk concerning the purchase when the price of a product is low, feeling less inclined to confirm the veracity of the information (Darby & Karni, 1973). Concerning this claim, the results from Smith (1990) empirically demonstrated that the risk associated with a product has a positive influence on information skepticism. Further, the perceived risk in an online purchase setting has a negative effect on consumers' purchase intention (Yang, Sarathy, & Lee, 2016). To overcome this concern with the influence of product price and perceived risk on consumer responses to reviews, we address the role of product positioning instead of product type. Doing so, we expect to clarify why evidence from previous works would lead to different effects concerning the review type on the consumer intentions.

It is known that a product can offer both utilitarian and symbolic benefits to a consumer (C. W. Park, Eisingerich, & Park, 2013). Yet, different products may be assessed based more on one of these benefit dimensions (Batra & Ahtola, 1991). Functional products are evaluated by consumers in their capacity to fulfill a utilitarian need, being bought by their particular attributes (Pan & Zhang, 2011; Strahilevitz & Myers, 1998). Thus, the tangible aspects have a pivotal role in the consumer value identification for functional products (De Chernatony, Harris, & Dall'Olmo Riley, 2000; Mort & Rose, 2004). Contrastively, symbolic products are considered based on their intangible characteristics, emotional value and symbolic benefits, which may fulfill consumer needs of self-expression (Bhat & Reddy, 1988).

When a consumer intends to perform a behavior (a purchase) based on utilitarian (symbolic) reasons, their attitudinal evaluation will be based on such utilitarian (symbolic) benefits (Batra & Ahtola, 1991). We postulate that the attribute-based reviews will have a high influence on consumer intentions for both product positioning (functional and symbolic), serving as a baseline for this moderation. Functional products are evaluated mainly based on their tangible attributes (Mort & Rose, 2004; Mudambi & Schuff, 2010), thus, the attribute-based review, which focuses on the products attributes, presenting objective evaluation and tangible characteristics (L. Huang et al., 2013), would offer helpful information for this type of assessment. It would also help in the judgement of a symbolic product. Symbolic products not only need to attend intangible benefits, but they also need to offer some standard level of functional value (Oliver, 1999; Wiedmann, Hennigs, & Siebels, 2009). Consequently, detailed information concerning this utilitarian dimension would help consumers to evaluate the symbolic products. Therefore, the attribute-based review would also be diagnostic when reviewing symbolic products, since it may indicate what consumers should expect about the functionality of the product.

Considering the experience-based review, we predict that this review would lead to higher consumer intentions when reviewing a symbolic product, but lower intentions when reviewing a functional product. Symbolic products are expected to fulfil intangible benefits (Bhat & Reddy, 1988). These intangible characteristics are the main content of the experience-based reviews (L. Huang et al., 2013), indicating that type of review would be helpful in the evaluation of symbolic products, further influencing the consumer intentions. Moreover, consumers expect that reviews of products with more intangible benefits to contain more emotions, compared to products with more tangible benefits (Yin et al., 2016). Further, Adaval (2001) suggested that affect-consistent information can influence the evaluation of intangible benefits of a product, whereas utilitarian benefits do not receive such influence. In this line, when reviewing a functional product, this type of review may not be as diagnostic as the attribute-based review. Since its content is mainly intangible and contemplates overall evaluations (L. Huang et al., 2013), it would not be as helpful in the assessment of the functional products, which are mainly assessed based on their specific attributes (Strahilevitz & Myers, 1998). Thus, the experience-based review would result in lower consumer intentions when reviewing a functional product.

Previous studies concerning the influences of customer rating have explored the role of volume, valence and even consumer characteristics (Flanagin & Metzger, 2013; D. H. Park & Kim, 2008; Qiu et al., 2012). Yet, there is scant evidence concerning the isolated influence of the product reviewed on the relationship between the customer ratings and consumer intentions (e.g. Pan & Zhang, 2011). Since customer ratings are not only offered in combination with text reviews but also are informed to customers isolated from other e-WOM forms, further attention should be given too to this type of review. Customer ratings are an overall unidimensional evaluation of the reviewer about the product (Filiari, 2015) and, since preferences for product characteristics are different amongst consumers, they could only be

helpful if the preferences about the product are homogeneous for a certain population (Archak et al., 2011). Moreover, consumers may infer that the preference a population hold for symbolic products vary more than their preference for functional products, as they lack objective standards for comparison (He & Bond, 2013). In light of these arguments, we predict that customer ratings would offer helpful information to consumers in the evaluation of functional products since consumers find the information on the customer ratings more useful for products with homogeneous preference in a population (He & Bond, 2013), but not for symbolic products. Thus, customer ratings will result in higher consumer intentions when reviewing a functional product, but lower intentions when reviewing a symbolic product.

Following our previous discussion, we expect that the product positioning will influence the impact of the review type on consumer intentions, changing its magnitude for customer ratings and experience-based reviews, but not for attribute-based reviews. Since attribute-based reviews are expected to have higher influences on both product positioning, we set them as the baseline for this interaction. Further, building on past research (L. Huang et al., 2013, 2014), we suggest that the reviews diagnosticity will be the reason why consumers show different intentions to different matches of review type and product positioning. Hence, we offer the third and fourth hypothesis of this research:

**H3a:** Consumers who see an attribute-based review will not show different attitudes across both types of product positioning

**H3b:** Consumers who see a customer rating for a functional product will have higher attitudes compared to those who see it for a symbolic product

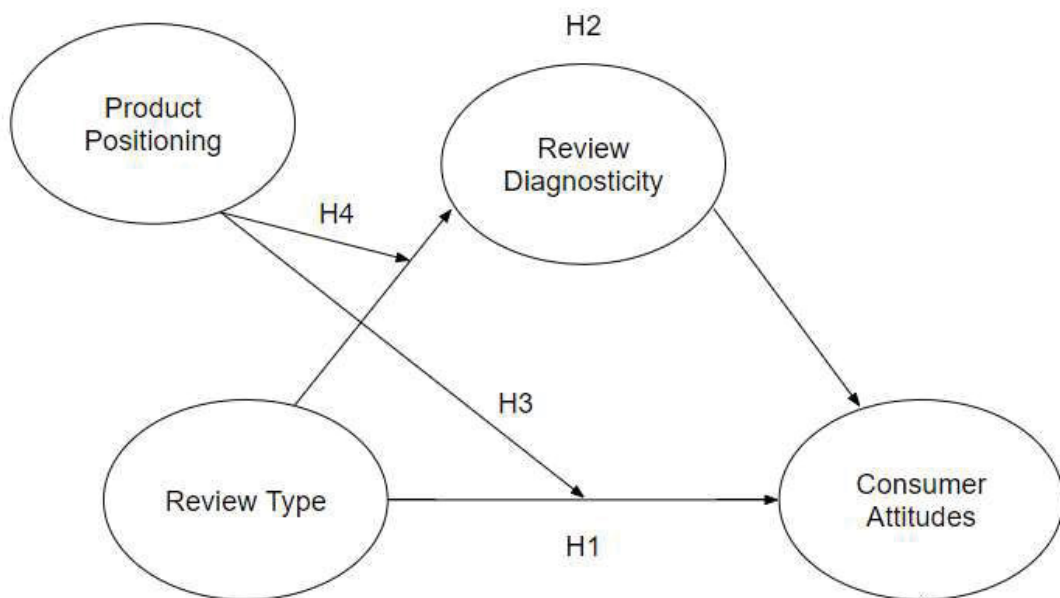
**H3c:** Consumers who see an experience-based review for a functional product will have lower attitudes compared to those who see it for a symbolic product.



**H4:** The reviews diagnosticity will be the mechanism that explains why consumers indicate different intentions towards different matches of review type and product positioning.

Following this hypothesis development, we present the research model of this study in Figure 1.

**FIGURE 1 – RESEARCH MODEL**



#### OVERVIEW OF STUDIES

To test our hypothesis, we conduct two studies. The first study examine all research hypothesis, set in a scenario where consumers saw online consumer reviews for a travel mug offer. In the second study some manipulations corrections were made based on the first. We also explored all hypothesis, but this time with a different product (sunglasses).

#### STUDY 1

This first study tests our first research hypothesis, which states that the attribute-based reviews will lead to higher consumers purchase intentions and willingness to pay, compared to the experience-based reviews and the customer ratings (H1). Further, this study explored

the diagnosticity role as a mediator of this main effect (H2). It also examined how the product positioning (functional vs. symbolic) moderates the effect of the review type on the consumer intentions (H3<sub>a-c</sub>) and if the diagnosticity of reviews explains this combined effect (H4).

*Participants and design.* Two hundred and twenty one individuals (57% female,  $M_{age} = 35.63$ ,  $SD = 10.92$ ) recruited through Amazon's Mechanical Turk participated in this experiment study. They were randomly assigned to one of the six conditions in the 3 (review type: customer rating vs. attribute-based review vs. experience-based review) x 2 (product positioning: functional vs. symbolic) between-subjects design. Twelve participants failed to indicate correctly which type of review they saw (customer ratings or text comments) and thus were removed from the analysis. We also excluded from the sample cases with a response time shorter than 180 seconds, since we estimated this time amount as the minimum required to perform our experiment. The final sample considered for the analysis in this study was 183 individuals.

*Procedure.* At the beginning of the experiment, participants were requested to imagine that they needed a new travel mug and to describe what they would expect from it. In the functional product condition, the reason for the need was to maintain beverages temperature when outside home, while in the symbolic product condition the reason was to stop using plastic cups, preserving the environment. Next, they were presented with a travel mug offer, which contained an image and the price of the product, the product description (either functional or symbolic) and the product reviews (either customer ratings or attribute-based reviews or experience-based reviews). All the reviews offered to participants had a positive valence, this choice was made so we could control the effects of review variance and inconsistency (Qiu et al., 2012) and improve the internal validity of the experiment.

In the functional product condition, the description consisted of attributes, quality and structural features of the travel mug. As for the symbolic product condition, the description

focused on self-expression, green consumption and style aspects of the travel mug. In order to ensure that the reviews would not seem fabricated, we based the experiment reviews offered on real travel mug reviews from an online retail store. Attribute-based reviews included opinions concerning the structure and temperature maintenance. Experience-based reviews contained opinions about self-expression benefits, style and overall satisfaction of the reviewers with the product. Participants on the customer rating condition only saw the stars the reviewers gave to the product. The images of the product description and the reviews are shown in Figure 2 and 3.

*Measures.* Following the manipulation, participants were asked to rate “How likely would you be to buy this Travel Mug?” on a 7-point semantic differential scale ranging from 1 – Not likely to 7 – Very likely (Nowlis, Mandel, & McCabe, 2004). They also rated the question “Would you be willing to pay a premium price for this Travel Mug?” on a 7-point semantic differential scale ranging from 1 – I would not pay to 7 – I would pay. Additionally, they answered the item “How much would you be willing to pay for this Travel mug in relation to its average value?” on a 7-point semantic differential scale ranging from 1 – Substantially less to 7 – Substantially more.

To check if the participants were influenced by the attribute and experience-based reviews manipulation, they rated the content of the reviews from 1 – the reviews described the features of the product to 7 – the reviews described the style preferences of the reviewer. Furthermore, to guarantee that they noticed the differences between ratings and text reviews, they were asked to indicate which type of review they saw, between customer ratings (stars) or text comments. For the product positioning manipulation check, respondents assessed the product, based on their perception, on an item adapted from Bhat (1986). They rated the item from 1 – “I would use this Travel Mug looking for functionality” to 7 – “I would use this Travel Mug looking for a way to express my personality”.

We also measured the review's diagnosticity (Filiari, 2015) perceived by the respondents. Diagnosticity was evaluated with a three item scale ( $\alpha = 0.90$ ), ranging from 1 – Strongly disagree to 7 – Strongly agree: “The information provided in online reviews was helpful for me to evaluate the product”, “The information provided in online reviews was helpful in familiarizing me with the product” and “The information provided in online reviews was helpful for me to understand the performance of the product”.

## Results

*Manipulation checks.* The product positioning manipulation check showed that participants in functional product condition perceived it to be more functional ( $M = 2.35$ ;  $SD = 1.47$ ) when compared to the symbolic product condition ( $M = 3.13$ ,  $SD = 1.82$ ;  $F(1, 181) = 10.12$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.053$ ). Moreover the review type manipulation check indicated that respondents in the attribute-based condition perceive the review as focusing more on the attributes of the product ( $M = 3.58$ ,  $SD = 1.79$ ) than individuals in the experience-based condition ( $M = 5.15$ ,  $SD = 1.57$ ;  $F(1, 117) = 25.80$ ,  $p < 0.001$ ,  $\eta_p^2 = 0.181$ ). Two-way ANOVAs were conducted with both manipulation factors to ensure that no interaction effects were triggered on the product positioning and review type manipulation checks ( $F_s < 1$ ).

*Consumer purchase intentions and willingness to pay.* Following our first hypothesis, we tested whether the attribute-based review condition would lead to higher purchase intentions and willing to pay compared to the customer rating and experience-based reviews. Two-way ANOVA tests were performed using the review type and product positioning as factors on purchase intentions, WTP and WTPP, to test H1 (See table 1 for mean values). The results showed that the review type manipulation did not influenced purchase intentions ( $F(2, 177) = 0.830$ ,  $p = 0.44$ ), neither the WTP ( $F(2, 177) = 1.252$ ,  $p = 0.29$ ) and WTPP ( $F(2, 177) = 0.712$ ,  $p = 0.49$ ). Thus, the results of this experiment fail to support our first hypothesis.

FIGURE 2 – STUDY 1 - PRODUCT POSITIONING MANIPULATION: FUNCTIONAL AND SYMBOLIC



<p style="text-align: center;"><b>S'well Stainless Steel Travel Mug 16 oz</b></p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>Keeps your liquid temperature longer</b></p> <p style="text-align: center;"><b>Price: U\$30</b></p> <p style="text-align: center; background-color: orange; color: white; padding: 2px;">ANTI-DRIPT</p> <p style="text-align: center;"><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• MADE OF FOOD-GRADE STAINLESS STEEL, durable to the core with no-stain interiors.</li> <li>• A WIDE MOUTH AND THICK RIM MADE FOR EASY DRINKING. Ice fits effortlessly inside.</li> <li>• TRIPLE-WALLED, a technology that creates a condensation-free exterior, so your hands and bag stay dry.</li> <li>• ERGONOMIC GRIP allows for even more on-the-go ease.</li> <li>• Keeps hot water hot for 12 hours and cold water cold for 24 hours.</li> </ul>	<p style="text-align: center;"><b>S'well Stainless Steel Travel Mug 16 oz</b></p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>Keeps your liquid temperature longer</b></p> <p style="text-align: center;"><b>Price: U\$30</b></p> <p style="text-align: center; background-color: orange; color: white; padding: 2px;">ANTI-DRIPT</p> <p style="text-align: center;"><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• MADE OF FOOD-GRADE STAINLESS STEEL, durable to the core with no-stain interiors.</li> <li>• A WIDE MOUTH AND THICK RIM MADE FOR EASY DRINKING. Ice fits effortlessly inside.</li> <li>• TRIPLE-WALLED, a technology that creates a condensation-free exterior, so your hands and bag stay dry.</li> <li>• ERGONOMIC GRIP allows for even more on-the-go ease.</li> <li>• Keeps hot water hot for 12 hours and cold water cold for 24 hours.</li> </ul>
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FIGURE 3 – STUDY 1 - REVIEW TYPE MANIPULATIONS: CUSTOMER RATINGS, ATTRIBUTE-BASED REVIEWS, AND EXPERIENCE-BASED REVIEWS

<p style="text-align: center;"><b>Customer Ratings</b></p> <p style="text-align: center;"><b>REVIEWS</b></p> <p>Rick Thomas ★★★★★</p> <p>David Ducker ★★★★★☆</p> <p>Mary Smith ★★★★★☆</p> <p>James Daley ★★★★★</p> <p>Susan Walter ★★★★★</p>	<p style="text-align: center;"><b>Attribute-based review</b></p> <p style="text-align: center;"><b>REVIEWS</b></p> <p><b>Rick Thomas</b> The structure of this mug is better than any other I've seen. Construction is solid and much higher quality than the asking price suggests. Highly recommended!</p> <p><b>David Ducker</b> This mug really maintain the liquids temperature for long. I was surprise for how much time it kept my coffee warm.</p> <p><b>Mary Smith</b> My favorite part about this mug is that my backpack doesn't get wet anymore. The outside of the mug is always dry.</p> <p><b>James Daley</b> Great travel mug. Well made, high quality! The material quality is excellent and the temperature maintenance is great. It holds my coffee temperature for more than 10 hours easily.</p> <p><b>Susan Walter</b> In my experience, this mug is strong and robust, it also keeps liquids hot (or cold) for longer than I am used.</p>	<p style="text-align: center;"><b>Experience-based review</b></p> <p style="text-align: center;"><b>REVIEWS</b></p> <p><b>Rick Thomas</b> I adore this mug, its style feels so classic to me. I am feeling very great with myself for choosing this one.</p> <p><b>David Ducker</b> I love this mug, it make me feel way more important to others. People often ask me were I bought. It because they find it nice.</p> <p><b>Mary Smith</b> Excellent product, I really like them! I recommend these very highly, and I am a hard person to buy for on certain things.</p> <p><b>James Daley</b> My dad had this one wooden mug back when I was young. These mug made me remember that good old days. Such a cool style while still being classic.</p> <p><b>Susan Walter</b> I feel so great using this travel mug, somehow they empower me. It is my choice when I feel like showing off.</p>
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*Diagnosticity mediation.* The second hypothesis of this research postulated that diagnosticity would mediate the effect of review type on purchase intentions and willingness to pay (H2). To test this hypothesis, first, we calculated a diagnosticity index by averaging the three diagnosticity items ( $\alpha = 0.90$ ). Then, bootstrapping analysis (Hayes 2012, model 4) were performed on the three dependent variables. Since our independent variable had three levels, we set the attribute-based condition as the baseline for the analysis, considering that we expected it to have higher means compared to the other two levels. The results showed that diagnosticity did mediate the effect of review type on purchase intentions and willingness to pay, but only for the comparison of attribute-based reviews and customer ratings, as reported through Table 2 (A, B and C).

**TABLE 1 – STUDY 1 - PURCHASE INTENTIONS, WTP, WTPP SPLIT BY REVIEW TYPE CONDITIONS**

	Customer Ratings (n = 64)	Attribute-based review (n = 60)	Experience-based review (n = 59)
Purchase intentions	3.75 (1.99)	4.27 (1.97)	4.05 (2.01)
WTP	2.98 (1.51)	3.37 (1.54)	3.41 (1.51)
WTPP	3.08 (1.83)	3.52 (1.96)	3.41 (2.05)
Diagnosticity	5.45 (1.93)	6.14 (1.72)	5.63 (1.79)

The pairwise comparisons of the effect on purchase intentions demonstrated that the attribute-based indirect effect was higher than the customer rating indirect effect (95% CI = -0.658 to -0.047), but showed no difference to the experience-based indirect effect (95% CI = -0.562 to 0.043). The analysis did not reveal either a total effect or a direct effect of the attribute-based review condition compared to the customer rating condition ( $p = 0.151$  and  $p = 0.545$ , respectively). Further, the total effect and the direct effect when comparing the attribute-based condition with the experience-based condition were not significant ( $p = 0.555$  and  $p = 0.962$ , respectively). Furthermore, similar results are revealed for the WTP and WTPP dependent

variables, as shown in Tables 2B and 2C. Thus, the results of this experiment offer initial support to H2.

*Product positioning moderation.* To test the third and fourth hypothesis of this research, which states that product positioning would moderate the effects of the review type on purchase intentions and willingness to pay (H3<sub>a-c</sub>), and that this interaction effect would be explained by the review diagnosticity (H4), we conducted bootstrapping analysis (Hayes 2012, model 8) on the three dependent variables. Three dummy variables were encoded, one for each type of review. Then, we performed the analysis setting each dummy variable as the independent variable and one of the other two orthogonal dummies as a covariate.

**TABLE 2A – STUDY 1 - EFFECT OF THE REVIEW TYPE (ATTRIBUTE-BASED VS. CUSTOMER RATINGS VS. EXPERIENCE-BASED) ON THE PURCHASE INTENTIONS THROUGH DIAGNOSTICITY**

	Effect	SE	p	LLCI	ULCI
Total Effect (Customer Rating)	-0.517	0.358	0.151	-1.223	0.190
Total Effect (Experience-based)	-0.216	0.365	0.555	-0.937	0.505
Direct Effect (Customer Rating)	-0.201	0.331	0.545	-0.854	0.452
Direct Effect (Experience-based)	0.016	0.336	0.962	-0.647	0.679
Indirect Effect (Customer Rating)	-0.316	0.154	-	-0.658	-0.047
Indirect Effect (Experience-based)	-0.232	0.151	-	-0.562	0.043
Total Effect - $R^2 = 0.012$ , $p = 0.351$					
Direct Effect - $R^2 = 0.003$ , $p=0.762$					

**TABLE 2B – STUDY 1 - EFFECT OF THE REVIEW TYPE (ATTRIBUTE-BASED VS. CUSTOMER RATINGS VS. EXPERIENCE-BASED) ON THE WILLINGNESS TO PAY THROUGH DIAGNOSTICITY**

	Effect	SE	p	LLCI	ULCI
Total Effect (Customer Rating)	-0.382	0.273	0.163	-0.921	0.156
Total Effect (Experience-based)	0.040	0.278	0.886	-0.509	0.590

Direct Effect (Customer Rating)	-0.241	0.269	0.371	-0.771	0.290
Direct Effect (Experience-based)	0.144	0.273	0.598	-0.394	0.682
Indirect Effect (Customer Rating)	-0.141	0.079	-	-0.346	-0.022
Indirect Effect (Experience-based)	-0.104	0.071	-	-0.278	0.008

Total Effect -  $R^2 = 0.016$ ,  $p = 0.233$

Direct Effect -  $R^2 = 0.011$ ,  $p=0.347$

**TABLE 2C – STUDY 1 - EFFECT OF THE REVIEW TYPE (ATTRIBUTE-BASED VS. CUSTOMER RATINGS VS. EXPERIENCE-BASED) ON THE WILLINGNESS TO PAY PREMIUM THROUGH DIAGNOSTICITY**

	Effect	SE	p	LLCI	ULCI
Total Effect (Customer Rating)	-0.439	0.350	0.212	-1.129	0.252
Total Effect (Experience-based)	-0.110	0.357	0.759	-0.814	0.594
Direct Effect (Customer Rating)	-0.179	0.333	0.591	-0.837	0.478
Direct Effect (Experience-based)	0.081	0.338	0.812	-0.586	0.747
Indirect Effect (Customer Rating)	-0.259	0.131	-	-0.563	-0.040
Indirect Effect (Experience-based)	-0.190	0.122	-	-0.459	0.029

Total Effect -  $R^2 = 0.009$ ,  $p = 0.426$

Direct Effect -  $R^2 = 0.003$ ,  $p=0.723$

The results indicate that the product positioning moderated the effects of the review type on the consumer intentions, but only for customer ratings and experience-based reviews (see Table 3 for condition's mean values and Table 4 for moderation results). The effects of the attribute-based reviews on consumers purchase intentions, WTP and WTPP were not influenced by the product positioning. As for customer ratings, the analysis showed that this review had a lower influence on purchase intentions, WTP and WTPP when reviewing a product with a symbolic positioning compared to a functional positioning. On the other hand,



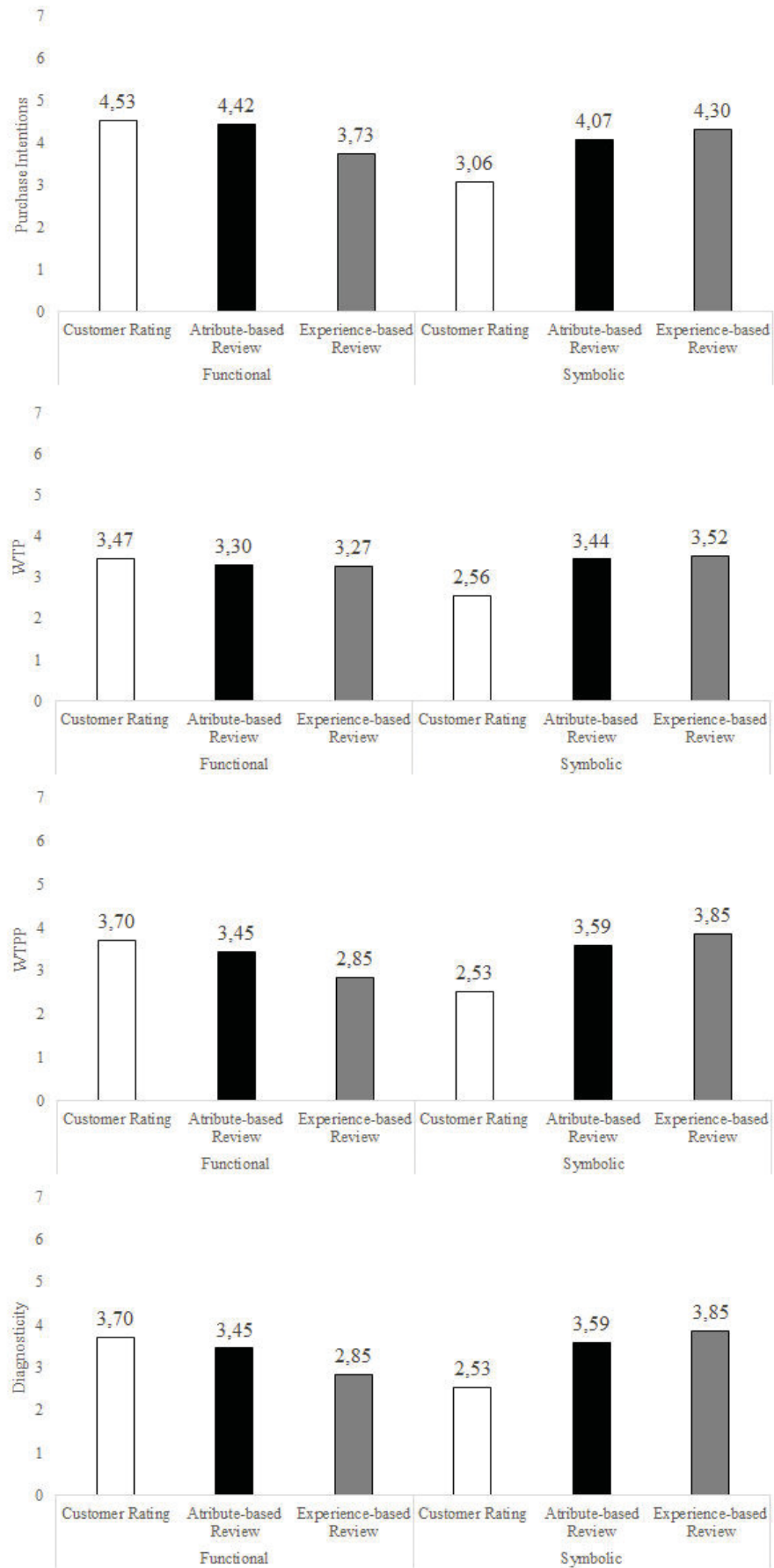
experience-based reviews had a higher influence on purchase intentions and WTPP when reviewing a product with a symbolic positioning compared to a functional positioning, whereas the influence on WTP was not affected by the product positioning. Thus, these findings support our third hypothesis, demonstrating that the product positioning has a moderating effect on the relationship between review type and consumer intentions.

**TABLE 3 – STUDY 1 - PURCHASE INTENTIONS, WTP, WTPP SPLIT BY REVIEW TYPE AND PRODUCT POSITIONING CONDITIONS**

	Functional positioning (n = 84)			Symbolic positioning (n = 84)		
	Customer Ratings (n = 30)	Attribute-based review (n = 33)	Experience-based review (n = 26)	Customer Ratings (n = 34)	Attribute-based review (n = 27)	Experience-based review (n = 33)
Purchase intentions	4.53 (2.01)	4.42 (1.90)	3.73 (1.85)	3.06 (1.72)	4.07 (2.07)	4.30 (2.13)
WTP	3.47 (1.55)	3.30 (1.47)	3.27 (1.40)	2.56 (1.35)	3.44 (1.65)	3.52 (1.60)
WTPP	3.70 (1.93)	3.45 (1.87)	2.85 (1.62)	2.53 (1.56)	3.59 (2.10)	3.85 (2.27)
Diagnosticity	5.84 (1.78)	6.03 (1.92)	5.51 (1.66)	5.10 (2.01)	6.28 (1.46)	5.72 (1.90)

To test our fourth hypothesis, concerning the diagnosticity mediation on the interaction effect of review type and product positioning, we used the attribute-based reviews as a baseline for the model, since our independent variable had three levels and the attribute-based review presented higher influences on both product positioning conditions and no differences between them was found. The analysis (Table 5) showed that for a product with a symbolic positioning, the diagnosticity mediated the relative negative effect of customer ratings compared to attribute-based reviews on purchase intentions, WTP, WTPP. However, such mediation did not occur for the functional positioning, as expected, since both attribute-based reviews and customer ratings were predicted to have higher influences on consumer intentions for products with functional products.

**FIGURE 4 – STUDY 1 PURCHASE INTENTIONS, WTP, WTPP AND DIAGNOSTICITY**



Further, for products with a functional positioning, the diagnosticity mediated the relative negative effect of experience-based reviews compared to attribute-based reviews on WTP, purchase intentions and WTPP. On the other hand, when the product had a symbolic positioning, this diagnosticity mediation was not significant, which was expected, as both experience-based reviews and attribute-based reviews were predicted to have higher influences on products with a symbolic positioning. Together, these results show that the product positioning moderation on the relationship between review type and consumer intentions can be explained by the diagnosticity of reviews, corroborating H4.

**TABLE 4 – STUDY 1 - PRODUCT POSITIONING MODERATION OVER THE REVIEW TYPE INFLUENCE ON PURCHASE INTENTIONS, WTP, WTPP**

Review Type	DV	b	p-value
Attribute-based Review	Purchase Intentions	-0.09	0.868
	WTP	0.39	0.406
	WTPP	0.07	0.904
Customer Ratings	Attribute-based Review	-1.16	0.041
	Customer Ratings	-0.92	0.047
	Experience-based Review	-1.39	0.015
Experience-based Review	Attribute-based Review	1.29	0.025
	Customer Ratings	0.55	0.242
	Experience-based Review	1.37	0.019

**TABLE 5 – STUDY 1 – INDIRECT EFFECTS OF REVIEW TYPE ON CONSUMER INTENTIONS BY PRODUCT POSITIONING CONDITIONS**

Comparison	DV	CI for Functional Positioning	CI for Symbolic Positioning
Customer rating vs. Attribute-based	Purchase Intentions	95% CI = -0.457 to 0.294	95% CI = -0.978 to -0.157
	WTP	95% CI = -0.233 to 0.123	95% CI = -0.492 to -0.060
	WTPP	95% CI = -0.388 to 0.244	95% CI = -0.811 to -0.135
Experience-based vs. Attribute-based	Purchase Intentions	90% CI = -0.686 to -0.042	90% CI = -0.445 to 0.160
	WTP	95% CI = -0.373 to -0.006	95% CI = -0.265 to 0.103
	WTPP	90% CI = -0.570 to -0.035	90% CI = -0.380 to 0.127

*Discussion.* The results of this first study failed to support our hypothesis that attribute-based reviews lead to higher purchase intentions and willingness to pay, compared to customer ratings and experience-based reviews (H1). We could argue that our scenario choice

in this experiment somehow influenced our results. The use of the green appeal in the symbolic product positioning could have interacted with our manipulations since green (eco-friendly) consumers tend to have more positive intentions towards green products than non-green consumers do (Zhang, Cheung, & Lee, 2014). Even with the randomization of our sample, this green appeal could have brought an extraneous effect to our model, which we did not control.

However, an indirect effect concerning the role of the review diagnosticity was found when comparing the influences of the attribute-based review and customer ratings on purchase intentions and willingness to pay. Thus, the study provided initial support to our proposition that the diagnosticity is the underlying mechanism explaining the effects of review type on purchase intentions and willingness to pay (H2). Further, the product positioning moderation was supported in this study (H3<sub>a-c</sub>) offering insights about the effect of review type on different types of products. Firstly, customer ratings tend to lead consumers to higher purchase intentions and willingness to pay when used to review a functional positioned product rather than symbolic products. Secondly, experience-based reviews result in higher purchase intentions and willingness to pay when offered in reviews of symbolic positioned products rather than functional positioned products. Thirdly, the effect of attribute-based reviews on purchase intentions and willingness to pay does not vary over the product positioning, being high in all conditions, consistent with its main effect stated on our H1. Finally, our results indicated that the reviews diagnosticity explained the product positioning moderation on the relationship between review type and consumer intentions, supporting H4. Thus, when participants perceived a combination of review and product position to be more diagnostic in evaluating the product, they demonstrated higher intentions towards the product, compared to when they found this match less diagnostic.

## STUDY 2

The main goal of the second study was to replicate the effects found in the first experiment and to test again our first hypothesis, concerning the influence of the type of review on consumer intentions. We elaborated the scenario this time with a different product (Sunglasses). Instead of using a green appeal in the symbolic positioning, we incorporated a style and classic appeal. Thus, this experiment tested the four hypothesis of this research.

*Participants and design.* Two hundred and six individuals (54% female,  $M_{age} = 37.52$ ,  $SD = 11.97$ ) recruited through Amazon's Mechanical Turk participated in this experiment. They were randomly assigned to one of the six conditions in the 3 (review type: customer rating vs. attribute-based review vs. experience-based review) x 2 (product positioning: functional vs. symbolic) between-subjects design. Seventeen participants failed to indicate correctly which type of review they saw (customer ratings or text comments) and thus were removed from the analysis. We also excluded from the sample cases with a response time shorter than 180 seconds, since we estimated this time amount as the minimum required to perform our experiment. The final sample considered for the analysis in this study was 168 individuals.

*Procedure.* Initially, participants were asked to imagine that they needed a new pair of sunglasses and to describe what they would expect from it. In the functional product condition, the reason for the need was the protection of the eyesight, while in the symbolic product condition the reason was to improve their appearance. Next, they were presented with a sunglass offer, which contained an image and the price of the product, the product description (either functional or symbolic) and the product reviews (either customer ratings or attribute-based reviews or experience-based reviews). Once again, participants only were provided with reviews containing positive valence.

In the functional product condition, the description consisted of attributes and technical features of the pair of sunglasses. As for the symbolic product condition, the description focused on the history and style aspects of the pair of sunglasses. In order to ensure that the reviews would not seem fabricated, we extracted real sunglasses reviews from an online retail store and made little refinement. Attribute-based reviews included opinions concerning the UV protection, structure, and polarization of the pair of sunglasses. Experience-based reviews contained opinions, sentiments and overall satisfaction of the reviewers about the style of the product. Participants on the customer rating condition only saw the stars the reviewers gave to the product. The images of the product description and the reviews are shown in Figure 4 and 5.

*Measures.* The measures used in this experiment were similar to the ones used in study 1. Participants were asked to rate “How likely would you be to buy these Sunglasses?” on a 7-point semantic differential scale ranging from 1 – Not likely to 7 – Very likely (Nowlis et al., 2004). They also rated the question “Would you be willing to pay a premium price for these Sunglasses?” on a 7-point semantic differential scale ranging from 1 – I would not pay to 7 – I would pay. Additionally, they answered the item “How much would you be willing to pay for these Sunglasses in relation to its average value?” on a 7-point semantic differential scale ranging from 1 – Substantially less to 7 – Substantially more.

To check if the participants were influenced by the attribute and experience-based reviews manipulation, they rated the content of the reviews from 1 – the reviews described the features of the product to 7 – the reviews described the style preferences of the reviewer. Furthermore, to guarantee that they noticed the differences between ratings and text reviews, they were asked to indicate which type of review they saw, between customer ratings (stars) or text comments. For the product positioning manipulation check, they rated the item from 1 – “I would use these Sunglasses looking for functionality” to 7 – “I would use these

Sunglasses looking for a way to express my personality”. In addition, we used the same measure for the diagnosticity variable that was incorporated in the first study ( $\alpha = 0.92$ ).

FIGURE 5 – STUDY 2 - PRODUCT POSITIONING MANIPULATION: FUNCTIONAL AND SYMBOLIC



<p><b>8Bees Unisex Aviator Sunglasses</b></p> <p><b>UV400 Eye Protection</b></p>  <p><b>Price: US\$22</b> <b>ADD TO CART</b></p> <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• UV 400 PROTECTION - 400UV rated, meaning it can block 99%-100% of both UVA and UVB radiation.</li> <li>• POLARIZED LENS -specialized multi layer lens designed to filter and block over 99.96% of glare, providing maximum comfort and improved visibility.</li> <li>• HIGH QUALITY FRAME - made with metallic alloy that is ultra light weight yet strong and durable.</li> <li>• ANTIOXIDANT PLATING FRAME - Antioxidant plating, anti-allergy &amp; skin-friendly tested, harmless to skin.</li> </ul>	<p><b>8Bees Unisex Aviator Sunglasses</b></p> <p><b>Most Iconic Sunglass Style in the World</b></p>  <p><b>Price: US\$22</b> <b>ADD TO CART</b></p> <ul style="list-style-type: none"> <li>• The Aviator is currently one of the most iconic sunglasses models in the world.</li> <li>• Aviator Classic sunglasses were originally designed for U.S. aviators in 1937. Aviator Classic sunglasses are a timeless model that combines great aviator styling with exceptional quality.</li> <li>• These sunglasses are the perfect choice for outdoor sports and activities such as driving, fishing, skiing, travelling, hiking, boating, and is suitable as high fashion accessory and daily wear all year round.</li> <li>• The product of meticulous, original styling that translates the best of the latest fashion trends into an ever-contemporary look for millions of wearers around the world.</li> </ul>
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FIGURE 6 – STUDY 2 - REVIEW TYPE MANIPULATIONS: CUSTOMER RATINGS, ATTRIBUTE-BASED REVIEWS, AND EXPERIENCE-BASED REVIEWS

Customer Ratings	Attribute-based review	Experience-based review
<p style="text-align: center;"><b>REVIEWS</b></p> <p><b>Rick Thomas</b> ★★★★★</p> <p><b>David Ducker</b> ★★★★★☆</p> <p><b>Mary Smith</b> ★★★★★☆</p> <p><b>James Daley</b> ★★★★★</p> <p><b>Susan Walter</b> ★★★★★</p>	<p style="text-align: center;"><b>REVIEWS</b></p> <p><b>Rick Thomas</b> The UV protection is better than any glasses I've seen. Everything is still clear and not too dark. Construction is solid and much higher quality than the asking price suggests. Highly recommended!</p> <p><b>David Ducker</b> These are just as sturdy and functional as any other great brand. I use these in extreme sun, and they work great.</p> <p><b>Mary Smith</b> My favorite part about these is that it blocks UV light very well. You can wear them inside (if you so choose) with ease because of the light tint.</p> <p><b>James Daley</b> Great sunglasses. Well made, high quality! They provide great coverage with the polarization. You barely notice that you have them on, lightweight but sturdy.</p> <p><b>Susan Walter</b> The polarization/tinting of these glasses really makes the spring colors come alive! They are strong and durable enough that the ear pieces don't get bent out of shape.</p>	<p style="text-align: center;"><b>REVIEWS</b></p> <p><b>Rick Thomas</b> A classic style of sunglasses that never gets old, I love them. I bought the medium size and they fit perfectly.</p> <p><b>David Ducker</b> I love these glasses, they make me feel way more beautiful. I will be styling these all summer long.</p> <p><b>Mary Smith</b> Excellent product I love them! Its style feels so classic to me. I recommend these very highly, and I am a hard person to buy for on certain things.</p> <p><b>James Daley</b> My dad had one of these aviator sunglasses back when I was young. These sunglasses made me feel just like my father back in the day, with a cool style while still wearing a classic.</p> <p><b>Susan Walter</b> I feel so great using these sunglasses, somehow they empower me. It is my choice when I feel like showing off.</p>

## Results

*Manipulation checks.* The product positioning manipulation check showed that participants in functional product condition perceived it to be more functional ( $M = 2.85$ ;  $SD = 1.71$ ) when compared to the symbolic product condition ( $M = 3.75$ ,  $SD = 1.96$ ;  $F(1, 166) = 10.18$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.058$ ). Moreover the review type manipulation check indicated that respondents in the attribute-based condition perceive the review as focusing more on the attributes of the product ( $M = 3.61$ ,  $SD = 1.83$ ) than individuals in the experience-based condition ( $M = 5.30$ ,  $SD = 1.48$ ;  $F(1, 107) = 28.22$ ,  $p < 0.001$ ,  $\eta_p^2 = 0.209$ ). Two-way ANOVAs were conducted with both manipulation factors to ensure that no interaction effects were triggered on the product positioning and review type manipulation checks ( $F_s < 1$ ).

*Consumer purchase intentions and willingness to pay.* Two-way ANOVAs were performed using the review type and product positioning as the factors on the three dependent variables – purchase intentions, willingness to pay (WTP) and willingness to pay premium (WTPP). The results showed that the review type manipulation influenced the purchase intentions ( $F(2, 162) = 3.467$ ,  $p < 0.05$ ;  $\eta_p^2 = 0.041$ ), but not the WTP ( $F(2, 162) = 2.232$ ,  $p = 0.111$ ) and WTPP ( $F(2, 162) = 2.296$ ,  $p = 0.104$ ). No main effects were found for the product positioning manipulation in the three dependent variables ( $p > 0.05$ ). Tukey post hoc analysis indicated that respondents in the attribute-based reviews indicated more purchase intentions ( $M = 5.11$ ,  $SD = 1.84$ ) compared to participants in the experience-based reviews condition ( $M = 4.17$ ,  $SD = 2.03$ ;  $p < 0.05$ ). No statistical difference in purchase intentions was found between participants in the attribute-based review condition and customer rating condition ( $p = 0.24$ ). Mean values are shown in Table 6. These results partially support H1.

*Diagnosticity mediation.* The second hypothesis of this research postulated that diagnosticity would mediate the effect of review type on purchase intentions and willingness



to pay (H2). Then, bootstrapping analysis (Hayes 2012, model 4) were performed on the three dependent variables. Again, we set the attribute-based condition as the baseline for the analysis. The results showed that diagnosticity did mediate the effect of review type on purchase intentions and willingness to pay, as reported in Table 7 (A, B and C).

**TABLE 6 – STUDY 2 - PURCHASE INTENTIONS, WTP, WTPP, DIAGNOSTICITY AND INFORMATION QUANTITY SPLIT BY REVIEW TYPE CONDITIONS**

	Customer Ratings (n = 59)	Attribute-based review (n = 56)	Experience-based review (n = 53)
Purchase intentions	4.53 (1.90)	5.11 (1.84) <sup>a</sup>	4.17 (2.03) <sup>a</sup>
WTP	3.86 (1.25)	4.16 (1.30)	3.66 (1.32)
WTPP	3.69 (1.87)	4.23 (2.09)	3.47 (2.03)
Diagnosticity	5.19 (2.00)	6.26 (1.42)	5.47 (1.93)

<sup>a</sup>, significant statistical difference (p<0.05)

The pairwise comparisons of the effect on purchase intentions demonstrated that the attribute-based indirect effect was higher than the customer rating indirect effect (95% CI = -0.691 to -0.148) and higher than the experience-based indirect effect (95% CI = -0.579 to -0.058). The analysis did not reveal either a total effect or a direct effect of the attribute-based review condition compared to the customer rating condition (p = 0.106 and p = 0.539). Further, we found a total effect when comparing the attribute-based condition with the experience-based condition (p = 0.012) and a marginal significant statistical difference for the direct effect (p = 0.062). Furthermore, similar results are revealed for the WTP and WTPP dependent variables, as shown in Tables 7B and 7C. These results suggest that a full mediation occurs in the relative effect between attribute-based and experience-based reviews on purchase intentions through diagnosticity, thus offering support to our H2.

**TABLE 7A – STUDY 2 - EFFECT OF THE REVIEW TYPE (ATTRIBUTE-BASED VS. CUSTOMER RATINGS VS. EXPERIENCE-BASED) ON THE PURCHASE INTENTIONS THROUGH DIAGNOSTICITY**

	Effect	SE	p	LLCI	ULCI
Total Effect (Customer Rating)	-0.582	0.358	0.106	-1.289	0.125
Total Effect (Experience-based)	-0.937	0.368	0.012	-1.663	-0.211

Direct Effect (Customer Rating)	-0.216	0.350	0.539	-0.907	0.475
Direct Effect (Experience-based)	-0.666	0.354	0.062	-1.367	0.033
Indirect Effect (Customer Rating)	-0.366	0.135	-	-0.691	-0.148
Indirect Effect (Experience-based)	-0.270	0.130	-	-0.579	-0.058

Total Effect -  $R^2 = 0.197$ ,  $p = 0.032$

Direct Effect -  $R^2 = 0.019$ ,  $p = 0.159$

**TABLE 7B – STUDY 2 - EFFECT OF THE REVIEW TYPE (ATTRIBUTE-BASED VS. CUSTOMER RATINGS VS. EXPERIENCE-BASED) ON THE WILLINGNESS TO PAY THROUGH DIAGNOSTICITY**

	Effect	SE	p	LLCI	ULCI
Total Effect (Customer Rating)	-0.296	0.241	0.220	-0.771	0.179
Total Effect (Experience-based)	-0.500	0.247	0.044	-0.988	-0.012
Direct Effect (Customer Rating)	-0.082	0.238	0.733	-0.552	0.389
Direct Effect (Experience-based)	-0.342	0.242	0.159	-0.819	0.135
Indirect Effect (Customer Rating)	-0.215	0.088	-	-0.432	-0.076
Indirect Effect (Experience-based)	-0.158	0.082	-	-0.363	-0.034

Total Effect -  $R^2 = 0.024$ ,  $p = 0.128$

Direct Effect -  $R^2 = 0.012$ ,  $p = 0.332$

**TABLE 7C – STUDY 2 - EFFECT OF THE REVIEW TYPE (ATTRIBUTE-BASED VS. CUSTOMER RATINGS VS. EXPERIENCE-BASED) ON THE WILLINGNESS TO PAY PREMIUM THROUGH DIAGNOSTICITY**

	Effect	SE	p	LLCI	ULCI
Total Effect (Customer Rating)	-0.537	0.373	0.151	-1.273	0.198
Total Effect (Experience-based)	-0.760	0.383	0.049	-1.516	-0.005
Direct Effect (Customer Rating)	-0.235	0.372	0.528	-0.970	0.499
Direct Effect (Experience-based)	-0.538	0.377	0.155	-1.282	0.206
Indirect Effect (Customer Rating)	-0.302	0.120	-	-0.605	-0.118
Indirect Effect (Experience-based)	-0.223	0.116	-	-0.513	-0.050

Total Effect -  $R^2 = 0.025$ ,  $p = 0.125$

Direct Effect -  $R^2 = 0.011$ ,  $p = 0.360$

*Product positioning moderation.* To test H3<sub>a-c</sub> and H4, we again conducted bootstrapping analysis (Hayes 2012, model 8) on the three dependent variables. We used the same encoding process of study 1 to execute the analysis. The results indicate that the product

positioning moderated the effects of the review type on the consumer intentions, but again, only for customer ratings and experience-based reviews (see Table 8 for condition's mean values and Table 9 for moderation results). The effects of the attribute-based reviews on consumers purchase intentions, WTP and WTPP again were not influenced by the product positioning. In addition, the influences of customer ratings on WTP and WTPP were influenced by the product positioning moderation, whereas the impact on purchase intentions was not. Thus, when the customer rating was offered to review a symbolic (functional) positioned product, the participants demonstrated lower (higher) intentions toward the product. The analysis also revealed that the experience-based review influence was higher on WTP, WTPP, but not on purchase intentions, when reviewing a product with a symbolic positioning compared to a functional positioning. Therefore, these results corroborate H3<sub>a-c</sub>.

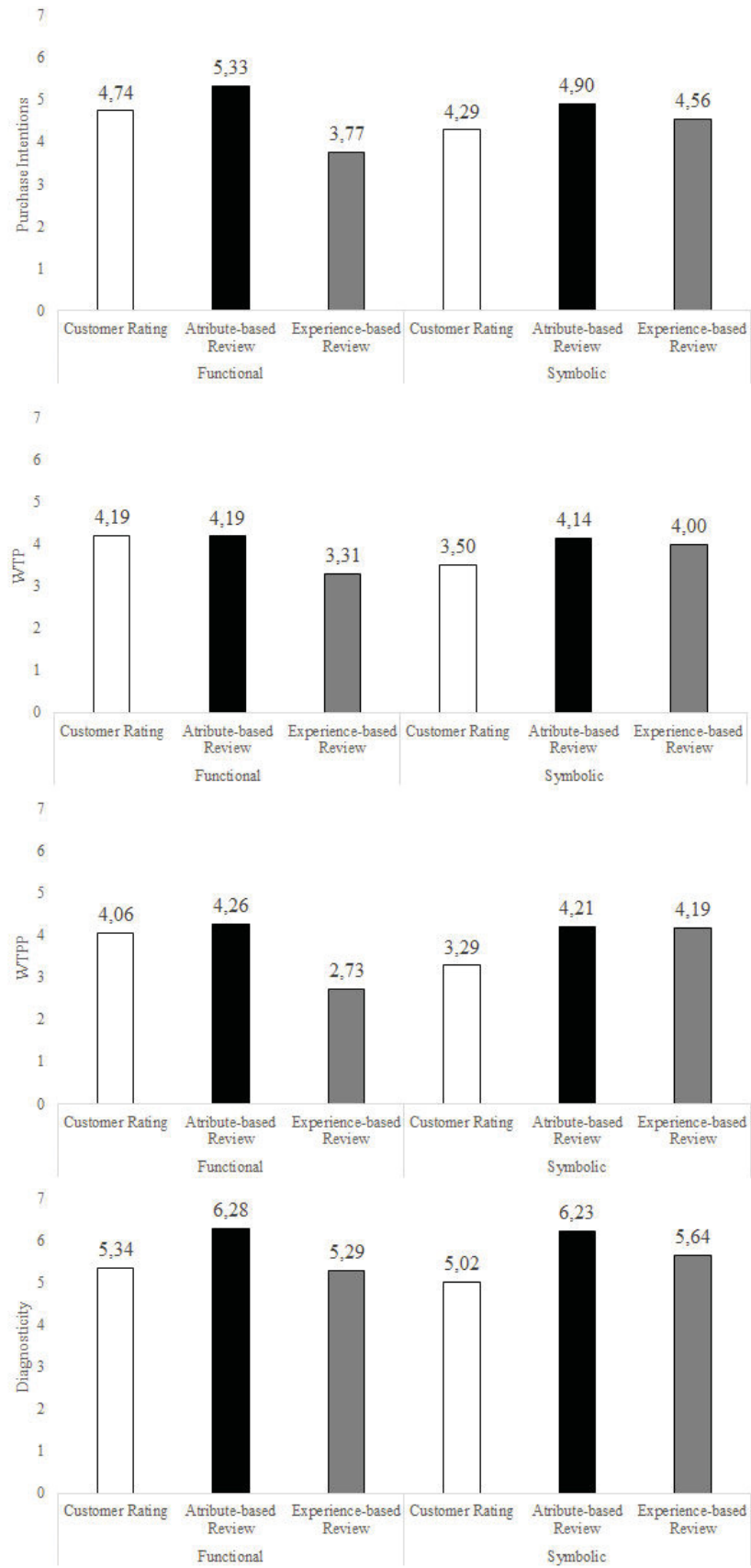
**TABLE 8 – STUDY 2 - PURCHASE INTENTIONS, WTP, WTPP SPLIT BY REVIEW TYPE AND PRODUCT POSITIONING CONDITIONS**

	Functional positioning			Symbolic positioning		
	Customer Ratings (n = 31)	Attribute-based review (n = 27)	Experience-based review (n = 26)	Customer Ratings (n = 28)	Attribute-based review (n = 29)	Experience-based review (n = 27)
Purchase intentions	4.74 (2.03)	5.33 (1.66)	3.77 (2.10)	4.29 (1.74)	4.90 (1.99)	4.56 (1.91)
WTP	4.19 (1.05)	4.19 (1.18)	3.31 (1.44)	3.50 (1.37)	4.14 (1.43)	4.00 (1.11)
WTPP	4.06 (1.90)	4.26 (1.97)	2.73 (1.71)	3.29 (1.78)	4.21 (2.23)	4.19 (2.10)
Diagnosticity	5.34 (1.90)	6.28 (1.05)	5.29 (2.30)	5.02 (2.11)	6.23 (1.71)	5.64 (1.52)

**TABLE 9 – STUDY 2 - PRODUCT POSITIONING MODERATION OVER THE REVIEW TYPE INFLUENCE ON PURCHASE INTENTIONS, WTP, WTPP**

Review Type	DV	b	p-value
Attribute-based Review	Purchase Intentions	-0.55	0.358
	WTP	-0.00	0.999
	WTPP	-0.32	0.619
Customer Ratings	Purchase Intentions	-0.46	0.442
	WTP	-0.92	0.023
	WTPP	-1.33	0.034
Experience-based Review	Purchase Intentions	1.05	0.083
	WTP	0.97	0.019
	WTPP	1.73	0.007

**FIGURE 7 – STUDY 2 PURCHASE INTENTIONS, WTP, WTPP AND DIAGNOSTICITY**



Identically to what was done in the first study, we used the attribute-based review as the baseline to test our fourth hypothesis concerning the diagnosticity mediation on the interaction effect of review type and product positioning. The results demonstrated that, regarding the differences between the attribute-based review and the customer based review, negative indirect effects through the diagnosticity were found for all dependent variables in both product positioning conditions (see Table 10). Further, the indirect effects for the symbolic positioned products ( $\text{Effect}_{\text{purchase}} = -0.442$ ;  $\text{Effect}_{\text{WTP}} = -0.253$ ;  $\text{Effect}_{\text{WTPP}} = -0.355$ ) were lower than for the functional positioned products ( $\text{Effect}_{\text{purchase}} = -0.285$ ;  $\text{Effect}_{\text{WTP}} = -0.163$ ;  $\text{Effect}_{\text{WTPP}} = -0.229$ ), converging toward our hypothesis.

Further, for products with a functional positioning, the diagnosticity mediated the relative negative effect of experience-based reviews compared to attribute-based reviews on purchase intentions (95% CI = -0.794 to -0.057), WTP (95% CI = -0.479 to -0.022) and WTPP (95% CI = -0.683 to -0.052). Meanwhile, when the product had a symbolic positioning, this diagnosticity mediation was not significant. Therefore, these analyses offer further support to our fourth hypothesis, demonstrating that the reviews diagnosticity is the mechanism that can explain the product positioning moderation on the relationship between review type and consumer intentions.

**TABLE 10 – STUDY 2 – INDIRECT EFFECTS OF REVIEW TYPE ON CONSUMER INTENTIONS BY PRODUCT POSITIONING CONDITIONS**

Type of Review	Positioning	Dependent Variable	Effect	SE	95% LLCI	95% ULCI
Customer Ratings vs. Attribute-based Review	Functional	Purchase intention	-0.285	0.156	-0.646	-0.019
		WTP	-0.163	0.087	-0.373	-0.027
		WTPP	-0.229	0.131	-0.563	-0.033
	Symbolic	Purchase intention	-0.442	0.191	-0.896	-0.133
		WTP	-0.253	0.116	-0.528	-0.065
		WTPP	-0.355	0.121	-0.601	-0.109

		WTPP	-0.355	0.162	-0.778	-0.113
		Purchase intention	-0.354	0.184	-0.794	-0.057
	Functional	WTP	-0.205	0.116	-0.479	-0.022
		WTPP	-0.284	0.157	-0.683	-0.052
Experience-based Review vs. Attribute-based Review		Purchase intention	-0.175	0.148	-0.522	0.068
	Symbolic	WTP	-0.101	0.087	-0.322	0.034
		WTPP	-0.140	0.126	-0.449	0.050

*Discussion.* The results of this study partially support this research first hypothesis concerning the review type influence on consumer attitude. When people see an attribute-based review, they indicate higher purchase intentions compared to when they see an experience-based review. No differences were found between attribute-based reviews and customer ratings regarding respondent's purchase intentions. Moreover, mediation analysis suggests that the effect of review type on consumer intentions is mediated by the information diagnosticity (H2), thus, the attribute-based review tends to be perceived by consumers as more useful when evaluating products, compared to customer ratings and experience-based reviews. Moreover, in relation to our third hypothesis, the product positioning again moderated the effect of review type on purchase intentions and willingness to pay, leading to a similar conclusion that we drew from the first study. Attribute-based reviews lead consumers to higher intentions for both product positioning, not being influenced by such moderation. On the other hand, the product positioning interacted with both customer ratings and experience-based review. Customer ratings lead consumers to higher intentions when reviewing a functional product, but lower when reviewing a symbolic one. As for the experience-based reviews, consumers indicated higher intentions when the review concerned a symbolic product, but lower intentions for functional products. Finally, this study corroborated the hypothesis regarding the mediation role of the review diagnosticity in the product positioning and review type interaction effect on consumer intentions. When

participants perceived a match of product positioning and review type to be high (low) on diagnosticity, demonstrated high (low) consumer intentions.

## GENERAL DISCUSSION

The studies of this research highlight the relevance of different types of online reviews and the reviewed product positioning on shaping consumer intentions. The first objective of this research was to demonstrate the influences of different review types. We have argued that attribute-based reviews would lead consumers to higher intentions when compared to experience-based reviews and customer ratings. Concerning this argument, our studies failed to support the proposition that attribute-based reviews would present a higher influence on consumer intentions compared to customer ratings, despite the fact that when the diagnosticity of the review was considered an indirect effect was found (study 2). Although previous literature pointed that text reviews would be perceived as more helpful in the evaluation of products (Filieri, 2015; Pavlou & Dimoka, 2006) - and our results in some way are in line with this proposition (the diagnosticity indirect effect) – in our studies consumers intentions were not influenced by such differences between ratings and text.

In relation to the differences among text reviews, our studies offered evidence that the influence of attribute-based reviews is higher than the influence of experience-based reviews. In study 2 we showed that participants who saw an attribute-based review would have higher purchase intentions compared to individuals who saw an experience-based review. Further, when the diagnosticity was accounted in the analysis, the results indicated that attribute-based reviews had higher purchase intentions, willingness to pay and willingness to pay premium compared to experience-based reviews. This finding corroborates with a body of research which indicates that more objective and factual information is perceived as more informative

by consumers, influencing their intentions (Ford et al., 1990; Holbrook, 1978; D. Park & Lee, 2008).

It also highlights the reviews diagnosticity function as the underlying process of the influence of review type on consumer intentions. When participants received an attribute-based review, rather than the experience-based review, they perceived the reviews as having high diagnosticity and thus indicated higher intentions towards the product. The importance of the diagnosticity in information search processes was already demonstrated in past research (Filieri, 2015; Jiang & Benbasat, 2007). Our work builds on that literature to demonstrate how the differences in a text review can influence the perceived information diagnosticity and further affect the consumer purchase intentions and willingness to pay.

Moreover, our results demonstrate that the product reviewed has an important role in the relationship between the type of review and consumer intentions. Previous studies have reported that the product type (search or experience) would interact with the type of review (attribute-based or experience-based) to influence the perceived diagnosticity of information (L. Huang et al., 2013, 2014). We extended these previous findings by exploring the role of the product positioning, in search of a more controlled influence of the product nature. Both our studies indicated that the product positioning affected the impact of the review type on purchase intentions and willingness to pay. First, they demonstrated that attribute-based review leads consumers to higher intentions towards products independently of the product positioning. Secondly, the results showed that consumers signal higher (lower) intentions when viewing a customer rating for functional (symbolic) positioned product. Finally, when receiving an experience-based review, consumers tend to demonstrated higher (lower) intentions when this one reviews a symbolic (functional) positioned product.

Importantly, we provided evidence for the mediation role of the review diagnosticity regarding the interaction influence of review type and product positioning. We argued in this



research that certain matches between review type and product positioning would be perceived as more diagnostic than others, due to the distinct information offered in each type of review and the different evidence consumers seek when evaluating contrasting product positionings. Thus, when consumers consider this match helpful, they are prone to show higher intentions towards products, compared to when the helpfulness is not detected. Both our studies support this proposition. Further, we observe that our hypotheses are in line with data from previous research. For example, similar to our results, Pan and Zhang (2011) have shown that customer ratings received higher means of helpfulness when offered for utilitarian products compared to more experiential (intangible) ones. Work from Filieri (2015) indicated that reviews for tourism-related products (which we could indicate as having more intangible benefits) were perceived as more diagnostic when they were presented in text form compared to the numerical rating form, same pattern of review diagnosticity that we found on our studies when the product review had a symbolic positioning. These findings from past research offer extra support to our propositions.

## **THEORETICAL AND MANAGERIAL IMPLICATIONS**

First, this present research contributes to the literature of e-WOM by investigating how different types of reviews influence consumer intentions. Past studies have demonstrated that the content of a review (Holbrook, 1978; Schindler & Bickart, 2012) and its form (Filieri, 2015) have an impact on the information diagnosticity. Our research extends the current knowledge by demonstrating how different types of reviews have distinct impacts on consumer intentions due to the perceived review diagnosticity. When consumers receive an attribute-based review, rather than an experience-based review or a customer rating, they indicate higher levels of information diagnosticity and are prone to indicate higher purchase intentions and willingness to pay.

This more comprehensive analysis concerning different types of reviews offers new insights relating to past findings demonstrated in the marketing literature. For instance, Filieri (2015) indicated that text reviews are more diagnostic and tend to be more adopted compared to customer ratings. The present research further explores this proposition, showing that only attribute-based reviews are perceived as more diagnostic by consumers, whereas the experience-based reviews lead to similar levels of diagnosticity.

Second, this work adds to the existing research on online reviews as it extends the understanding of the product moderation on the relationship between e-WOM and consumer intentions. Past research has suggested that the product type reviewed (search or experience) can alter the perceived helpfulness of attribute or experience-based text reviews (L. Huang et al., 2013), as consumers prefer attribute-based reviews when looking for a search product and experience-based reviews when searching for an experience product (Luan et al., 2016). The current research extends this line of studies by demonstrating how the product positioning can influence the different review type effects on consumer intentions. We indicate that functional positioned products receive higher consumer purchase intentions and willingness to pay when reviewed with customer ratings or attribute-based reviews, rather than experience-based reviews. On the other hand, symbolic positioned products obtain higher consumer intentions when reviewed with attribute-based or experience-based reviews, instead of customer ratings.

Finally, this study contributes to the information processing literature by enriching the understanding of the information diagnosticity role in online reviews settings. The present studies not only show that the review diagnosticity mediates the influences of different review types on consumer intentions, following previous studies of the literature (Filieri, 2015; D. Park & Lee, 2008), but they also evidenced that the moderation effect of the product positioning in this relationship is also explained by the review diagnosticity. When the

matches between the product positioning and the review type are perceived as high in diagnosticity, they further elicit higher consumer intentions.

As e-WOM is a known driver of sales and has been pointed as an important tool to influence consumers, implications for marketing managers and architects of review platforms can also be drawn from this present research. First, our research demonstrates that online retail websites that sell a variety of products, and that do not have a clear segmentation of categories within the site, should request consumers to leave text feedbacks with more objective argumentation about the product, highlighting the attributes of the product. Since consumers consider the attribute-based review as more diagnostic compared to other types of review, and it also exerts higher influences on consumer intentions, this form of e-WOM could help retailers to boost consumers' responses toward their products, independently of their positioning.

Further, this present study also highlighted the importance of the product reviewed to better understand the influences of online reviews. The positioning a company chooses for its product, more functional or more symbolic, has a clear impact on the effectiveness of online reviews. In light of these findings, we argue that online stores that sell mostly commodities and products with functional benefits should benefit most by offering in their platforms e-WOM in the form of customer ratings or attribute-based reviews. These two types of reviews seem to be more helpful to products that are mainly evaluated based on their utilitarian features, and thus could be more indicated to supermarket and hardware stores' websites, for example. Otherwise, we indicate a different strategy for websites selling branded products with a more symbolic appeal. We suggest that online stores selling products with more intangible benefits provide to their consumers e-WOM in the form of text comments, either attribute-based or experience-based. Consumers who evaluate a symbolic product consider text reviews as more helpful than numerical ratings. Further, these text reviews lead

consumers to higher purchase intentions and willingness to pay. For instance, clothing and jewelry stores could benefit most by providing text comments to its consumers, due to the intangible nature of their products.

### **LIMITATIONS AND FUTURE RESEARCH**

Our research presents some limitations. First, we only account for positive valence feedbacks in our studies. This choice was made so we could control the e-WOM valence source of variation, as the valence is known to affect the consumer perceptions (Qiu et al., 2012). We also did not explore in our model the influences of e-WOM volume and variance, which are important characteristics of online reviews. Therefore, we recommend that future research extend our studies to account for these legitimate sources of variation, improving the understanding of the influences of different types of reviews on consumer responses.

Second, although we explored the role of the product positioning, other product characteristics could be explored to extend the generalization of our findings. As we argued in this research, the price and risk of a product can affect consumers skepticism towards information (Darby & Karni, 1973; Nelson, 1970, 1974). Thus, future studies could account for different product characteristics in order to corroborate our results or to investigate new factors that may interfere with the diagnosticity of reviews.

Third, although we found initial evidence, more research is needed to evidence the differences between customer ratings and text reviews. We could not find a relative main effect between these types of reviews in this research, only indirect effects through the diagnosticity mediation. The literature already indicates that text reviews are more diagnostic than numerical ratings (Filiari, 2015; Pavlou & Dimoka, 2006). Thus, more studies are

required to corroborate the distinct effect of text reviews and numerical ratings on consumer intentions.

Finally, the results from the first experiment seemed to be influenced by the green appeal used in the symbolic positioning condition. Green products are known to elicit positive intentions on green consumers (Zhang et al., 2014). Although our sample was randomized, the results found could be caused by a disproportional ratio of consumers with green intentions in the sample or the origin of such results could be due to an influence of green appeal on the reviews appraisal. This question is open to an inquiry from future research.

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## Appendix A

### SCRIPT – STUDY 1

Welcome to the research study!

The following information is provided to you as part of the university's program for ensuring that academic research is conducted in a safe and ethical manner. Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study: This survey is related to your Brand Evaluations.

What you will be asked to do in the study: You will be answering questions pertaining to your behavior as a brand consumer.

Time required: The study will last about 5 to 8 minutes.

Risks: We do not anticipate any risks associated with your participation.

Confidentiality: Your identity will be kept confidential as required by law. Your name will be separated from your data, and all data will be reported in aggregate form (e.g., averages). Your name or code will not be used in any report.

We're interested in your opinion about travel mug brands and online reviews use. Just try to respond sincerely your thoughts about each question that will be presented to you, even if you did not buy or use it.

### Condition 1 – Functional positioning and Attribute-based reviews

Please imagine you need a travel mug to maintain the temperature of your beverages when you are not home and that you are considering buying one.

Describe below what would you expect from this travel mug:

---

After some searching, you find the following site with a travel mug offer. Please, look carefully all the details about the travel mug and all the reviews offered in this image. You will be asked questions about them next.

## S'well Stainless Steel Travel Mug 16 oz



**Keeps your liquid temperature longer**

**Price: U\$30**

[ADD TO CART](#)

### FEATURES

- MADE OF FOOD-GRADE STAINLESS STEEL, durable to the core with no-stain interiors.
- A WIDE MOUTH AND THICK RIM MADE FOR EASY DRINKING. Ice fits effortlessly inside
- TRIPLE-WALLED, a technology that creates a condensation-free exterior, so your hands and bag stay dry.
- ERGONOMIC GRIP allows for even more on-the-go ease
- Keeps hot water hot for 12 hours and cold water cold for 24 hours.

### REVIEWS

#### Rick Thomas

The structure of this mug is better than any other I've seen. Construction is solid and much higher quality than the asking price suggests. Highly recommended!

#### David Ducker

This mug really maintain the liquids temperature for long. I was surprise for how much time it kept my coffee warm.

**Mary Smith**

My favorite part about this mug is that my backpack doesn't get wet anymore. The outside of the mug is always dry.

**James Daley**

Great travel mug. Well made, high quality! The material quality is excellent and the temperature maintenance is great. It holds my coffee temperature for more than 10 hours easily.

**Susan Walter**

In my experience, this mug is strong and robust, it also keeps liquids hot (or cold) for longer than I am used.

**Condition 2 – Functional positioning and Experience-based reviews**

Please imagine you need a travel mug to maintain the temperature of your beverages when you are not home and that you are considering buying one.

Describe below what would you expect from this travel mug:

---

After some searching, you find the following site with a travel mug offer. Please, look carefully all the details about the travel mug and all the reviews offered in this image. You will be asked questions about them next.

## S'well Stainless Steel Travel Mug 16 oz



**Keeps your liquid temperature longer**

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**ADD TO CART**

### FEATURES

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- A WIDE MOUTH AND THICK RIM MADE FOR EASY DRINKING. Ice fits effortlessly inside
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- ERGONOMIC GRIP allows for even more on-the-go ease
- Keeps hot water hot for 12 hours and cold water cold for 24 hours.

### REVIEWS

#### Rick Thomas

I adore this mug, its style feels so classic to me. I am feeling very great with myself for choosing this one.

#### David Ducker

I love this mug, it make me feel way more important to others. People often ask me were I bought it because they find it nice.

#### Mary Smith

Excellent product, I really like them! I recommend these very highly, and I am a hard person to buy for on certain things.

**James Daley**

My dad had this one wooden mug back when I was young. These mug made me remember that good old days. Such a cool style while still being classic.

**Susan Walter**

I feel so great using this travel mug, somehow they empower me. It is my choice when I feel like showing off.

**Condition 3 – Functional positioning and Customer Rating**

Please imagine you need a travel mug to maintain the temperature of your beverages when you are not home and that you are considering buying one.

Describe below what would you expect from this travel mug:

---

After some searching, you find the following site with a travel mug offer. Please, look carefully all the details about the travel mug and all the reviews offered in this image. You will be asked questions about them next.

**S'well Stainless Steel Travel Mug 16 oz**

**Keeps your liquid temperature longer**

**Price: U\$30**

**ADD TO CART**

## S'well Stainless Steel Travel Mug 16 oz



Keeps your liquid temperature longer

Price: U\$30

ADD TO CART

### FEATURES

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- A WIDE MOUTH AND THICK RIM MADE FOR EASY DRINKING. Ice fits effortlessly inside.
- TRIPLE-WALLED, a technology that creates a condensation-free exterior, so your hands and bag stay dry.
- ERGONOMIC GRIP allows for even more on-the-go ease.
- Keeps hot water hot for 12 hours and cold water cold for 24 hours.

### REVIEWS

Rick Thomas ★★★★★

David Ducker ★★★★★

Mary Smith ★★★★★

James Daley ★★★★★

Susan Walter ★★★★★

#### Condition 4 – Symbolic positioning and Attribute-based reviews

Please imagine you need a travel mug because you want to stop using plastic cups, preserving the environment this way, and that you are considering buying one.

Describe below what would you expect from this travel mug:

---

After some searching, you find the following site with a travel mug offer. Please, look carefully all the details about the travel mug and all the reviews offered in this image. You will be asked questions about them next.

#### S'well Stainless Steel Travel Mug 16 oz



- Every product that you use makes a statement about who you are. Stand out with this travel mug, whose style is superior than the others conventional's travel mugs.
- This travel mug It is not only a beautifully design bottle, product of a meticulous and original styling, but also is built-up with high-quality.
- It is also an environmental friendly alternative to consumers of the 50 billion plastic water bottles that end up in landfills each year.
- We believe that everybody deserves a cleaner environment. Let's make a difference.

## REVIEWS

**Rick Thomas**

The structure of this mug is better than any other I've seen. Construction is solid and much higher quality than the asking price suggests. Highly recommended!

**David Ducker**

These really maintain the liquids temperature for long. I was surprise for how much time it kept my coffee warm.

**Mary Smith**

My favorite part about these is that my backpack doesn't get wet anymore. The outside of the mug is always dry.

**James Daley**

Great travel mug. Well made, high quality! The material quality is excellent and the temperature maintenance is great. It holds my coffee temperature for more than 10 hours easily.

**Susan Walter**

In my experience, this mug is strong and robust, it also keeps liquids hot (or cold) longer than other mugs I had before.

---

### Condition 5 – Symbolic positioning and Experience-based reviews

Please imagine you need a travel mug because you want to stop using plastic cups, preserving the environment this way, and that you are considering buying one.

Describe below what would you expect from this travel mug:

---

After some searching, you find the following site with a travel mug offer. Please, look carefully all the details about the travel mug and all the reviews offered in this image. You will be asked questions about them next.



## S'well Stainless Steel Travel Mug 16 oz



**Everybody deserves a cleaner environment**

**Price: U\$30**

**ADD TO CART**

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- This travel mug It is not only a beautifully design bottle, product of a meticulous and original styling, but also is built-up with high-quality.
- It is also an environmental friendly alternative to consumers of the 50 billion plastic water bottles that end up in landfills each year.
- We believe that everybody deserves a cleaner environment. Let's make a difference.

## REVIEWS

### Rick Thomas

I adore this mug, its style feels so classic to me. I am feeling very great with myself for choosing this one.

### David Ducker

I love this mug, it make me feel way more important to others. People often ask me were I bought it because they find it nice.

### Mary Smith

Excellent product, I really like them! I recommend these very highly, and I am a hard person to buy for on certain things.

### James Daley

My dad had this one wooden mug back when I was young. This mug made me remember that good old days. Such a cool style while still being classic.

### Susan Walter

I feel so great using this travel mug, somehow they empower me. It is my choice when I feel like showing off.

## Condition 6 – Symbolic positioning and Customer ratings

Please imagine you need a travel mug because you want to stop using plastic cups, preserving the environment this way, and that you are considering buying one.

Describe below what would you expect from this travel mug:

---

After some searching, you find the following site with a travel mug offer. Please, look carefully all the details about the travel mug and all the reviews offered in this image. You will be asked questions about them next.

**S'well Stainless Steel Travel Mug 16 oz**



**Everybody deserves a cleaner environment**

**Price: U\$30**

[ADD TO CART](#)

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- This travel mug it is not only a beautifully design bottle, product of a meticulous and original styling, but also is built-up with high-quality.
- It is also an environmental friendly alternative to consumers of the 50 billion plastic water bottles that end up in landfills each year.
- We believe that everybody deserves a cleaner environment. Let's make a difference.

## REVIEWS

Rick Thomas 

David Ducker 

Mary Smith 

James Daley 

Susan Walter 

---

## Questions

**(DV – Purchase Intention) How likely would you be to buy this Travel Mug?**

Not Likely         Very Likely

**(DV – WTPP) Would you be willing to pay a premium price for this Travel Mug?**

I would not pay         I would pay

**(DV – WTP) How much would you be willing to pay for this Travel Mug in relation to its average value?**

Substantially Less         Substantially More

---

Next, concerning the online reviews that you saw, rate how much you agree or disagree with each affirmative below.

**Mediator - Diagnosticity**

The information provided in the online reviews was helpful for me to evaluate the product

Strongly disagree ○ ○ ○ ○ ○ ○ ○ Strongly agree

The information provided in the online reviews was helpful in familiarising me with the product

Strongly disagree ○ ○ ○ ○ ○ ○ ○ Strongly agree

The information provided in the online reviews was helpful for me to understand the characteristics of the product

Strongly disagree ○ ○ ○ ○ ○ ○ ○ Strongly agree

**(Manipulation check – review type) Now, relating to the content of the reviews, do you think that the reviews ...**

Described the features of the product ○ ○ ○ ○ ○ ○ ○ Described the style preferences of the reviewer

**(Manipulation check – product positioning) Please, rate the next questions based on your perception about the Travel Mug:**

People who use this Travel Mug ○ ○ ○ ○ ○ ○ ○ People who use this Travel Mug are looking for functionality looking for a way to express their personality

**(Manipulation check – review type) What type of review did you see?**

- Ratings (Stars)
- Text Comments

**Demographics**

Gender

- Male
- Female

Age : \_\_\_\_\_

Ethnicity

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other

Income (year)

- Less than \$10,000
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$49,999
- \$50,000 - \$59,999
- \$60,000 - \$69,999
- \$70,000 - \$79,999
- \$80,000 - \$89,999
- \$90,000 - \$99,999
- \$100,000 - \$149,999
- More than \$150,000

Employment status

- Employed full time
- Employed part time
- Unemployed looking for work
- Unemployed not looking for work
- Retired
- Student
- Disabled

## **Appendix B**

### SCRIPT – STUDY 2

Welcome to the research study!

The following information is provided to you as part of the university's program for ensuring that academic research is conducted in a safe and ethical manner. Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study: This survey is related to your Brand Evaluations.

What you will be asked to do in the study: You will be answering questions pertaining to your behavior as a brand consumer.

Time required: The study will last about 5 to 8 minutes.

Risks: We do not anticipate any risks associated with your participation.

Confidentiality: Your identity will be kept confidential as required by law. Your name will be separated from your data, and all data will be reported in aggregate form (e.g., averages). Your name or code will not be used in any report.

We're interested in your opinion about sunglasses brands and online reviews use. Just try to respond sincerely your thoughts about each question that will be presented to you, even if you did not buy or use it.

### Condition 1 – Functional positioning and Attribute-based reviews

Please imagine you need a pair of sunglasses to protect your eyesight and that you are considering buying one.

Describe below what would you expect from this pair of sunglasses:

---

After some searching, you find the following site with a sunglasses offer. Please, look carefully all the details about the pair of sunglasses and all the reviews offered in this image. You will be asked questions about them next.

#### 8Bees Unisex Aviator Sunglasses



#### UV400 Eye Protection



Price: U\$22

ADD TO CART

#### FEATURES

- UV 400 PROTECTION - 400UV rated, meaning it can block 99%-100% of both UVA and UVB radiation.
- POLARIZED LENS -specialized multi layer lens designed to filter and block over 99.96% of glare, providing maximum comfort and improved visibility.
- HIGH QUALITY FRAME - made with metallic alloy that is ultra light weight yet strong and durable.
- ANTIOXIDANT PLATING FRAME - Antioxidant plating, anti-allergy & skin-friendly tested, harmless to skin.

## REVIEWS

### Rick Thomas

The UV protection is better than any glasses I've seen. Everything is still clear and not too dark. Construction is solid and much higher quality than the asking price suggests. Highly recommended!

### David Ducker

These are just as sturdy and functional as any other great brand. I use these in extreme sun, and they work great.

### Mary Smith

My favorite part about these is that it blocks UV light very well. You can wear them inside (if you so choose) with ease because of the light tint.

### James Daley

Great sunglasses. Well made, high quality! They provide great coverage with the polarization. You barely notice that you have them on, lightweight but sturdy.

### Susan Walter

The polarization/tinting of these glasses really makes the spring colors come alive! They are strong and durable enough that the ear pieces don't get bent out of shape.

## Condition 2 – Functional positioning and Experience-based reviews

Please imagine you need a pair of sunglasses to protect your eyesight and that you are considering buying one.

Describe below what would you expect from this pair of sunglasses:

---

After some searching, you find the following site with a sunglasses offer. Please, look carefully all the details about the pair of sunglasses and all the reviews offered in this image. You will be asked questions about them next.



## 8Bees Unisex Aviator Sunglasses



### UV400 Eye Protection



Price: U\$22

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### FEATURES

- UV 400 PROTECTION - 400UV rated, meaning it can block 99%-100% of both UVA and UVB radiation.
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- HIGH QUALITY FRAME - made with metallic alloy that is ultra light weight yet strong and durable.
- ANTIOXIDANT PLATING FRAME - Antioxidant plating, anti-allergy & skin-friendly tested, harmless to skin.

### REVIEWS

#### Rick Thomas

A classic style of sunglasses that never gets old, I love them. I bought the medium size and they fit perfectly.

#### David Ducker

I love these glasses, they make me feel way more beautiful. I will be styling these all summer long.

#### Mary Smith

Excellent product I love them! Its style feels so classic to me. I recommend these very highly, and I am a hard person to buy for on certain things.

#### James Daley

My dad had one of these aviatorsunglasses back when I was young. These sunglasses made me feel just like my father back in the day, with a cool style while still wearing a classic.

#### Susan Walter

I feel so great using these sunglasses, somehow they empower me. It is my choice when I feel like showing off.

### Condition 3 – Functional positioning and Customer Ratings

Please imagine you need a pair of sunglasses to protect your eyesight and that you are considering buying one.

Describe below what would you expect from this pair of sunglasses:

---

After some searching, you find the following site with a sunglasses offer. Please, look carefully all the details about the pair of sunglasses and all the reviews offered in this image. You will be asked questions about them next.

#### 8Bees Unisex Aviator Sunglasses



**UV400 Eye Protection**



**Price: U\$22**

ADD TO CART

#### FEATURES

- **UV 400 PROTECTION** - 400UV rated, meaning it can block 99%-100% of both UVA and UVB radiation.
- **POLARIZED LENS** -specialized multi layer lens designed to filter and block over 99.96% of glare, providing maximum comfort and improved visibility.
- **HIGH QUALITY FRAME** - made with metallic alloy that is ultra light weight yet strong and durable.
- **ANTIOXIDANT PLATING FRAME** - Antioxidant plating, anti-allergy & skin-friendly tested, harmless to skin.

## REVIEWS

Rick Thomas	★★★★★
David Ducker	★★★★☆
Mary Smith	★★★★☆
James Daley	★★★★★
Susan Walter	★★★★★

### Condition 4 – Symbolic positioning and Attribute-based reviews

Please imagine you need a pair of sunglasses to use improve your appearance and that you are considering buying one.

Describe below what would you expect from this pair of sunglasses:

---

After some searching, you find the following site with a sunglasses offer. Please, look carefully all the details about the pair of sunglasses and all the reviews offered in this image. You will be asked questions about them next.

### 8Bees Unisex Aviator Sunglasses



- The Aviator is currently one of the most iconic sunglasses models in the world.
- Aviator Classic sunglasses were originally designed for U.S. aviators in 1937. Aviator Classic sunglasses are a timeless model that combines great aviator styling with exceptional quality.

- These sunglasses are the perfect choice for outdoor sports and activities such as driving, fishing, skiing, travelling, hiking, boating, and is suitable as high fashion accessory and daily wear all year round.
- The product of meticulous, original styling that translates the best of the latest fashion trends into an ever-contemporary look for millions of wearers around the world.

## REVIEWS

### Rick Thomas

The UV protection is better than any glasses I've seen. Everything is still clear and not too dark. Construction is solid and much higher quality than the asking price suggests. Highly recommended!

### David Ducker

These are just as sturdy and functional as any other great brand. I use these in extreme sun, and they work great.

### Mary Smith

My favorite part about these is that it blocks UV light very well. You can wear them inside (if you so choose) with ease because of the light tint.

### James Daley

Great sunglasses. Well made, high quality! They provide great coverage with the polarization. You barely notice that you have them on, lightweight but sturdy.

### Susan Walter

The polarization/tinting of these glasses really makes the spring colors come alive! They are strong and durable enough that the ear pieces don't get bent out of shape.

### Condition 5 – Symbolic positioning and Experience-based reviews

Please imagine you need a pair of sunglasses to use improve your appearance and that you are considering buying one.

Describe below what would you expect from this pair of sunglasses:

---

After some searching, you find the following site with a sunglasses offer. Please, look carefully all the details about the pair of sunglasses and all the reviews offered in this image. You will be asked questions about them next.

## 8Bees Unisex Aviator Sunglasses



Price: U\$22

ADD TO CART

- The Aviator is currently one of the most iconic sunglasses models in the world.
- Aviator Classic sunglasses were originally designed for U.S. aviators in 1937. Aviator Classic sunglasses are a timeless model that combines great aviator styling with exceptional quality.
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- The product of meticulous, original styling that translates the best of the latest fashion trends into an ever-contemporary look for millions of wearers around the world.

## REVIEWS

### Rick Thomas

A classic style of sunglasses that never gets old, I love them. I bought the medium size and they fit perfectly.

### David Ducker

I love these glasses, they make me feel way more beautiful. I will be styling these all summer long.

### Mary Smith

Excellent product I love them! Its style feels so classic to me. I recommend these very highly, and I am a hard person to buy for on certain things.

### James Daley

My dad had one of these aviator sunglasses back when I was young. These sunglasses made me feel just like my father back in the day, with a cool style while still wearing a classic.

### Susan Walter

I feel so great using these sunglasses, somehow they empower me. It is my choice when I feel like showing off.

### Condition 6 – Symbolic positioning and Customer ratings

Please imagine you need a pair of sunglasses to use improve your appearance and that you are considering buying one.

Describe below what would you expect from this pair of sunglasses:

After some searching, you find the following site with a sunglasses offer. Please, look carefully all the details about the pair of sunglasses and all the reviews offered in this image. You will be asked questions about them next.

## 8Bees Unisex Aviator Sunglasses



**Most Iconic Sunglass Style in the World**

**Price: U\$22**

**ADD TO CART**

- The Aviator is currently one of the most iconic sunglasses models in the world.
- Aviator Classic sunglasses were originally designed for U.S. aviators in 1937. Aviator Classic sunglasses are a timeless model that combines great aviator styling with exceptional quality.
- These sunglasses are the perfect choice for outdoor sports and activities such as driving, fishing, skiing, travelling, hiking, boating, and is suitable as high fashion accessory and dailywear all year round.
- The product of meticulous, original styling that translates the best of the latest fashion trends into an ever-contemporary look for millions of wearers around the world.

## REVIEWS

Rick Thomas ★★★★★

David Ducker ★★★★★

Mary Smith ★★★★★

James Daley ★★★★★

Susan Walter ★★★★★

### Questions

**(DV – Purchase Intention) How likely would you be to buy these Sunglasses?**

Not Likely ○ ○ ○ ○ ○ ○ ○ ○ Very Likely

**(DV – WTPP) Would you be willing to pay a premium price for these Sunglasses?**

I would not pay ○ ○ ○ ○ ○ ○ ○ ○ I would pay

**(DV – WTP) How much would you be willing to pay for these Sunglasses in relation to its average value?**

Substantially Less ○ ○ ○ ○ ○ ○ ○ ○ Substantially More

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Next, concerning the online reviews that you saw, rate how much you agree or disagree with each affirmative below.

**Mediator - Diagnosticity**

The information provided in the online reviews was helpful for me to evaluate the product

Strongly disagree        Strongly agree

The information provided in the online reviews was helpful in familiarising me with the product

Strongly disagree        Strongly agree

The information provided in the online reviews was helpful for me to understand the characteristics of the product

Strongly disagree        Strongly agree

**(Manipulation check – review type) Now, relating to the content of the reviews, do you think that the reviews ...**

Described the features of the product        Described the style preferences of the reviewer

**(Manipulation check – product positioning) Please, rate the next questions based on your perception about the Sunglasses:**

People who use these Sunglasses        People who use these Sunglasses are looking for functionality        People who use these Sunglasses are looking for a way to express their personality

**(Manipulation check – review type) What type of review did you see?**

- Ratings (Stars)**
- Text Comments**

**Demographics**

Gender

- Male
- Female

Age : \_\_\_\_\_



Ethnicity

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other

Income (year)

- Less than \$10,000
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$49,999
- \$50,000 - \$59,999
- \$60,000 - \$69,999
- \$70,000 - \$79,999
- \$80,000 - \$89,999
- \$90,000 - \$99,999
- \$100,000 - \$149,999
- More than \$150,000

Employment status

- Employed full time
- Employed part time
- Unemployed looking for work
- Unemployed not looking for work
- Retired
- Student
- Disabled