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**AVANÇOS NO DESENVOLVIMENTO DA ESCALA DE JULGAMENTO E
SIGNIFICADO DO PRODUTO PARA O BRASIL**

**ADVANCES ON THE MEASURE OF JUDGMENT AND MEANING OF THE
PRODUCT FOR BRAZIL**

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AVANÇOS NO DESENVOLVIMENTO DA ESCALA DE JULGAMENTO E SIGNIFICADO DO PRODUTO PARA O BRASIL

RESUMO

O objetivo deste trabalho foi o desenvolvimento de uma escala de julgamento e significado do produto, válida para os consumidores brasileiros. Ela consistiu em um estudo de dois estágios, incluindo tanto a abordagem qualitativa quanto a quantitativa. Na etapa qualitativa, a condução de grupos focais com 16 participantes brasileiros permitiu a geração de 40 itens para uma nova medida de julgamento e significado do produto. Após a validação semântica e a análise de juízes, os itens encontrados compuseram um questionário, que foi aplicado face-a-face, a 684 participantes. Os resultados sugerem um desempenho muito melhor da medida quando comparado ao da versão anterior da escala, indicando o seu potencial de uso não só no Brasil, mas também em outros países. A escala final ficou com 20 itens que foram distribuídos em quatro fatores, como apontados pela revisão da literatura. Dois fatores estão relacionados aos tipos de julgamento (passo a passo e afetivo), enquanto os outros dois estão relacionados aos tipos de significados (utilitário e simbólico). Resultados adicionais, como esperado, mostraram que o significado utilitário do produto está positivamente correlacionado com um o julgamento passo-a-passo, enquanto o significado simbólico está positivamente relacionado com o julgamento afetivo. Implicações gerenciais para marketing, e futuras pesquisas são propostas.

Palavras-chave: Julgamento do produto; Significado do produto; Comportamento do consumidor; Modelo das duas rotas.

ADVANCES ON THE MEASURE OF JUDGMENT AND MEANING OF THE PRODUCT FOR BRAZIL

ABSTRACT

The purpose of this paper was the development of a valid measure of judgment and meaning of products for Brazilian consumers. It consisted of a two-stage study including both qualitative and quantitative approaches. In the qualitative stage, focus groups with 16 Brazilian participants allowed the generation of 40 items for a new scale of judgment and meaning of a product. After semantic validation and expert analysis, the found items composed a questionnaire administered to 684 participants in a paper-and-pencil survey. Results suggest that the items performed considerably better when compared to the previous version, indicating their potential of usage not only in Brazil, but also in other countries. The final measure consisted of 20 items that were distributed into four factors, as pointed out by the literature review. Two factors are related to judgment types (piecemeal and affective), while the other two are related to meaning types (utilitarian and symbolic). Additional results, as expected, showed that product's utilitarian meaning is positively correlated to a piecemeal judgment, whereas symbolic meaning is positively related to affective judgment. Managerial implications for marketing, and future research directions are proposed.

Keywords: Product judgment; Product meaning; Consumer behavior; Two-routes model.

1 INTRODUCTION

Understanding consumer judgments and product meaning is a quite subjective and challenging task. Based on the instrument of meaning and judgment of the products proposed by Allen (1997, 2000), Nepomuceno and Torres (2005) demonstrated that the applicability of the original measurement has significant limitations in Brazil. Some terms presented cultural misunderstandings among Brazilians, and only two out of the four original dimensions were found, indicating that the description of judgment and meaning may have confounded respondents. Considering these deficiencies, the objective of this study is to develop a more trustworthy measure of judgment and meaning of the product. Another important objective of this research is to test the distinction between judgment and meaning in Brazil, in order to assure a difference concerning the two types of judgments and the two types of meaning involved in Allen's measure.

The literature has systematically shown that individuals evaluate objects and attribute meanings not only in a rational manner. Violations of rationality in decision-making are clear and influenced by mood, context and framing effect (e.g., Allen, 2002; Kahneman & Tversky, 1984; Tversky & Kahneman, 1974, 1981). According to Pham (2009), for example, consumers are mainly symbolic and their buying decisions are motivated by sensations and emotions. Biological factors (such as hunger, thirst, or sexual desire) also play important roles and influence one's decision-making (Loewenstein, 1996). Lozano, Crites and Aikman (1999) described that hungry individuals had stronger attitudes towards food, especially for high-fat food, influencing daily eating patterns and consumer decisions regarding food purchases. However, not only visceral factor plays a role on violations of rationality. The price endings, for instance, can influence a product-price evaluation. Schindler and Kirby (1997) found that price perception of consumers is influenced by the leftmost digit of the price tag, due to an underestimation of prices with nine at the end. Similarly, there is evidence that consumers perceive a higher price difference between \$29.99 and \$39.99 than between \$30.00 and \$40.00, supporting the idea of a left-digit effect (Gaston-Breton, 2011; Luppe & de Angelo, 2010; Manning & Sprott, 2009). This effect is just one of many identified in the literature that reinforces the violations of rationality.

Frequently, individuals make decisions that are based on impulse and on emotions (Dijksterhuis, et al. 2009). To deal with the issue of rationality on decision making in practical terms, marketing scholars have proposed dual process models that can generally describe one's

decision-making as predominantly rational or emotional (Allen, 2001; Epstein, 1994; Mittal, 1988; Stanovich, 1999). Epstein (1994) suggested that two systems coexist when making decisions. One is holistic, affective and association driven, while the other is analytic, logical and reason-oriented. Besides summarizing dual process models, Stanovich (1999) described two reasoning systems. The first is automatic, largely unconscious and with less demand on the cognitive capacity, while the second encompasses analytic intelligence. According to Allen (2000), based on the proposal of Mittal (1988) of both the affective choice mode and the information processing mode, the meaning attributed to a product is built on the type of judgment used (either rational or emotional). A product's utilitarian meaning would be formed after it has been judged in rational terms. Conversely, the symbolic meaning attributed to a product would be based on its affective evaluation.

As reviewed above, the way consumers process their judgment is considerably relevant to understand consumer behavior. Equally important are the decision-making styles (Scott & Bruce, 1995; Thunholm, 2004). More specifically, the decision-making style has been defined as the response pattern habitually manifested by individuals before their effective choice. It is not a trait, but a habit-based propensity to respond to specific decision contexts. Different styles have been related to measurements of leadership, innovation, self-esteem, and self-control (Scott & Bruce, 1995; Thunholm, 2004, 2008). A similar logic is applicable to judgment and meaning of the product. Whilst individuals can use both the emotional and rational types of judgment, they will use one of them more frequently. However, it is certain that the nature of the choice generally guides the choice between a hedonic utilitarian product or service (Dhar & Wertenbroch, 2000).

The Two-Routes Model presented by Allen (1997), for instance, investigates the predominant consumer style to evaluate and attribute meaning to products. Several authors have pointed the importance of adapting and testing theories cross-culturally (Berry, 1969; Denton, 2008; Gelfand, Raver & Ehrhart, 2002). Thus, this model was extensively studied in Brazilian populations (e.g., Mendes, Nascimento, Coutinho, Souza Filho & Freires, 2011; Torres, Allen, 2009; Torres, Pérez-Nebra, 2007). However, it is important to increase the validity of the model with a more reliable measurement that could be used not only in Portuguese speaking populations but could also assess its assumptions in a different culture.

Therefore, the purpose of this paper is to present the validity of a measurement of judgment and meaning of the product for Brazilians, based on the original scale proposed by Allen (1997, 2000) in the Two-Routes Model. It meets the need of improvement of Allen's Scale of Judgment and Meaning of the Product in Brazil, as highlighted by Nepomuceno and Torres

(2005), and suggests two research agendas. The first one, presented by Nepomuceno, Porto and Rodrigues (2006), arguments that Allen's instrument is overly generalist and it is not based on the evaluations of specific products' categories. Nepomuceno, Porto and Rodrigues' (2006) study, for instance, demonstrated that the theoretical model was not confirmed, even when the measurement was designed to a mobile phone, and reinforced the need to adapt the model for the Brazilian reality.

The second line of research is also motivated to test the theoretical model in Brazil, but keeping the generalist aspect of the scale. In other words, this line of research is focused on the development of a measure that evaluates consumer judgment's style in most situations, observing literature guidelines for developing scales (Gerbing & Anderson, 1988). In order to clarify and better explore the constructs and concepts related to the study, it is presented, in sequence, a brief review about attribution of meaning and types of judgment.

2 ATTRIBUTION OF MEANING

According to Levy (1959) people do not buy products just because of their function and utility. They also buy products due to their meaning. The idea that the meaning given to objects influences our behavior is well known in Psychology, and can be exemplified by the advertising industry in Brazil. The well-known Brazilian case of *Havaianas* slippers showed that the product image changed after its market repositioning, modifying the meaning attributed to the product as well (Lalli & Porto, 2000). Traditionally, *Havaianas* were destined to low-income customers and associated to those who could not afford a product of superior quality. However, after an intense advertising campaign with celebrities, top models and wealthy individuals, the product changed its image and is now associated to comfort, slighness and affordable quality. Moreover, its success of sales abroad created the feeling that it is a fashionable product. This example reinforces the proposal that the meaning attributed to products can change constantly, first by using advertising and fashion system (as in the *Havaianas*' example) and later by rituals such as possession, exchange and grooming (McCraken, 1986). The *Havaianas*' example also shows that the meaning people attribute to products can influence their buying behavior, affecting the product's sales.

Given the importance of product meaning, authors have identified dimensions that form psychological meaning. According to Fournier (1991) the meaning can be formed on three

dualistic dimensions. It may have shared or personalized sources; it may have high versus low emotional response; and it can be either objective or symbolic.

The first dimension of meaning is the degree to which meaning is a shared or individualized phenomenon. According to Richins (1994), the meaning can have two natures: public and private. The public nature has observers as the source of meaning, while the private nature is subjective, with a singular meaning for each person that is not shared with anyone else. Usually, the private meaning can influence the public meaning and vice-versa. McCracken (1986) pointed the importance of culture and its effect over the attribution of meaning. According to him, culture (an example of shared phenomenon) influences the meaning attributed to the world and its objects, because it determines how phenomena are viewed. In other words, culture is the lens through which individuals view objects and hence it affects the meaning people attribute to these objects.

The second dimension of meaning is the level of emotional response. Richins (1994) suggests that the process of the attribution of meaning results from the interpretation of external stimulators and can be defined as a subjective perception or affective reaction of a person concerning an object. Thus, when defining meaning, Richins gave a prominent role to emotion. As an example, when interviewing North Americans about their favorite objects, Wellendorf and Arnould (1988) found that the objects' characteristics are less important than personal memories they bring up. These personal memories were reminders of a friend or family member, a vacation trip, or a specific event. Though emotion had not been measured directly in the research, it makes intuitive sense to imagine that these memories are loaded with emotion. In sum, it appears that the emotions associated to objects also influence the meanings attributed to them.

The third dimension of meaning is its dualistic view of objective meaning versus symbolic meaning. The meaning may be formed primarily through objective, tangible criteria and characteristics of the object itself. On the other hand, it may be subjective, based on experience, and dependent on symbolic associations. According to Fournier (1991) and Allen (2001), though meaning is formed based on both components, it is expected that one of the two will be particularly salient. Individuals can distinguish between affective (wants) and cognitive or reasoned preferences (shoulds) (Bazerman, Tenbrunsel & Wade-Benzoni, 1998; Shiv & Fedorikhin, 1999). Not surprisingly, authors have associated "wants" with hedonic products and "shoulds" with utilitarian products (Dhar & Wertenbroch, 2000). The distinction between utilitarian and hedonic goods is not based only on cognition, but also on behavior. There is evidence that individuals behave differently when dealing with utilitarian and hedonic goods. Dhar and Wertenbroch (2000) showed that hedonic products are preferred over the utilitarian

ones in forfeit decisions. Moreover, they found that owners of more hedonic cars value their vehicles, in terms of market price, more than the owners of more utilitarian cars in forfeit settings.

Following Allen's (2000) suggestion, meaning will be understood in the present study as a subjective perception or affective reaction of a person facing an object. This reaction refers to the instrumental and symbolic significances that a person associates with the attributes of a particular product (Helfenstein, 2005). This concept is similar to the classical definition of attitudes proposed by Fishbein (1966). However, the difference between meaning and attitudes is that the former is a more abstract concept when compared to the latter. Moreover, attitudes are related to behavioral intention and its definition includes the process of evaluation of an object, whereas meaning is seen only as the result of this evaluation. Thus, meaning can be built even without the direct contact of an individual with the product. A person can develop meaning regarding a product just by hearing something about it or, at least, by understanding the image of a particular product.

The object's meaning is based on the type of judgment involved (Allen, 1997, 2000). The way in which an object is evaluated may help to understand how its meaning is formed. To better understand Allen's proposal, we will now present the role of the judgment on the meaning formation.

3 TYPES OF JUDGMENT

According to Allen (2001) two types of judgment precede public and private meanings. One is rational, a piecemeal judgment, made on an attribute-by-attribute basis. The other is emotional and called affective judgment. As Mittal (1988) points out, the affective way of judgment is extremely relevant for the formation of the product preference. This type of judgment has three main characteristics: it is holistic; it is influenced by the individual self; and it is difficult to explain. The holistic judgment evaluates the product as a whole and does not consider its fragments. Because of the influence of the self, affective judgment considers features from the own individual, that are beyond the attributes of the object, being focused in the person and not in the object. Thus, the difficulty of explaining the affective judgment is due to its subjective profile. In summary, the affective judgment is not only linked to the object's features, but to the individual characteristics.

The piecemeal judgment, as described by Allen (2001) and introduced by Mittal (1988), is based on the evaluation of tangible attributes and usage functions of a product. This type of judgment explains consumers' choices that happen mainly through cognitive processes. Similarly to the expectancy theory (Vroom, 1964), in a piecemeal judgment, the individual acquires information about the product and evaluates this information using rational criteria, judging them and applying heuristics.

4 HYPOTHESES

Two hypotheses were developed based on the literature review presented above. First, it is expected that the adapted measurement will be more appropriate for evaluating the constructs than the instrument used by Nepomuceno and Torres (2005). In other words, the alphas and fit indices will be superior to the ones reported in that study. Thus, our first hypothesis is such that:

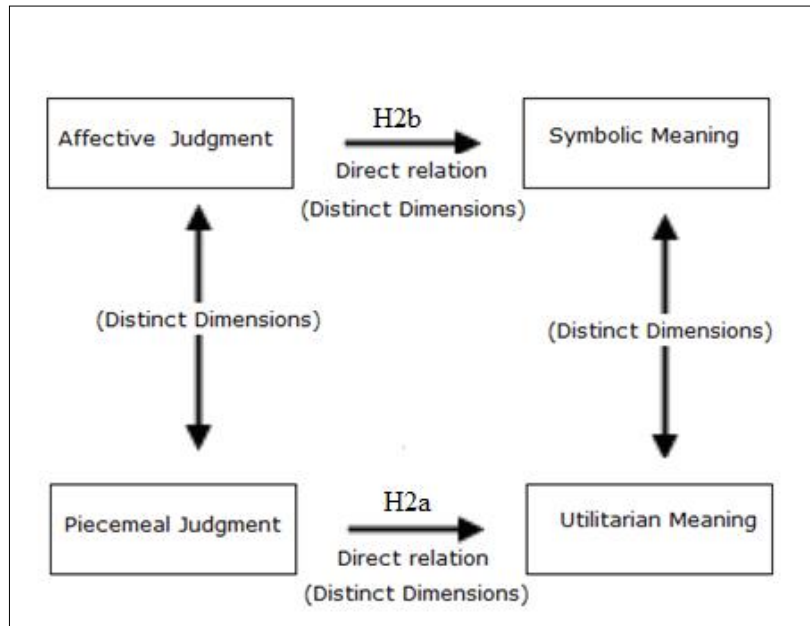
***H1:** The proposed measure of judgment and meaning of the product is more valid for Brazilian consumers than the instrument previously presented by Nepomuceno and Torres (2005)*

It is also expected that the relation between product judgment and meaning will confirm previous studies (Allen, 2001). Therefore, our second hypothesis, which was divided into two statements, is:

***H2a:** The piecemeal judgment, as measured by the present scale, will positively predict the utilitarian meaning; and*

***H2b:** The affective judgment, also assessed here, will positively predict the symbolic meaning.*

Figure 1 illustrates the model proposed to test H2. Furthermore, we want to test if the new measure is able to identify the four dimensions proposed by Allen (2000, 2001). This is important because Nepomuceno and Torres (2005) found two factors in a Brazilian population instead of four, requiring the development of a measure which is coherent with the theoretical framework originally proposed.

Figure 1. Design model for testing the second hypothesis.

5 METHOD

To compose the measure, the study was divided in two stages. The first stage, qualitative, focused on reviewing and complementing the 19 items of the product judgment and meaning scale translated to Brazil by Nepomuceno and Torres (2005). The second stage, quantitative, concentrated efforts on testing the proposal found in the former stage.

Four focus groups were conducted with four participants each, amounting 16 individuals whose age varied from 18 to 45 years old. Six of them were male and their educational level varied from middle school to graduate education. The principle of similar profile characteristics was used to compose each group, and maintain the homogeneity intra-groups. All focus groups followed the same method. Firstly, in semi-structured interviews, they were questioned about the way they make their purchases, how they judge products and how they attribute meaning to them. Proceeding, they were asked to evaluate their understanding concerning 24 assertions built based on the literature and on the 19 items previously presented by Nepomuceno and Torres (2005). The collected data during the group activity were submitted to a classical content analysis following procedures indicated by Bauer (2002). The results of this qualitative stage generated a new proposal of measurement of judgment and meaning of the product for Brazil

with 40 items that were next submitted to semantic validation and expert analysis (the items structure is showed on Appendix A).

In the second phase of the study, in order to test the proposed measurement, a paper-and-pencil survey was administered to 684 undergraduate students from public and private higher education institutions located in Brasília, Brazil. The students were recruited in their classrooms by trained interviewers after the professor's approval. Respondents were instructed to evaluate how they choose educational products in general. After data screening procedures such as the exclusion of missing values and the treatment of outliers, we reached a valid sample of 609 respondents. For this sample, the average age was 21.56 (SD = 5.45) and 54.2% were female. In the self-administered questionnaire were included the 40 items presented on Appendix A in a Likert-type scale of seven points varying from 1 = Completely Disagree to 7 = Completely Agree. This scale range was chosen because of the evidence that scales with more points may allow greater discrimination between items (Pasquali, 1999). The scale was followed by some social economic status questions such as gender, age and family income.

6 RESULTS

To test the scale validity we analyzed data using exploratory and confirmatory factor analysis. For this purpose, the sample was randomly divided into two groups. The first was composed of 305 participants whose answers were analyzed with a principal component analysis. The second group had 304 participants whose answers were analyzed with an exploratory factor analysis with oblimin rotation. To test the hypotheses a structural equation model was made with all the 609 participants. This strategy allowed the instrument to be as short as possible and tested its validity for measuring the proposed model.

For exploratory factor analysis we conducted the initial solution using principal component analysis. Four factors were found when considering eigenvalues superior to 2. The items with factor loading lower then .35 were discarded for the next analysis. This criterion resulted on the exclusion of five items. Following, for exploratory factor analysis, the factors were extracted using maximum likelihood method and oblimin rotation. The scree plot provided support for a four-factor solution (Cattell, 1966). The items with factor loading below .45 were disregarded, following suggestions of Churchill (1979) and Lee and Hooley (2005) for marketing measures, resulting on the exclusion of 12 items for the next analysis. These items presented problems of wording, leading to interpretation and comprehension problems.

Finally, the remaining items were submitted to a confirmatory factor analysis with the application of structural equation modeling (SEM) in which Piecemeal Judgment was considered as a predictor of Utilitarian Meaning and Affective Judgment was considered as a predictor of Symbolic Meaning. SEM is a noteworthy tool because it does not only evaluate the relation between independent and dependent variables, but also executes confirmatory factor analysis of the involved constructs (Lattin, Carroll & Green, 2003). We analyzed a sample of 601 participants through SEM. The responses from eight participants were excluded because of the identification either of outliers or unanswered variables. It is also important to mention that because of normality absence, SEM analyses followed the elliptical theory's procedures as proposed by Bentler (2006).

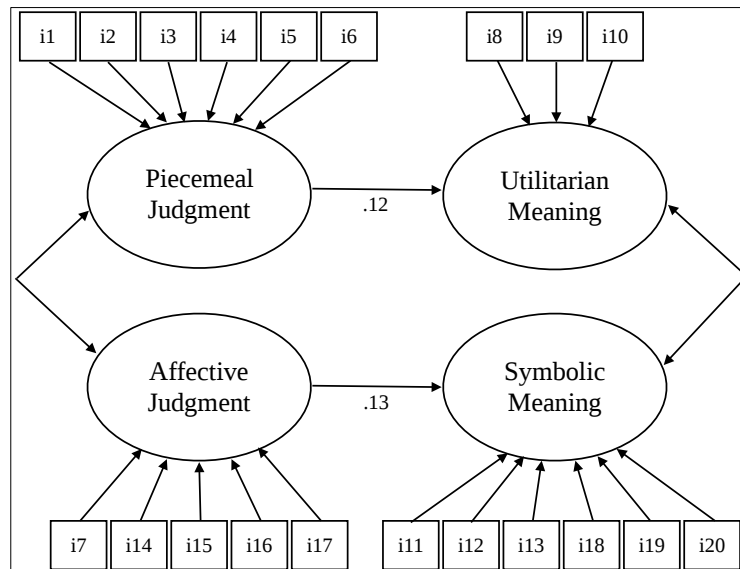
Initial analyses suggested the exclusion of three specific items due to the following reasons: their exclusion improved the model fit; they had lower factor loading (.39, .44 and .43 respectively) on the factor they were associated when the whole sample was analyzed; and because their exclusion did not generate a reduction in the Cronbach's alphas. Hence, another SEM analysis was executed with the remaining 20 items. Table 1 summarizes its results, presenting the Cronbach's alphas and goodness-of-fit indices (Please refer to Appendix B to see these 20 items either in English or Portuguese). The reader should be advised that these items were produced in Portuguese, and were freely translated into English by the authors, for a better understanding of the article.

The alphas obtained are acceptable (Nunnally, 1978; Tabachnick & Fidell, 2000), with higher indices than those found by Nepomuceno and Torres (2005), and vary between .74 and .81. The goodness-of-fit indices were above the cut-off point, showing the model fits the data satisfactorily. The CFI, IFI and GFI were above .90, as suggested by Bentler (1992), the RMSEA was below .05 (Browne & Cudeck, 1989; Kline, 2011), and the χ^2/df was lower than 5 (Taylor & Todd, 1995). Given the sound results, H1 was supported.

Table 1 shows that Piecemeal Judgment was considered as a significant predictor of Utilitarian Meaning (0.12, $p < .05$) and that Affective Judgment has predicted Symbolic Meaning significantly (0.13, $p < .05$). Both relations confirmed H2a and H2b, being the first study using a Brazilian population that was able to confirm this component of Allen's model. Figure 2 summarizes the final full model tested in this study.

Table 1. *Confirmatory factor analysis results*

ITEM	FACTORS			
	SYMBOLIC MEANING	PIECEMEAL JUDGMENT	AFFECTIVE JUDGMENT	UTILITARIAN MEANING
1		.61		
2		.66		
3		.60		
6		.48		
7		.73		
8		.67		
9			.50	
11				.59
12				.92
13				.72
18	.63			
19	.72			
20	.77			
21			.64	
22			.67	
23			.64	
24			.55	
28	.61			
29	.55			
33	.55			
Cronbach's Alpha	.81	.81	.74	.78
Path Analysis* - Standardized β Values				
Piecemeal Judgment → Utilitarian Meaning		.12*		
Affective Judgment → Symbolic Meaning		.13*		
*= Significant at p < .05. Model Goodness-of-fit Indices: $\chi^2 = 424.04$ (df = 167, N = 601); $\chi^2/\text{df} = 2.54$; GFI = .92; CFI = .94; IFI = .94; RMSEA = .05				

Figure 2. Final full model tested using SEM.

We tested the convergent and discriminant validity of the measurement. Discriminant validity is obtained when a dimension does not correlate highly with another that it should differ (Campbell, 1960; Pasquali, 2007). Similarly, convergent validity is obtained when a dimension is highly correlated to another that it should be similar. It is known that Multitrait Multimethod (MTMM) is the preferable method for testing for convergent and discriminant validity (Campbell & Fiske, 1959; Eid et al., 2008; Peter, 1979). However, we were unable to use different methods for assessing the participants' responses. Thus, we used a less rigorous approach proposed by Fornell and Larcker (1981) and later explored by Grewal, Cote and Baumgartner (2004). According to these authors, convergent validity is established if the average variance extracted for each factor accounts for .50 or more of the total variance. Table 2 shows that the average variance extracted for each factor is: .51 for Piecemeal judgment; .49 for Affective judgment; .69 for Utilitarian Meaning; and .51 for Symbolic Meaning. Gerbing and Anderson (1988) also described that convergent validity is demonstrated by statistically significant path coefficients. In this study, the paths between judgment and meaning were significant at $p < .05$. Finally, discriminant validity is obtained if the average variance extracted is larger than the squared correlation coefficients between factors (Fornell & Larcker, 1981). Again, Table 2 shows that this criterion was met across all pairs of factors.

Table 2. *Test of convergent and discriminant validity of the measure of judgment and meaning proposed.*

CONSTRUCT		JUDGMENT		MEANING	
		PIECEMEAL	AFFECTIVE	UTILITARIAN	SYMBOLIC
Judgment	Piecemeal	.51			
	Affective	.40	.49		
Meaning	Utilitarian	.33	.30	.69	
	Symbolic	.31	.31	.30	.51

Note. The diagonal entries show Fornell and Larcker's (1981) indexes of the average variance extracted by the construct. Entries below the diagonal are the squared correlation coefficients.

The measure was submitted to a second and more rigorous test of discriminant validity. This test compares an unconstrained model with free correlation between the factors with a model that constrains correlations of one factor (Bagozzi, Yi & Philips, 1991). If the two models do not differ significantly on a chi-square difference test, the measurement fails to provide discriminant validity. The model provided in Figure 2 was the starting point for the testing. A total of two comparisons were made. The first distinguishes the Affective Judgment from the Symbolic Meaning and the Piecemeal Judgment from the Utilitarian Meaning. Special attention should be brought to this comparison, because previous research conducted by Nepomuceno and Torres (2005) failed to show these distinctions. The second comparison attempted to distinguish the Affective Judgment from the Piecemeal Judgment and the Symbolic Meaning from the Utilitarian Meaning. Table 3 shows the results of these comparisons.

Table 3. *Results of the discriminant validity analysis*

	CHI-SQUARE	DF		CHI-SQUARE	DF
Unconstrained Model	570.22	167	Unconstrained Model	570.22	167
Constrained Model*	1231.18	169	Constrained Model**	1367.15	169
Difference	660.96	2	Difference	796.93	2
*Correlation between Piecemeal Judgment and Utilitarian Meaning and between Affective Judgment and Symbolic Meaning are held constant at 1.0			**Correlation between Piecemeal Judgment and Affective Judgment and between Utilitarian Meaning and Symbolic Meaning are held constant at 1.0		

For both comparisons, the constrained model had a significantly poorer fit, rejecting the hypothesis that the factors are measuring the same construct. The results of these tests demonstrate that the measurement used in this research is reliable and valid. However, there is

still a need for improvement in the scale, since the total variance explained by the affective judgment is slightly below the minimum required, showing a possible lack of convergent validity.

7 DISCUSSION

As stated previously, H1 was supported. In a comparison with the measurement used by Nepomuceno and Torres (2003, 2005), this questionnaire shows improvements, leading to promising insights for future research. This success was obtained due to the succeeding reasons: the items' understanding was clearer; the method used allowed the creation of items applicable to a Brazilian population; there were more and enough items to measure each of the dimensions; and the items showed a better distinction between judgment and meaning.

All these factors combined allowed this new version of the scale to be more reliable. None of the items had a cross loading with other factors nor were located in a dimension not previously predicted. Those essential qualities, that guarantee internal validity, were not present in previous versions. Despite these improvements, further advances are still necessary. Several items had factor loadings below .60 with their respective factors, showing that improvements are still possible. As presented by Churchill (1979), after a first data collection and test of the measurement, which occurred in the present research, the scale needs to be tested again in a new sample so that validity and reliability can be assessed under more rigorous rules. Future research should use this new version of the questionnaire, but using MTMM instead.

The need of improvement is also noticeable when considering the Utilitarian Meaning dimension. We were able to generate items that captured the preference of forming a utilitarian meaning over a symbolic meaning, but these items were problematic and had to be excluded. The remaining items may be associated to an easiness to use the product or to acquire it, instead of a direct measure of utilitarian meaning. Therefore, to improve the measurement before a new data collection, it is recommended that future research complement the scale by adding items that could better capture this preference.

The relationship between judgment and meaning found here is an issue that must be addressed. The results confirmed both H2a and H2b, showing a positive relation between affective judgment and symbolic meaning (0.13), and between piecemeal judgment and utilitarian meaning (0.12). These relations might not be as strong as one would imagine, but they

are still representative. According to Richins (1994) a product meaning is formed by the influences of the social and interpersonal relations given to the object. Therefore, the way a person judges a product is not the only precedent variable, on the contrary, there are plenty of other possible constructs or concepts that can complement one judgment, such as: human values (Allen, 2001; Allen, 2006), reference groups (Escalas & Bettman, 2005); the role of possessions in a culture-based communication system (Douglas & Isherwood, 1979); or the role of possessions on the sense of identity (Belk, 1988).

The weak correlations just presented might be an argument in favor of Shaffir and LeBoeuf (2002). In time, these authors reviewed the dual model's processes that distinguish between analytic reasoning (rational judgment) and automatic/holistic reasoning (affective judgment). They concluded that the relationship proposed by Allen and others is weakened because both judgments have a coexistence of overlapping. Although logical, the theoretical differentiation between reason and emotion might not be valid. This clarifies that the two processes might not be dualistically different, but they share a continuum of importance that occur during consumer decision making. Nevertheless, this study was able to identify the four dimensions proposed by Allen (2001). Furthermore, there are authors that defend the existence of a variety of decision-making styles (Scott & Bruce, 1995; Thunholm, 2004), which indirectly support either rational or emotive judgments. Future research should bring answers to this discussion.

The relationship between affective judgment and symbolic meaning was very similar to the one found between affective choice and expressiveness by Mittal (1988). Mittal also found that the "emotive" route's elements were somewhat more strongly correlated than those present in the "rational" route. Thus, forthcoming researches may verify if the relation at an emotive route is stronger, or if this stronger relationship is due to a measurement limitation.

Finally, we should point out the managerial implications of this research for practitioners. The manner in which a consumer assesses (or judges) a product will ultimately influence his/her final purchase decision. A company would profit from knowing whom and how many of its costumers make evaluations in a rational or an emotive way. This information can show to whom and how new products should be introduced in the market place. Moreover, this study can be fortuitous for those intending to create new products, as it indicates whether a focus on utilitarian attributes is more profitable than a focus on symbolic attributes and vice-versa. In sum, the development of this scale provides an interesting opportunity for practitioners, enriching strategic information for designing their products' projects.

The present research has a few limitations. First, the sample was composed of university students only, which decreases representativeness of the whole population, so one should be cautious to use these results. On the other side, students can be considered appropriate because they are active consumers and are able to evaluate their purchase strategies. Moreover, the usage of this population is acceptable for theoretical testing (Calder, Phillips & Tybout, 1981).

Despite the efforts to improve the measurement, a second major limitation is related to the lack of convergent validity in the scale of affective judgment. As seen before, the score obtained in this dimension is under .50 and indicates a need of further improvement, by creating new items or upgrading language comprehension of those already found. Nevertheless, the test of convergent validity was slightly below the cut-off point (a value of .49 was found, whereas the cut-off point equals .50), and this result presents good chances to be not found in future samples.

Despite the shortcomings pointed above, the advances demonstrated in this research should inspire the use of this new measure in Anglophonic populations. This research innovates by testing part of Allen's model with SEM's analysis in Brazil and the success of this new version shows the potential of using the scale in other populations. Future research with the model should focus on four lines of research. First, it should verify the influence of other relevant variables on meaning formation and type of judgment preferred. As already cited, some relevant variables would be: human values; reference groups; the role of possessions as a communication system; and the role of identity.

A second stream of research would be the adaptation of this new measurement to specific products, services or even brands. Nepomuceno, Porto and Rodrigues (2006), for instance, have presented a measurement that uses Allen's model in the purchase of a mobile phone, finding encouraging and promising results for applying the model with any product. Researchers willing to try this stream would just slightly change the writing of the items in order to measure the importance of judgment and meaning of the particular product, such as cellular phones, cars, computers, clothes, and so on. To use the scale to analyze products like cars, for example, instead of an item such as "I am rational when buying a product" the modified item could be "I am rational when buying a car".

Given that a more reliable measurement for evaluating the judgment and meaning of the product is presented, a third possibility for a future research is testing if the role of the human values of Schwartz (1992) is confirmed for the Brazilian population. Following this idea, and besides human values' construct, further tests with Allen's Two-Routes Model can be conducted

introducing other social beliefs constructs, as proposed by Alfinito and Torres (2012) whilst using Leung's et al. (2002) social axioms. A fourth and final possible line of research would compare the efficacy and importance of the model when evaluating a product category or a brand. It is possible that the relationship between judgment and meaning could also be different when considering product categories or brands. Forthcoming studies could verify, for instance, that the relationship between the piecemeal judgment and the utilitarian meaning are stronger in the purchase of computers as a product category, but weaker if a brand with strong reputation is considered. That is, judgment and meaning discussion in consumption context brings an extensive field of investigation.

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Appendix A. Qualitative stage results for product judgment and meaning items

Id	Proposed items in original language (Portuguese)	Proposed items translated to English	Expected Factor
1	<i>Sou racional ao comprar um produto.</i>	I am rational when buying a product.	PJ
2	<i>Considero os prós e contras antes de comprar um produto.</i>	I consider the pros and cons before buying a product.	PJ
3	<i>Procuro o máximo de informações sobre o que vou comprar.</i>	I search the maximum information about what I will buy.	PJ
4	<i>Antes de comprar um produto, imagino como ficaria minha imagem diante dos outros.</i>	Before buying a product, I imagine how my image would be to others.	AJ
5	<i>Antes de comprar um produto, imagino como eu me sentiria usando-o.</i>	Before buying a product, I imagine what I would feel using it.	AJ
6	<i>Controlo minha impulsividade ao comprar um produto.</i>	I control my impulsivity when I am buying a product.	PJ
7	<i>Penso bem antes de comprar um produto.</i>	I think well before buying a product.	PJ
8	<i>Seleciono os produtos de forma cuidadosa.</i>	I select my products in a careful way.	PJ
9	<i>Prefiro um produto que reflita meu jeito de ser.</i>	I prefer the product that reflects the way I am.	AJ
10	<i>Seleciono o produto que melhor cumpre sua função</i>	I select a product that better meet its function.	UM
11	<i>Seleciono o produto que posso encontrar mais facilmente para comprar.</i>	I select a product that I can easily find to purchase.	UM
12	<i>Seleciono o produto de uso mais fácil.</i>	I select a product of easier use.	UM
13	<i>Seleciono o produto de uso mais rápido.</i>	I select a product of faster use.	UM
14	<i>A imagem social que um produto possui influencia minha decisão de compra.</i>	The product social image influences my purchase decision.	SM
15	<i>A minha compra é influenciada pela primeira impressão que tenho sobre o produto.</i>	My purchase is influenced by the first impression that I have over a product.	AJ
16	<i>No instante que vejo um produto já sei se gosto dele.</i>	In the moment I see a product, I know if I liked it.	AJ
17	<i>Quando gosto de um produto, compro</i>	When I like a product I buy it.	AJ
18	<i>Escolho um produto que posso exibir com orgulho.</i>	I choose a product that I can proudly display.	SM
19	<i>Escolho um produto que está na moda.</i>	I choose a product that is fashionable.	SM
20	<i>Escolho um produto reconhecivelmente caro.</i>	I choose a product that is recognizable expensive.	SM
21	<i>Escolho um produto compatível com o que penso sobre mim mesmo.</i>	I choose a product that is compatible with what I think about myself.	AJ
22	<i>Escolho um produto que me deixe de bom humor ao usá-lo.</i>	I choose a product that makes me in a good mood when I am using it.	AJ
23	<i>Escolho um produto sensorialmente agradável (ex: olfato, visão, etc.).</i>	I choose a product that is pleasant for the senses (i.e. smell, sight, etc.).	AJ
24	<i>Seleciono o produto em função do meu sentimento em relação a ele.</i>	I select a product in function of my feeling towards it.	AJ
25	<i>Seleciono o produto com base nos meus impulsos.</i>	I select a product based on my impulses.	AJ
26	<i>Na compra de um produto penso na sua utilidade.</i>	When buying a product I think on its utility.	UM
27	<i>A primeira coisa que percebo, antes de comprar um produto, é a aparência.</i>	The first thing that I notice, before buying a product, is its appearance.	AJ
28	<i>Prefiro um produto que demonstre poder sobre as outras pessoas.</i>	I prefer a product that demonstrates power over people.	SM
29	<i>Dou mais importância à beleza de um produto.</i>	I give more importance to the product's beauty.	SM
30	<i>Dou mais importância à funcionalidade de um produto.</i>	I give more importance to the product's functionality.	PJ
31	<i>A primeira coisa que avalio em um produto é o</i>	The first thing I evaluate in a product is	PJ

Id	Proposed items in original language (Portuguese)	Proposed items translated to English	Expected Factor
	<i>preço.</i>	its price.	
32	<i>Compro somente aquilo que havia planejado previamente</i>	I buy only what I have planned in advance.	PJ
33	<i>Considero importante comprar uma marca reconhecida socialmente.</i>	I consider being important to buy a brand socially recognized.	SM
34	<i>Escolho produtos que me dêem realização pessoal.</i>	I choose product that gives me personal realization.	SM
35	<i>Compro aquilo que me faça acreditar que estou evoluindo na vida.</i>	I buy what makes me believe that I'm evolving in life.	SM
36	<i>O significado que dou ao produto é mais importante do que o significado dado por meus amigos próximos.</i>	The meaning that I give to a product is more important than the meaning given by my close friends.	SM
37	<i>Quando encontro alguma coisa que me agrada muito, passo alguns dias pensando se devo ou não comprar.</i>	When I find something that pleases me a lot, I spent some days thinking if I should buy it or not.	PJ
38	<i>Gosto de comprar produtos que traduzem sentimentos.</i>	I like to buy products that translate feelings.	SM
39	<i>Prefiro o produto mais útil.</i>	I prefer the most useful product.	UM
40	<i>Prefiro o produto que eu goste mais.</i>	I prefer the product that I like most.	SM

Note. PJ = Piecemeal Judgment; AJ = Affective Judgment; SM = Symbolic Meaning; UM = Utilitarian Meaning.

Appendix B. Final product judgment and meaning scale with 20 items

Od Id	New Id	Remaining items in original language (Portuguese)	Remaining items translated to English	Factor
1	1	<i>Sou racional ao comprar um produto.</i>	I am rational when buying a product.	PJ
18	2	<i>Escolho um produto que posso exibir com orgulho.</i>	I choose a product that I can proudly display.	SM
21	3	<i>Escolho um produto compatível com o que penso sobre mim mesmo.</i>	I choose a product that is compatible with what I think about myself.	AJ
19	4	<i>Escolho um produto que está na moda.</i>	I choose a product that is fashionable.	SM
23	5	<i>Escolho um produto sensorialmente agradável (ex: olfato, visão, etc.).</i>	I choose a product that is pleasant for the senses (i.e. smell, sight, etc.).	AJ
11	6	<i>Seleciono o produto que posso encontrar mais facilmente para comprar.</i>	I select a product that I can easily find to purchase.	UM
20	7	<i>Escolho um produto reconhecidamente caro.</i>	I choose a product that is recognizable expensive.	SM
2	8	<i>Considero os prós e contras antes de comprar um produto.</i>	I consider the pros and cons before buying a product.	PJ
22	9	<i>Escolho um produto que me deixe de bom humor ao usá-lo.</i>	I choose a product that makes me in a good mood when I am using it.	AJ
12	10	<i>Seleciono o produto de uso mais fácil.</i>	I select a product of easier use.	UM
33	11	<i>Considero importante comprar uma marca reconhecida socialmente.</i>	I consider being important to buy a brand socially recognized.	SM
6	12	<i>Controlo minha impulsividade ao comprar um produto.</i>	I control my impulsivity when I am buying a product.	PJ
29	13	<i>Dou mais importância à beleza de um produto.</i>	I give more importance to the product' beauty.	SM
8	14	<i>Seleciono os produtos de forma cuidadosa.</i>	I select my products in a careful way.	PJ
28	15	<i>Prefiro um produto que demonstre poder sobre as outras pessoas.</i>	I prefer a product that demonstrates power over people.	SM
9	16	<i>Prefiro um produto que reflita meu jeito de ser.</i>	I prefer the product that reflects the way I am.	AJ
3	17	<i>Procuro o máximo de informações sobre o que vou comprar.</i>	I search the maximum information about what I will buy.	PJ
24	18	<i>Seleciono o produto em função do meu sentimento em relação a ele.</i>	I select a product in function of my feeling towards it.	AJ
13	19	<i>Seleciono o produto de uso mais rápido.</i>	I select a product of faster use.	UM
7	20	<i>Penso bem antes de comprar um produto.</i>	I think well before buying a product.	PJ

Note. PJ = Piecemeal Judgment; AJ = Affective Judgment; SM = Symbolic Meaning; UM = Utilitarian Meaning. * It is important to consider the new identification (new id) sequence of items for empirical application.