

Impacts from Product Type and Representation Type On Perception of Justice and Price Fairness

Track: Consumer Behavior

Abstract:

Consumers make purchasing decisions every day. This paper aims to investigate perceptions of justice and price unfairness, where the product (hedonic vs. utilitarian) is presented either in a more abstract (verbal) or a more concrete way (photo) in a context of discriminatory pricing – a widely-employed market practice nowadays. Two experimental studies were done. Results show an interaction between product and representation types. When products are represented only by words, consumers have to use their imagination; this lowers construal level, makes people less price sensitive to utilitarian products. However, such a result is not seen when products are represented by pictures.

Keywords:

Discriminatory price, hedonic and utilitarian, construal level theory

Discriminatory Pricing, Product Type And Representation Type: Their Impacts On Perception of Justice and Price Fairness

Introduction

Consumers make purchasing decisions every day. Among their purchases, consumers shop for hedonic and utilitarian products. In general, hedonic consumption is related to fun, pleasure, excitement, fantasy, experimental situations, or sensual pleasure, such as purchasing watches, games, wine, songs, or chocolate cake. On the other hand, utilitarian consumption is related to instrumental and functional needs or products, such microwaves, toilet paper, laundry detergent, or fruit salad (Curry, 2001; Khan, Dhar, & Wertenbroch, 2004; Wertenbroch & Dhar, 2000). Following Dhar and Wertenbroch (2000), O'Curry and Strahilevitz (2001), and Okada (2005), we believe that products can have hedonic and utilitarian characteristics, with products evaluated as more hedonic if they contain more hedonic attributes or more utilitarian if they contain more utilitarian attributes.

Among the variables that affect the consumer's purchase decision is the price (Isabella, Pozzani, Chen, & Gomes, 2012). Consumers evaluate their decision during and after purchasing a product. When "people compare the ratio of their outputs (what they receive) to inputs (what they pay – financial and non-financial) to the ratio of the other party", they make a perception of justice (Patterson, Cowley, & Prasongsukarn, 2006, p. 264). If the difference is in the individual's favor, he or she can judge the decision as fair. If the difference is in detriment of the individual's favor, he or she can judge it as unfair. Because pricing strategy is a critical activity for marketing managers (Campbell, 1999), it is important to understand how consumers react to changing prices. By understanding how consumers react to changing prices, more specifically to hedonic and utilitarian products, managers can predict how consumers are likely to respond.

Although some researchers consider the topic (hedonic and utilitarian) old and unfashioned, it is still very important and has not been examined exhaustively. For instance, could abstraction levels due to representation type influence an hedonic or utilitarian product evaluation? Is this influence similar for emotional words or pictures? Psychology and, more recently, neuroscience studies have shown differences between words and pictures regarding information processing (Amit, Algom, & Trope, 2009; Hinojosa, Carretié, Valcárcel, Méndez-Bértolo, & Pozo, 2009; Knapp & Abrams, 2012; Miwa, Libben, Dijkstra, & Baayen, 2014; Schlochtermeyer et al., 2013). According to Azzian, Watson, Parvaz & Squires (2006) pictures have privileged access to processing semantic and emotional information, as compared to words.

Based on these information, our research question is: As emotional products represented either verbally or pictorially, we chose hedonic products, as they are more experiential and fantasy-related (Holbrook & Hirschman, 1982); compared them to utilitarian products, which may be perceived as more concrete (Botti & McGill, 2011) perceived similarly in changing

price situations? We chose the context of discriminatory pricing, since this strategy has been increasingly employed in the marketplace sales practice (Jin, He, & Zhang, 2014; Weisstein, Monroe, & Kukar-Kinney, 2013; Xia & Monroe, 2010). This pricing strategy may increase company profitability (Jin et al., 2014), but it may also entail negative consequences, such as a sense of unfairness (Isabella & Mazzon, 2014). Therefore, in this study we aim to investigate perceptions of justice and price unfairness, where the product (more emotional vs. less emotional) is presented either in a more abstract (verbal) or a more concrete way (photo).

This topic is relevant since words and pictures are two kinds of emotional stimuli heavily employed by marketing researchers, both in academia and in the marketplace. Online retail outlets among other retailers, for instance, may choose to show products on a list, using only words, or to include their photographs. Academic researchers, especially in experimental studies, often utilize pictorial and verbal stimuli to induce emotion (Schlochtermeyer et al., 2013; Townsend & Kahn, 2014).

Theoretical Background

The theoretical background is divided in four big blocks: hedonic and utilitarian concepts, differences between words and pictures and construal level theory. After that, we join all those blocks to develop our hypotheses.

Hedonic and Utilitarian Concepts

The products have two major dimensions: the instrumental or utilitarian dimension and the hedonic dimension (Mano & Oliver, 1993). The utilitarian products are instrumental and goal oriented (Werthenbroch & Dhar, 2000). They can be considered functional, sensible, and usable (Botti & McGill, 2011), accomplishing functional and practical tasks. Consequently, they can also be considered necessary (Choi et al., 2014). Usually the benefits are perceived as tangible and concrete (Sela & Berger, 2012). Some examples of products with a strong utilitarian dimension are: detergents, delight products, home security systems, microwaves, minivans, personal computers, scientific calculators, and toothpaste (Curry, 2001; Okada, 2005; Werthenbroch & Dhar, 2000).

The hedonic dimension can be considered as an imaginative reality. People can purchase a product of desire and anticipate the experience or fantasy (Holbrook & Hirschman, 1982) based on what they expect will be a pleasure (Alba & Williams, 2013). The hedonic approach to consumer behavior has a role of mental construct, involving the multisensory system and emotional arousal (Holbrook & Hirschman, 1982). Consumers perceive symbolic meanings to the subjective characteristics (Shiv & Fedorikhin, 1999). For instance, perfume can make people feel more attractive to themselves. The hedonic product is usually valued for their product pleasing properties (Mano & Oliver, 1993). In this dimension, the attributes for a product are not perceived as necessary, but as something that the product can work without (Sela & Berger, 2012). There is a list of products that are strongly related to the hedonic dimension such as: art services or products (performance arts – ballet;

plastic art; painting or popular culture – movies), beer, chocolate, DVDs/CDs, television sets, tobacco, and video games (Childers, Carr, Peck, & Carson, 2001; Curry, 2001; Okada, 2005; Voss, Spangenberg, & Grohmann, 2003).

It is common to view hedonic and utilitarian dimensions on a bipolar scale. However, many researchers have shown that products that are both hedonic and utilitarian sometimes appeal to one of the dimensions more than the other.

According to Shiv and Fedorikhin (1999), an affective response comes from a rapid automatic processing and the rational reaction occurs by cognitive and deliberated reactions. Cognitive reactions seek to stimulate the process of thinking about the situation or the product. Meanwhile, affective reactions are more related to sensations and the experience through the five senses (Spangenberg, Voss, & Crowley, 1997). Because the utilitarian product is usually related to utilitarian consumption, and consequently to a more rational consumption than hedonic consumption, it is easier for consumers to create reasons for purchasing utilitarian products than hedonic products (Okada, 2005).

Perception of Justice and Price Fairness

Justice is an evaluation of the appropriateness of a person's treatment by others (Chebat & Slusarczyk, 2005; Schoefer & Ennew, 2005). The perception of justice concerns the process through which outcomes are obtained. The outcome is perceived in the company or person responsible for the outcome (Maxwell, 2002)..

Related to price, many researchers state that when consumers perceive a price as high, they judge it as unfair and consider either leaving the store or complaining about it (Maxwell, 2002). Based on this, an economically fair price means a cheap price. The fairness concept has two main aspects: social and economic. Economic fairness is related to the economic theory that we could extrapolate aspects of emotions. "Buyers are assumed to be self-interested utility maximizer who rationally review the magnitude of a price and judge its economic acceptability based on their own best self-interest" (Maxwell, 2002, p. 192). The expectation of the price is not only based on the internal and external reference price, but also on what the consumer feels that he or she deserves (self-interest) (Namkung & Jang, 2010). When the actual price does not match the desired price, people resent the violation of the rules. This perception of unfairness is based on the process of perception of justice. Imagine a consumer goes to a place and purchases a product with a determined price of "x". Then his friend goes to the same place, on the same day, and purchases the same product for "x-25%x". In this case, the consumer paid more than his friend. Since the purchase expectation and economic rules are not respected, the perception of justice will be shaken (Hoffman & Kelley, 2000; Maxwell, 2002; Xia, Monroe, & Cox, 2004).

This kind of situation is common with price discrimination because companies want to maximize their profit (McMahon-Beattie, 2010). The viability of online dynamic pricing or differential pricing for the same product from the same seller has been increasing, especially in online retailing (Weissstein et al., 2013). In addition, price fairness is not only important to

online retailers, but also to consumers, policy makers, and politicians (Campbell, 2007b). On the other hand, companies may try to avoid treating consumers unfairly because consumer perceptions of unfair prices can lead to decreased profitability since consumers may consider either leaving the store or complaining about it (Maxwell, 2002).

While price perception can be explored through the perception of justice, many researchers have been using a concept called price fairness. Similar to perception of justice, fairness is defined as the judgment of whether or not the outcome and/or process to reach the outcome is reasonable, acceptable, or just (Bolton, Keh, & Alba., 2010; Bolton, Warlop, & Alba, 2003; Xia & Monroe, 2010). Xia et al. (2004) complement that “the cognitive aspect of this definition indicates that price fairness judgments involve a comparison of a price or procedure with a pertinent standard, reference, or norm”. According to Kahneman, Knetsch, and Thaler (1986), price fairness is the consumer’s judgment regarding the difference between what they expect and what they accept. Therefore, we could say that price fairness has two components. The economic component comes from the belief that consumers follow the utility maximization theory and will judge a price as fair as long as the product price covers the cost of the benefits. Meanwhile, the social component results from social rules and regulations, or whether the product is socially accepted as a fair price.

Differences between Words and Pictures

The information processing is different in the semantic and lexical systems, although they are connected. The semantic system controls the perception of objects and pictures and the execution of physical actions, whereas the lexical system provides perception of language and controls speech and writing. Such disparities between the information systems cause different response times and types with picture and word stimuli (Glaser & Glaser, 1989).

De Houwer and Hermans (1994) exploited stimulus valence by presenting words and pictures with either positive or negative valences. Their results confirmed the hypothesis that negative pictures are more quickly processed than positive ones; nevertheless, this difference was not found with word representations. That is, negative pictures have privileged access to semantic information, but there are no differences in the lexical process due to word valence.

The emotional meaning of a verbal stimulus can be considered, in general, to be learned, experienced, or mediated by culture (Hinojosa, Méndez-Bértolo, & Pozo, 2010). This notion is appropriate, if we consider the emotional processing that some objects or words may provoke. For instance, a chocolate cake may bring memories of one’s grandmother, of a favorite bakery, or provoke a recollection of the smell of mother’s baking. On the other hand, pictures may facilitate the semantic system by rendering this process automatic and influencing the emotional processing of a specific cake.

Undoubtedly, many articles will still discuss why such disparities in emotional intensity exist, but the superiority in photo processing, as compared to words, is consensual. The most accepted explanation is that more detailed images have faster

and more direct access to the identification process and, consequently, to emotional processing (Schlochtermeyer et al., 2013; Townsend & Kahn, 2014).

Construal Level Theory

Construal level theory is an account of how psychological distance of an item, object or event influences individuals' thoughts and behavior (Trope, Liberman, & Wakslak, 2007; Trope & Liberman, 2003). This theory assumes that different dimensions of psychological distance affect how an item is interpreted; such differences derive from the way the item is mentally construed, whether more abstractly or in more detail (Trope et al., 2007).

Although not only two levels exist, but a continuum, the authors define construal levels as high and low (Trope & Liberman, 2010). Low-level construals are relatively unstructured, contextualized representations that include subordinate and incidental features of events. Such features are details, definitions, and specific information. High-level construals are more structured representations of an item, belonging to a network, ranking or categorization; in other words, they are more schematic. In general, they are organized hierarchically and defined along object, trait and goal-directed action categorizations. High-level construals are more decontextualized, in an attempt to extract the gist from the available information (Trope et al., 2007).

There is a relationship between an event's psychological distance and abstractness. Some authors posit that this occurs due to a likely connection with experience, information and knowledge regarding the event itself (Trope et al., 2007). Psychological distance is being studied along several dimensions: time (Koehler, Breugelmans, & Dellaert, 2011), space, and social distance (Williams & Bargh, 2008). More recently, the notion of psychological distance in verbal (vs. pictorial) representations has been investigated (Amit et al., 2009). According to Amit et al (2009), there is a difference between verbal and pictorial representations related to their own psychological distance, be it temporal, spatial, or social. The authors posit that concepts are organized in the cognitive system; as words are concepts, consequently they are organized in a hierarchical structure of categories, similarly to higher- levels in construal level theory. In order to demonstrate that words are related to high-level construal, whereas pictures are examples of low-level construal, eight experiments were run (see Amit et al (2009) for further information).

Therefore, pictures are more concrete, more detailed, and specific representations; i.e., they are particular as are objects in nature, whereas words are more abstract representations carrying the gist of the object. Words are not subjected to perceptual analysis. Usually, a wider set of references is needed to develop a mental image of the object. A word may represent a category, or be interpreted as such, whereas a picture can often form a singular representation.

Based on the previous discussion, the following hypotheses are proposed.

Building the Hypothesis

Based on the idea that different processes to hedonic and utilitarian purchases occur. Where hedonic products are closer to affection and that positive emotions could be processed faster and more automatically than utilitarian products. And when utilitarian products are purchased or preferred, the experience is relatively more instrumental and practical; it seems to be more logically associated and compatible with cognitive reactions than affective reactions evoked by hedonic products (Alba & Williams, 2013; van den Berg, Manstead, van der Pligt, & Wigboldus, 2006). Two experiments were done by Isabella & Mazzon (2014) using hedonic and utilitarian products represented by photos to show that perception of justice and perception of price unfairness are seen in distinct ways, depending on product type. Their results show that with hedonic goods, consumers seem to place less importance on price and thus worry less about pricing discrepancies; consequently this affects less perceptions of perception of justice and perception of price unfairness. On the other hand, utilitarian products are less emotional and thus more related to cognitive issues. In addition, the experiments showed that, in unfairness situations, consumers felt more anger to utilitarian products than hedonic ones.

But, what happens when the product is not represented by a photo, that is, by a tangible and highly emotional stimulus? Based on the idea that photo stimuli convey more emotion than words, and that product representation types produce distinct cognitive distances, it may be assumed that different products will be unequally evaluated. We propose that because hedonic products involve greater imagination and are bought in anticipation of a desire, an experience, or a fantasy (Holbrook & Hirschman, 1982), with the expectation of a pleasurable purchase and consumption experience (Alba & Williams, 2013). It can be said that such a product has a more abstract quality, as compared to utilitarian products, which are more practical and functional (Botti & McGill, 2011), and thus less imaginative and more concrete. Consequently, when consumers wish to buy a more imaginative, intangible product, with a lower construal level, they will have to create their expectations based on a more abstract conception, regardless of product representation type. In other words, the cognitive distance in the experience of shopping for a hedonic product will not be largely influenced by product representation type. But, when it comes to a concrete, well-defined product used for practical reasons, a more abstract representation type (verbal) or a more direct one (pictorial) could influence how this product is perceived.

This being so, if someone faces a discriminatory pricing situation seen as unfair when purchasing a utilitarian product represented by a word, their cognitive process is altered. According to Fujita, Trope, Liberman and Levin-Sagi (2006), when an individual is oriented toward a certain activity, this activity may become a cognitive priming and alter a subsequent action. When an individual imagines shopping for a utilitarian product, there is interference in the subsequent activity from the perception and judgment of the pricing situation. Even if the price modifies consumer construal level, there will be an

influence of the initial processing on product judgment. When there is a perception of price changes, we assume that both the perception of fairness in that situation and the perception of price unfairness will be altered. Therefore, two hypotheses are defined:

H1: Abstract representations (words) alter perception of justice for utilitarian products.

H2: Abstract representations (words) alter perception of price unfairness for utilitarian products.

Empirical Study

Two experiments were conducted to test the proposed hypotheses. We run pretests to define the products and prices, and to validate the defined protocol. All the studies were approved by the ethics commission (Institutional Review Board) from Temple University, under Code 21561. Before starting any of the studies, subjects were presented a consent form, in online and print versions, explaining the research. Only those who gave their consent had access to the research. It should be stressed that none of the respondents participated in both pretests and studies. Studies 1 and 2 were run in the Qualtrics platform, so that the dependent and independent variables could be randomized. Two pretests were conducted to define the products and prices used in studies 1 and 2.

Pretest I

Thirty-one subjects participated in the first pretest, which was run online with help from a consumer panel company. Each participant saw a list of products and evaluated each one along Voss, Spangenberg and Grohmann's (2003) scale, which is based on the concepts developed by Hirschman and Holbrook (1982) to measure whether a product is more hedonic or utilitarian. Along a 7-point, semantic differential scale, subjects evaluated two dimensions: utilitarian (*necessary - unnecessary; effective - ineffective; helpful - unhelpful; functional - not functional*) and hedonic (*not fun - fun; dull - exciting; not delightful - delightful; not thrilling - thrilling; enjoyable - unenjoyable*). Lower scores indicate more utilitarian, less hedonic products. Among the products presented to the subjects, in color photos and in random order, were a piece of cake and a fruit salad. The cake scored an average of 4.47(sd=1.33, N=31) and the fruit salad, 2.80 (sd=.79 N=31) on the utilitarian dimension ($\alpha_{\text{cake}}=.80$; $\alpha_{\text{fruit}}=.68$). An ANOVA with repeated measures showed a statistical difference for both products along this dimension ($p<.001^{***}$, $\eta^2=.537$). For the hedonic dimension, ($\alpha_{\text{cake}}=.87$; $\alpha_{\text{fruit}}=.85$) statistical differences were also found ($p<.001^{***}$, $\eta^2=.319$) with $M_{\text{cake}} = 5.34$ (sd=1.21, N=31) and $M_{\text{fruit salad}} = 4.24$ (sd=1.01, N=31). In order to define product prices for the experiment, subjects were asked how much they would pay, in average, for each product in a fast food store or restaurant. The results were: for the piece of cake, $M = \$3.63$, Median = 3.00 and sd = 1.79; and for the fruit salad, $M=3.95$, Median = 3.25 and sd = 1.66. We chose to utilize the median values of \$3.00 and \$3.25. A small

adaptation was made on the second price, which was changed from \$3.25 to \$3.30 to avoid the effect of the price ending in the digit 5; this way, both product prices ended in zero. The goal in defining two prices was to support the cover story, which asked participants to imagine they were shopping for a product. We needed to check if these prices were really adequate to the target population, and whether they would be similarly perceived for both hedonic and utilitarian products; thus, a second pretest was run.

Pretest II

The second pretest was conducted online with 66 participants, using the same consumer panel as in pretest 1. Besides testing the prices, this pretest was used to define the photographs to be used in study 2. Therefore, participants saw four photos: two with a piece of cake and two with a fruit salad. The prices (\$3.00 and \$3.30) were randomly assigned for each product, so that the pictures of same product, say the cake, never had the same price, but always were shown with different price points. This was done to avoid prices from influencing product choice. Next, subjects were asked to imagine they were on their lunch break and decided to buy a dessert. Coming to the store, they would find four product choices, but they should buy only one. After choosing the dessert, participants had to answer to what degree they agreed or disagreed, along a 7-point scale, with four statements derived from Zielke's (2011) scale for measuring retail price images. The statements were: *"This product price is cheap"*, *"In this online store I pay less for the same quality than elsewhere"*, *"This online store has product with accessible price"* and *"The price of this product is very high"*.

Results showed that 42 people chose a piece of cake and 24 picked the fruit salad. As for prices, 50 percent decided for the cheapest cake and 54 percent chose the pricier fruit salad. A Chi-square analysis showed no statistical difference among choices ($\chi^2(1, N=66) = 0.745$ $p > .05$). As for the product photos, there was no common preference; product choice was evenly distributed (Cake 1 = 20, Cake 2 = 22, Fruit Salad 1 = 15 and Fruit Salad 2 = 9), with $\chi^2(3, N=66) = 0.183$ $p > .05$. In terms of retail price image ($\alpha = .88$) for the cake and the fruit salad, an ANOVA with two independent variables (price and product choice) showed no interaction or main effects in the model, meaning that the retail price image is equal for both products. Regarding perceived product prices, no significant difference was found between the products, and no interference of price on product choice. Based on these results, the price and products to be used in studies 1 and 2 were confirmed.

Study 1

Study 1 is a 2 (product type: hedonic vs. utilitarian) X 2 (stimulus: photo vs. words) between-subject design, with approximately 30 subjects per condition. Data collection was done via a consumer panel with American-born members,

who were randomly invited to participate.

Procedures: Subjects read in the cover story that they were going to participate in a shopping situation. They were asked to imagine that they were on their lunch break and had decided to go out for a dessert. Entering a local store, they saw two products: a piece of cake and a fruit salad. The definition of the hedonic and utilitarian product was based on previous research (e.g. Shiv & Fedorikhin, 1999) and on the pretests. The selected prices (\$3.00 and \$3.30) were randomly assigned to each product. Next, subjects completed the retail price image scale (four items) and read the second research stimulus – price change. At this point, they were instructed to imagine that, soon after buying their dessert, they run into a friend on the street. Talking to this friend, they both realize that they had been to the same store and bought the same dessert. Then the friend remarks that he/she has paid \$2.30 or \$2.50 (depending on the initial condition); that is, if the initial purchase price was \$3.00, the friend would have paid \$2.30, and if it was \$3.30, then the friend supposedly paid \$2.50. The amount paid by the friend was always 25 percent lower than the original price. We chose to alter the price by 25 percent to follow the literature on manipulations of perceived price unfairness (e.g Xia et al., 2004). After the manipulation, subjects were asked to complete the 7-point scales for the dependent variables: perception of justice (De Toni & Mazzon, 2014), perception of price unfairness (Darke & Dahl, 2003), perceived value (adaptado de Dodds, Monroe, & Grewal, 1991), and repurchase intention (De Toni & Mazzon, 2014). Finally, subjects had to complete demographic data and the manipulation check. In this study, the emotions scale was not utilized.

Analysis

Descriptive Analysis

The research design is considered quasi-experimental, since we decided to let respondents choose which product they desired to buy. This decision was made in order to get subjects more involved with the purchase situation. This way, the number of subjects in each condition was not completely balanced. The sample was comprised of American-born individuals (60% male), evenly distributed between 19 and 73 years old. In terms of education, 37.4% of them had spent 4 years in college, 30% had spent some time (they were dropouts or undergraduates), 47% had a full time job, 15% a part-time job, 63% earned under \$40,000 a year. Forty-nine percent of the subjects were single, whereas 39% were married.

From a total of 130 participants in the study, only 117 completed the research. But, in the descriptive analysis we decided to include all 130 respondents. Sixty-five of them read the manipulation instructions without product photos, and 65 got the instructions together with the pictures. Their choices were as follows: 81 individuals selected the piece of cake and 49 the fruit salad. Prices were also balanced: 64 individuals picked the fruit salad when it cost \$3.30, whereas 66 of them chose the cake when it was pricier. In order to verify whether the price influenced product choice, retail price image and perception of justice, three tests were conducted. Firstly, a Chi-square test indicated that the price had no influence on product choice

($\chi^2(1, N=130) = 3.439$ $p > .05$). Retail price image was analyzed by a generalized linear model using price, type of stimulus, and product choice as independent variables. As predicted, no interaction or main effect was found ($p > .10$), demonstrating that the price assigned to each stimulus did not interfere with perceived price. Thus, the price manipulation was taken out of the model. Table 1 shows the number of subjects in each cell, discarding the price stimulus, according to previous analyses.

Table 1 – Conditions Study 1

		Stimulus		Total
		Word	Photo	
Choice	Piece of Cake	41	40	81
	Fruit Salad	24	25	49
Total		65	65	130

A second Chi-square test was run to check if the number of subjects in each cell was unbalanced. This analysis ($\chi^2(1, N=130) = .033$ $p > .05$) yielded a number that may be considered as balanced.

Manipulation Check

Two manipulation checks were conducted to verify: (1) whether the cake is perceived as more hedonic than the fruit salad, and whether the fruit salad is perceived as more utilitarian than the cake; (2) whether subjects noticed the price change – the stimulus designed to influence perception of price unfairness. In the first manipulation check we used the scale developed by Voss, Spangenberg and Grohmann (2003), as we did in the pretest ($\alpha_{\text{hedonic}} = 0.96$; $\alpha_{\text{utilitarian}} = 0.95$). In the hedonic dimension, the mean score for the piece of cake was 3.95 (sd=1.77, N=81), whereas for the fruit salad it was 2.44 (sd=1.59, N=49). An ANOVA confirmed a statistical difference between these means ($F(1,129) = 23.898$, $p < .001^{***}$). In the utilitarian dimension, the piece of cake had a 4.76 score (sd=1.97, N=81) and the fruit salad, 3.77 (sd=2.03, N=49). As expected, this difference was significant ($F(1,129) = 30.166$, $p < .01^{**}$).

The second manipulation check was based on the following statement, developed especially for this study: “In this imaginary situation, as compared to your friend, did you pay a higher, lower or equal price?” As this question was asked at the end of the survey, not all 130 respondents answered the manipulation check. So, only the 117 subjects who completed the research were included in the second manipulation check and in the study analyses. Out of this group, 98.2% got the manipulation right; we decided to keep in the sample the two respondents who answered it inadequately, because their opinions do not alter the results.

The hypotheses proposed in this study were verified through ANOVA/GLM analyses. To confirm if the sample presented homogenous variances between treatments, and errors with a normal distribution, we ran the Kolmogorov-Smirnov, Shapiro-Wilk. The results showed that perception of justice and price fairness may be considered as normal. The results from the Levene test for the homogeneity of error variance showed no statistical difference; therefore, these data could be used in the ANOVA analyses (Levene test – Perception of Justice: $F=0.509$; $p=0.677$; Levene test – Perception of Price

Unfairness: $F=0.170$). To assess reliability, we analyzed the Cronbach's Alpha for Perception of Justice ($\alpha=0.912$) and Perception of price unfairness ($\alpha=0.858$).

Perception of Justice

The scores for perception of justice, in the word representation condition, were in average 3.37 ($sd=1.34$, $N=38$) for the cake, whereas the fruit salad had a mean score of 4.53 ($sd=1.12$, $N=19$). In the photo representation condition, mean scores for the cake were 3.65 ($sd=1.27$, $N=37$) and 2.80 for the fruit salad ($sd=1.33$, $N=23$). An analysis of variance revealed a significant interaction between the results ($F(1,117) = 16.080$, $p<0.001^{***}$, $\eta^2=0.125$). The means presented shows the interaction indicating differences due to product type: words ($F(1,55)=10.280$, $p=0.002$) and pictures ($F(1,58)=6.019$, $p=0.017$). Such results reveal a significant difference in perception of justice, both for product type and for representation type. The data confirm hypotheses H1.

Perception of Price Unfairness

Similar results were found for perception of price unfairness. Subjects who were assigned the pictorial stimuli realized the price change and felt more unfairly treated when the product was utilitarian ($M=3.15$, $sd=1.44$, $N=23$), than when it was hedonic ($M=3.69$, $sd=1.45$, $N=37$). In the case of verbal stimuli, the scores are inverted, that is, people who chose the hedonic product showed lower mean scores for perception of price unfairness ($M=3.45$, $sd=1.45$, $N=38$), than those who chose the utilitarian one ($M=4.23$, $sd=1.23$, $N=19$). This means that, when subjects read and imagined the situation, they felt that the price change was more unfair for the cake than for the fruit salad.

Note that the higher the score, the higher the perception of price unfairness. An ANOVA indicated a statistically significant interaction ($F(1,117) = 5.676$, $p=0.019^*$, $\eta^2= 0.048$). Thus, we may say that these results are consistent with the previous analyses of perception of justice and with results from previous studies using photos from (Isabella & Mazzon, 2014) When we assessed the differences due to product type in the words ($F(1,56)=3.929$, $p=0.052$) and photo representation ($F(1,59)=1.931$, $p=0.170$) conditions, there was a marginally significant difference in the perception of price unfairness with the verbal representation, but not necessarily with pictures. Using the item 'which was the highest price you have ever paid for such a product' as a covariate, an analysis with the word representation revealed a significant difference between the products ($F(54,1)=4.427$; $p=0.040$), but not in the photo condition. Thus, hypothesis H2.

Study 2

This study is a 2 X 2 between-subject experiment, with the following independent variables: product type (hedonic vs. utilitarian) and price (\$3.30 vs. \$3.00). Data were collected from a consumer panel, restricted to American residents.

Procedures

Similarly to study 1, respondents were instructed to imagine that they were on their lunch break, and were looking for a dessert. A local store offers two kinds of product: a piece of cake and a fruit salad. Based on the previous pretests, the products are represented either verbally or pictorially, with prices of \$3.00 and \$3.30 randomly assigned. Having chosen their dessert, respondents are asked to imagine that they run into a friend after leaving the store. Then, they learn that this friend paid \$2.30 or \$2.50 (a price 25% lower than what the subject had paid). Next, participants answered several questions along the 7-point, Likert-type scales for: perception of justice (De Toni & Mazzon, 2014), perception of price unfairness (Darke & Dahl, 2003), perceived value (adaptado de Dodds et al., 1991), repurchase intention (De Toni & Mazzon, 2014) and emotions (Richins, 1997). Regarding the emotions scale (joy, sadness, anger, and surprise), we decided to collect data in two separate moments: after choosing the product and after running into the friend. However, to avoid the halo effect, subjects answered this scale in only one of those moments. This scale was used to assess perception of unfairness and to check whether the product type would convey some sort of emotion when represented by words. Next, respondents completed demographics and the manipulation checks.

Analysis

Descriptive Analysis

In all, 206 people participated in the study, although three did not fill out the demographics questions. Table 2 shows the number of subjects in each cell. The sample (51% male) was comprised of 48.5% single and 35.9% married individuals, with ages ranging between 19 and 70, with a slight concentration in the 28-32 bracket (roughly 20% of the sample). In terms of education, 14.1% had finished high school, 21.8% were undergrads, and 37.5% were graduates. Regarding occupation, 47.6% had full-time jobs, 18.9% part-time jobs, 5.8% worked from home, and 5.3% were undergraduate students. In terms of income, 19.9% earned up to \$9,900 a year; 12.6% earned between \$10,000 and \$19,999; 16.5% earned between \$19,999 and \$29,999 a year; the remaining 50% earned over \$30,000 yearly.

Table 3.1 – Condition – Study 2

	Prices	Emotions Scale Before the New Price	Emotions Scale After the New Price	Total
Piece of Cake	\$3.00	31	25	56
	\$3.30	18	32	50
Fruit Salad	\$3.00	29	25	54
	\$3.30	24	22	46
				206

When we asked them how often they used to buy cake, 25.2% of the subjects answered they normally buy a piece every month, followed by 16.5% of the respondents, who buy it every 3 months. As for the fruit salad, 16.5% answered they buy it monthly, and 14.6% every three months.

Manipulation Check

Four manipulation checks were run: (1) to confirm that participants were paying attention to the research; (2) to assess if the piece of cake represented by a photo was considered as hedonic, and the fruit salad as utilitarian; (3) to verify if subjects remembered the prices they paid; and (4) to confirm whether participants realized that the friend had paid a lower price.

In the first manipulation check, respondents were asked which product they imagined they had purchased. All participants answered this question correctly.

The second manipulation check consisted of an ANOVA with the product type (piece of cake and fruit salad) and the two scales for hedonic and utilitarian features as dependent variables. The results were: (1) for the utilitarian features, $\bar{x}_{\text{Piece of Cake}} = 4.39$ ($s=1.23$) and $\bar{x}_{\text{Fruit Salad}} = 3.31$ ($s= 1.18$), where a lower score corresponds to more utilitarian characteristics, with statistical significance ($F(1,204)=40.660$, $p=0.000$); (2) for the hedonic features, $\bar{x}_{\text{Piece of Cake}} = 5.26$ ($s=1.07$) and $\bar{x}_{\text{Fruit Salad}} = 4.35$ ($s=1.19$), where again a lower score corresponds to more utilitarian characteristics, with a significant difference between the products ($F(1,204) = 32.835$, $p = 0.000$). Such results support that the products are perceived differently, according to our expectations.

In the third manipulation check, we used an ANOVA to verify if the respondent recalled the price paid. We compared the product types and the two prices to check whether they were recalled in a distinct way. To that effect, an open question was used at the end of the questionnaire. As a result, the average price for the fruit salad presented with the price point of \$3.30 was \$3.26, and the average price recalled for the \$3.00 price point was \$3.09. The piece of cake presented at the \$3.30 price was in average recalled at \$3.23, and when presented at \$3.00, the average recalled price was \$3.16. Thus, as expected, there is a significant interaction between product type and price ($F(1,205)=5.859$ $p =0.016$). It is important to stress that, although participants recalled the prices in the imaginary situation, the price difference of only 10% was not sufficient to influence product choice. This can be seen in table 4: the number of subjects in each cell indicates an almost homogenous distribution in product choice.

The final manipulation check was meant to confirm whether subjects realized that they had paid more than their friend. To that effect, they were asked how much the friend had paid. Out of the 206 respondents, 95.1% informed prices between \$2.00 and \$2.70; 30.7% of them answered \$2.30, and 44.9% stated \$2.50 (these values were exactly the ones that subjects were presented). Only 6 people recalled prices above \$3.00, but these were not higher than the prices they had (imaginarily) paid. Thus, we kept all the cases for further analysis.

In order to confirm if the sample presented homogenous variances between treatments, and errors with a normal distribution, we ran the Kolmogorov-Smirnov, Shapiro-Wilk, and Levene tests. The results of the Levene test for the homogeneity of error variance showed no statistical difference for any of the dependent variables (Levene test – Perception

of Justice: $F=1.653$; $p=0.123$; or Perception of Price Unfairness: $F=1.581$; $p=0.143$). Because of these results, in the second study we used, besides general linear models (GLM), the Kruskal- Wallis non-parametric analysis for comparison of means. We analyzed the Cronbach's Alpha for Perception of Justice ($\alpha=0.891$) and Perception of Price Unfairness ($\alpha=0.874$), Joy ($\alpha=0.950$), Sadness ($\alpha=0.861$), Anger ($\alpha=0.937$), Surprise ($\alpha=0.842$).

Data Analysis

Data analysis comprised GLM and the Kruskal-Wallis non-parametric analysis. Firstly, both dependent variables - perception of justice and perception of price unfairness – were assessed in the complete model (independent variables: product type, position along the emotions scale, and prices). As there seemed to be no statistical difference regarding the position on the emotions scale for the dependent variables, we chose to drop it from the model. The same occurred with the prices of \$3.00 and \$3.30, which showed no influence on any of the dependent variables. Thus, the samples could be joined. However, in order to assess if these two items could act as moderators and interfere with the differences among products in the four variables, we ran the analyses using both as covariates in the model. As the results from the complete model with covariates were quite similar to a simpler model (using only product type as the independent variable), we decided to report only the results from this simplified model. Note that the two price points in this study were used to create a cover story and to control for perceived product price, so as to avoid a direct effect on perception of justice and of price unfairness for either the hedonic or utilitarian product. As for the order of presentation of the scales, we created only two separate moments to avoid a halo effect on the process of analysis.

Perception of Justice

For the word representation, the mean score for perception of justice in the condition with disparate prices between the respondent and the friend was 3.44 for the piece of cake ($s=1.41$, $N=106$) and 3.85 for the fruit salad ($s=1.16$, $N=100$). An ANOVA yielded the following results: $F(1,205) = 4.936$ and p value = 0.027, confirmed by the Kruskal-Wallis test ($p=0.033$). Findings from study 1 are thus confirmed: the perception of justice with verbal representations is affected by cognitive distance, altering the perception of utilitarian products (H1). The averages demonstrated that the situation involving the fruit salad was perceived as more fair than with the piece of cake.

Perception of Price Unfairness

A similar result was found with perception of price unfairness. Respondents judged the price paid for the fruit salad as more fair ($\bar{x}=3.90$, $s=1.18$, $N=100$) than for the piece of cake ($\bar{x}=3.54$, $s=1.50$, $N=106$). An analysis of variance run with the means showed a marginal difference ($F(1,205)=3.679$; $p=0.056$). When we ran the same analysis using price and the position on the emotions scale as covariates, results were $F(1,205) = 4.115$, $p=0.044$. The Kruskal-Wallis test supports this

analysis ($p=0.035$). Again, these results confirm findings from study 1, demonstrating that representation type interferes on price perceived unfairness, supporting hypothesis H2.

Analysis of Emotions

In order to validate whether perception of discriminatory pricing evoked more negative emotions with products represented by words, as compared to a photo, we ran an analysis of variance with the means in each condition. Recall that one part of the sample filled out the emotions scale before learning that a friend had bought the same good for a lower price. Consequently, 102 individuals completed the scale before manipulation and 104 individuals afterwards.

In relation to anger, the mean before the price manipulation was 1.08 ($s=0.27$, $N=49$) for the piece of cake and 1.51 ($s=1.17$, $N=53$) for the fruit salad. However, the means increased considerably after the price manipulation ($\bar{x}_{\text{Piece of cake}}=3.42$, $s=1.82$, $N=57$ and $\bar{x}_{\text{Fruit Salad}}=3.11$, $s=1.85$, $N=47$), showing that people felt angry because the price was changed. No interaction between representation type and product type was found, only a change in emotion related to the perception of discriminatory pricing ($F(1, 205)=95.588$, $p=0.000$; $\bar{x}_{\text{Before learning price paid by friend}}=1.30$ ($s=0.88$, $N=102$) and $\bar{x}_{\text{After learning price paid by friend}}=3.28$ ($s=1.83$, $N=104$). In terms of sadness, no interaction or main effect of product type was found. The analysis demonstrated only an effect of price change on this emotion. Before learning about the discriminatory pricing practices, subjects' level of sadness was 1.22 ($s=0.78$, $N=49$) for the piece of cake and 1.48 ($s=0.95$, $N=53$) for the fruit; these means are not significantly different ($p=0.217$). After learning about the price paid by the friend, sadness scores became 1.92 for the cake ($s=1.15$, $N=57$) and 2.01 for the fruit salad ($s=1.18$, $N=47$); they are significantly different as compared to initial values ($F(1,206) = 18.450$, $p=0.000$). As for joy, it would not be surprising to find higher values with hedonic than with utilitarian products. However, although joy averages are higher for the hedonic than for the utilitarian product before learning about price changes, neither a main effect nor an interaction between product type and price change was found, only a change in the emotion related to the perception of discriminatory pricing ($F(1, 205)=264.296$, $p=0.000$; $\bar{x}_{\text{Before learning price paid by friend}}=1.56$ ($s=1.00$, $N=102$) and $\bar{x}_{\text{After learning price paid by friend}}=4.47$ ($s=1.54$, $N=104$). Finally, we analyzed the aspect of surprise in perception of discriminatory pricing. As expected, we did not find a main effect or interaction between the variables and the product type, only a main effect of surprise ($F(1, 205)=59.800$, $p=0.000$; $\bar{x}_{\text{Before learning price paid by friend}}=1.82$ ($s=1.18$, $N=102$) and $\bar{x}_{\text{After learning price paid by friend}}=3.27$ ($s=1.46$, $N=104$).

Final Consideration

In this article we aimed to verify the influence of product and representation type on perception of justice and perception of price unfairness, in a context of discriminatory pricing – a widely-employed market practice nowadays (Jin et al., 2014; Weisstein et al., 2013; Xia & Monroe, 2010). We also assessed the impact exerted on those variables by various levels of

price changes, in both directions. Based on construal level theory, we developed two hypotheses to demonstrate that, just as a hedonic product's emotional level induces fantasies, expectations, and abstractions, its representation type may influence consumer behavior. Results showed an interaction between product and representation types. When products are represented only by words, consumers have to use their imagination; this lowers construal level and makes people less sensitive to utilitarian products. Such a result is not seen when products are represented by pictures. According to previous studies (Isabella & Mazzon, 2014), when a product is pictorially represented within a discriminatory pricing situation, consumers are usually more price-sensitive in relation to the utilitarian than the hedonic product.

Our findings are interesting for marketing academia, as many studies use photo and word stimuli, but few of them have investigated their differences (Amit et al., 2009), especially as referred to consumer behavior. It is not clear whether results from previous studies suffered an influence of product representation type. This study also contributes by trying to understand product evaluations in a post-purchase situation, and not during the choice process, as is more usual in the literature (Aydinli & Bertini, 2014; Shiv & Fedorikhin, 1999; Trope et al., 2007). Our main contribution for marketing practice is by testing the best way to represent products (either by words or pictures) when companies use a discriminatory pricing strategy.

This study was limited to an exploration of discriminatory pricing strategies; it would be interesting to test consumer perceptions of different products and prices in a common shopping situation. It was also limited in terms of product types; future research could explore differences in consumer behavior referring to other product categories. In this study, we used only two representation types – words and color photos. Future endeavors could focus on distinct representation types and situations, such as drawings, movies, commercials, and the physical exposure of products in the point of purchase or consumption. Also, just as we exploited Construal Level Theory, other theories could be applied, such as Dual Process Theory. Thus, we believe that future studies could complement our findings from this initial research.

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