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**Product packaging and consumers' emotional response.
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Product packaging and consumers' involvementemotional response. Does spatial representation influence emotional reactionsproduct evaluation and choice?

Abstract

Purpose - The purpose of this paper is to investigate the influence of different spatial representations (foreground and background) of a product image on the package on the consumer (a) ~~involvement with the product (measured in terms of~~ emotional state) and (b) intention to buy ~~the product~~, drawing upon the Construal Level Theory (CLT).

Design/methodology/approach – Two between-subjects experimental designs were conducted. A face reading software was used to measure the emotional reactions of participants while watching the stimuli.

Findings - Empirical results showed that the foreground representation of the product, triggered by a lower perceived psychological distance between the subject and the product, generates more positive emotional responses compared to the background representation. However, the purchase intention did not significantly differ between the foreground and the background condition.

Research limitations/implications - The study enriches the literature on CLT and provides some guidance to manufacturers and product managers for the understanding of the role of packaging in influencing consumer behaviour.

Originality/value – The paper contributes to the research on the presence of the product imagery on the package. The focus is shifted from the presence/absence of the picture to its position (proximal or distal). This aspect has been neglected in previous studies. Moreover, it is the first application of face reading to support CLT basic assumption and enrich extant marketing research on packaging.

Keywords

Packaging, Construal Level Theory, spatial distance, emotions, face reader

Article Classification

Research paper

Introduction

Packaging is one of the most important factors in the buying decision process. It communicates to consumers at the point of sale, thus becoming an essential part of the selling strategy (e.g. Prendergast and Pitt, 1996; Rettie and Brewer, 2000; Silayoi and Speece, 2004). In today's increasingly competitive market-place, package becomes a primary vehicle for communication and branding, particularly in the case of new brand introductions, brand repositioning or extensions, product changes, and in product categories in which the use of pictures on packages would provide a strategic method of differentiation (Garber et al., 2000). In light of this evidence, an understanding of the impact of package design elements is crucial to enhance point of purchase communication.

A central stream within recent research concerns the visual impact of packaging in purchase decisions. Such research found that package form and appearance could have a powerful effect on consumers' responses to a product. In particular, some studies have measured the effect of incorporating product imagery (on the packaging) on consumers' attention, choice and brand

beliefs, suggesting that pictures may provide potential advantages for packaging strategy (e.g. Underwood et al., 2001; Underwood and Klein, 2002). Hence, these studies have tried to answer the following question: if product image influences buying behaviour, will its removal from the package discourage consumers from purchasing that product? To the author's knowledge, no study exists that has explored the effect of different spatial positions (proximal or distal) of a product picture on the package in broadening the product's appeal and influencing the consumer's purchase decision.

The purpose of this paper is to contribute to the understanding of the role of the package as a communication vehicle, starting from the research on the presence of the product imagery on the packaging. The focus is its position (foreground and background) in the spatial context of the illustration on the package, using recent theoretical advances related to the Construal Level Theory (CLT). CLT posits that individuals construe mental representations of stimuli in their environments in different ways: in terms of abstract and generalized features (high-level construals) or in terms of concrete and contextualized features (low-level construals) (Trope & Liberman, 2000; 2003). The level of construal depends on the psychological distance from the stimuli (objects or events), which systematically changes people's responses to those stimuli. For example, in construing the more psychological distant events, people would be more likely to use stereotypes rather than individuating information, generalized scripts rather than more concrete, non-schematic details, trait concept rather than situation-specific goals, and causal in construing the more explanations rather than unconnected occurrences (Liberman et al., 2002). The concept of psychological distance is considered as a broad, multifaceted concept, which includes different dimensions: temporal (near future vs distant future), social (self vs other; in-group vs out-group), spatial (here vs there; near vs distant), and certainty-related (certain vs uncertain) distance.

Recently, literature has suggested that the construal level approach provides an integrative framework for explaining and predicting consumer behaviour. Researchers have used the CLT to understand different important aspects of consumers' decision-making, including the formation of consideration sets, methods for evaluating brands, and purchase decisions (Dhar & Kim, 2007; Kardes et al., 2006; Trope et al., 2007). We add to this line of inquiry by focusing on the spatial dimension of the psychological distance and examining the influence of different spatial representations (foreground and background) of a product on the package on the consumer (a) ~~involvement emotional state with the product~~ and (b) intention to buy it.

Two experimental studies were conducted to respond to a call for more research on the role of construal level in consumer behaviour contexts (Liberman et al., 2007; Lynch & Zauberger, 2007). Findings are in line with the key conceptual premise of CLT and should provide managers with a greater understanding of the package's ability to communicate and the nature of its effects on consumers' product evaluation and choice.

The paper is organized as follows. The next section reviews the relevant literature and proposes the research hypotheses. Then Study 1 and Study 2 are presented, describing the research methodology and depicting results. General discussion, limitations and recommendations for further developments end the work.

Literature review

The role of packaging in the buying decision process

In marketing literature, packaging is considered a vehicle for consumer communication and branding, which takes a role similar to other marketing communications elements (Rettie and Brewer, 2000).

According to some authors, packaging forms part of the product and the brand (Evans and Berman, 1992). In this perspective, it is an intrinsic property or characteristic of the product. On the contrary, other authors considered packaging as an extrinsic element, like price. It is related to the product and takes a role in the buying and consuming process but that does not form part of the physical product itself (Olson and Jacoby, 1972; Underwood, 2003; Underwood et al., 2001). For Keller (1998) it is one of the five elements of the brand together with the name, the logo and/or graphic symbol, the personality and the slogans.

From the consumers' perspective, the package often represents the product itself. Its overall features can underline the uniqueness and originality of the product and influence the quality judgments (Silayoi and Speece, 2007). Several factors justify the crucial role of package in the purchasing process. First, package is the first thing that individuals see before making the final decision to buy (Vidales Giovannetti, 1995). This is particularly relevant for products purchased without prior planning in an impulse buying event. In this case, the differential perception and the positioning of the graphics elements on a package may make the difference between identifying and missing the item (Herrington and Capella, 1995). Second, many consumers today shop under higher levels of perceived time pressure and tend to purchase fewer products than intended (Herrington and Capella, 1995). Therefore, a package that attracts consumers at the point of sale will help them make decisions quickly (Silayoi and Speece, 2004; 2007). Third, consumers' purchasing intention depends on the degree to which they expect that the product can satisfy their expectations about its use (Kupiec and Revell, 2001). Nevertheless, when they have not even thought about the product before entering the store, their intention to buy is determined by what is communicated at the point of purchase. As a result, the package becomes a critical factor in the decision-making process because it communicates to consumers favourable or unfavourable implied meaning about the product at the time they are actually deciding in the store (Silayoi and Speece, 2007). Finally, in the current self-service economy, packaging provides manufacturers with the last opportunity to persuade possible buyers before brand selection (McDaniel and Baker, 1977). Therefore, decisions on the communication elements in the package became strategic marketing and positioning decisions.

Among the elements that compose the packaging, visual imagery is an essential attribute. It refers to the picture of the product, which has the capability to communicate aspects of how a product looks, tastes, feels, smells, or sounds. Pictures are more vivid stimuli than words, are more noticeable and easier to recall and, thus, may serve to attract consumers' attention and set expectations for the contents (Underwood et al., 2001). Prior research focusing on visual imagery of packaging suggests that the picture may be an information cue that consumer can use to compare and differentiate among products and brands. Underwood and Klein (2002) demonstrated that packages displaying the pictures of food products could communicate information about the brand, and thus change brand beliefs. In another empirical study, Underwood et al. (2001) found that adding product picture to a package positively affect attention to the brand and brand choice. Contextually, such influence is moderated by the degree of familiarity the consumer has with the brand.

The basis for picture effectiveness may be its vividness and ability to evoke imagery processing of product consumption. A well-represented product image is likely to create more enjoyable aesthetic experiences for the consumer and evoke memorable and positive association with the product

(Underwood et al., 2001; Underwood and Klein, 2002). This has significant implications in terms of marketing. For two years, Campbell Soup Co. researchers conducted a series of interviews and neuromarketing studies to see how consumers react to the elements of package design of its condensed soups (from pictures of bowls of soup to logo design) with the aim of figuring out how to increase sales. Results showed that the soup pictured on the can and shelf labels did not look warm. And the big spoon holding a sample of soup on each label provoked little emotional response. In light of these results, the company changed some of the iconic pictures of its condensed soups on packages: steam rose from larger, more vibrant pictures of soup in more modern, white bowls, and those unemotional spoons disappeared.

The present research intends to contribute to the knowledge on this vein of research by shifting the focus from the presence/absence of a realistic picture of the product to its position (foreground and background) on the package. The theoretical framework is the Construal Level Theory, with a focus on the spatial dimension of the psychological distance.

Theoretical Framework: Construal Level Theory

Construal level theory (CLT) is a leading theory that posits that individuals construct different mental representations of stimuli in their environments, which vary in terms of the degree of abstraction (Freitas, Salovey, & Liberman, 2001; Liberman and Trope 1998; Trope & Liberman, 2000; 2003; Vallacher & Wegner, 1987). The level of abstraction depends on the psychological distance, which changes people's perceptions of an object or an event by altering the way people mentally construe it.

The conceptual framework of psychological distance was first introduced by Lewin (1951) and subsequently reviewed within CLT (Trope and Liberman, 2003). It is defined as the subjective distance between an actor and an event in the actor's psychological space and is considered the primary determinant of construal level. CLT assumes that individuals tend to use concrete mental models when thinking about near psychological objects (i.e., low-level construals) and more abstract mental models when thinking about distant psychological objects or events (i.e., high-level construals). In other words, people mentally construe objects that are psychologically near in terms of low-level, detailed and contextualized features, whereas distant psychological events are construed in terms of high-level, abstract, and stable characteristics (Trope, Liberman & Wakslak, 2007).

A considerable body of research demonstrates that differences in construal level lead to differences in the ways that individuals make judgments and choices (e.g. Fujita et al., 2006; Kardes et al., 2006; Trope and Liberman, 2000). Changes in construal levels may lead people to shift their evaluations of a stimulus when information changes such that people's evaluations of an event or an object are more influenced by the value associated with high-level (low-level) construals when the event or the object is psychologically distant (near).

Trope and Liberman (2003) theorized that there are four major distance dimensions that are highly relevant to the psychology of consumer decision-making and can be unified under the psychological space: temporal, social, spatial, and certainty-related (hypotheticality) distance. There is accumulating evidence that the basic principle of CLT applies to all these dimensions of psychological distance: the greater the temporal, social, spatial or hypothetical distance from an event, the more distant it appears and the more abstractly we would expect it to be represented.

The basic premise of CLT originated from a particular focus on temporal distance (see Liberman & Trope, 1998) and numerous studies examined the hypothesis that distant future events are

represented in a more abstract, structured, high-level manner than near future events. Trope and Liberman (2000) tested a change in the weights of abstract versus concrete features of events, according to temporal distance, by varying the valence of the two types of construals. They found that individuals rated the events as more positive at a near versus distant future time and concluded that high-level construal features, compared with low-level construal features, are more important in determining distant future preferences than near future preferences. Similarly, Nussbaum et al. (2003) reported that when participants were allowed to seek new information before making a prediction about a target person, they tended to prefer information about more global traits (high-level construals) when the goal was to predict the target person's behaviour in distant rather than near future situations.

Level of construal may also be related to social perspective, such as self *vs* other, in-group *vs* out-group, and familiar other *vs* unfamiliar other. Many studies have documented the actor-observer bias – the tendency to explain others' behaviours in dispositional (high-level, abstract) terms and one's own behaviour in situational (low-level, concrete) terms (e.g. Fiedler et al., 1995; Jones, 1976; Jones and Nisbett, 1972). Similarly, it has been shown that when social distance to another person increases from an in-group member (close social distance) to an out-group member (far social distance), people will describe the target person using abstract, primary concepts such as stereotypes and traits (Fiedler et al., 1995; Idson and Mischel 2001; Linville et al., 1996; Werkman et al., 1999). Compared to in-groups, out-groups are perceived as more homogenous (Jones et al., 1981; Park and Judd, 1990; Park and Rothbart, 1982), less differentiated into subgroups (Brewer and Lui, 1984; Linville, 1982; Park et al., 1992), and as possessing more structured, predictable sets of properties (Linville et al., 1996). In synthesis, the less similar someone is to oneself or in-group members, the more socially distant they typically seem; therefore, the behaviour performed by a dissimilar other would be represented at a higher level of construal than behaviour performed by a similar other (Trope et al., 2007).

Literature is also consistent with the notion that more abstract construals are applied to an improbable event as compared to a probable event. An improbable event would seem more distant than a probable event, and the lower the probability of the event, the greater its psychological distance (Trope et al., 2007). Liberman et al. (2002) used a categorization task in which participants grouped objects related to each of the four scenarios into as many groups as they deemed appropriate. Participants were asked to imagine that they were either highly likely or highly unlikely to engage in the scenario. Results showed that participants in the high-likelihood condition created fewer, broader groups out of the objects than participants in the low-likelihood condition. Similarly, manipulating construal level in different ways and examining a variety of probability judgments, Wakslak and Trope (2009) found that participants led to adopt a high-level-construal mind-set made lower probability assessments than did those led to adopt a low-level-construal mind-set.

Finally, a series of studies examined the relationship between spatial distance and mental construal. It has been shown that spatially distant events occurring in a different country are associated more with high-level construals than events occurring in the local city (Fujita et al., 2006). In another experiment, a sample of students at NYU's Washington Square campus watched a video of two students interacting and provided a written description of the activity in the video (Fujita et al., 2006). Findings showed that participants who were told that the video protagonists were located in a spatially distant location used more abstract language in describing the events in the film than those who believed the video protagonists were located in a spatially near location.

Influence of spatial distance on ~~product involvement~~ emotional state and intention to buy

Amit (2006) has recently suggested that because psychologically near events or objects tend to be represented concretely and psychologically distant events or objects tend to be represented abstractly, psychological distance should impede the processing of concrete event/object representations. In particular, since a picture is a concrete representation that carries the properties of the referent object in full detail, processing of pictures should be facilitated when they are psychologically near. In an experiment on spatial distance, Amit presented a pair of items in pictorial format inside background pictures that created an illusion of depth. The items were presented either in proximal or distal position in the background picture. As expected, participants responded faster to pictures of objects when they were spatially near than spatially distant.

The present work relies on the CLT basic assumptions and Amit's (2006) findings on the effect of different construal levels in a background picture. Focusing on spatial dimension of the psychological distance, it proposes that different spatial distances in the representation of a product may influence the consumer ~~involvement-emotional state with this product~~ and, consequently, ~~the his/her purchase~~ intention ~~to buy it~~. Specifically, it is hypothesized that the proximal (foreground) position of the product imagery on the packaging may reduce the psychological distance between the consumer and the product, compared to distal (background) position. If consumers mentally represent products that are psychologically near in terms of low-level, detailed and contextualized features, this could translate in a higher and positive ~~involvement-emotional response~~ and a greater intention to purchase compared to psychologically distant products, which are represented in terms of high-level, abstract, and stable characteristics. ~~In this study, involvement was measured in terms of~~ The emotional state, ~~which~~ is considered as "a short-term affective state that usually has a definite cause and clear cognitive content" (Forgas, 1992). Other authors have hypothesized that emotional intensity about events might make those events seem psychologically closer in multiple dimensions, including time, space, and sociality. Starting from the evidence that increased emotional intensity is naturally associated with reduced objective distance (Frijda, 1988, 1992; Loewenstein, 1996; Metcalfe and Mischel, 1999), Van Boven et al. (2010) proposed that, in everyday experience, people may feel more intense emotions when events are psychologically closer in temporal, spatial, and social distance. In six experiments, they highlighted the role of emotional intensity in reducing perceived psychological distance. Sharing this point of view, the following hypotheses are formulated:

H1: The proximal (foreground) position of the product imagery on the package stimulates more positive emotions than the distal (background) position.

H2: The proximal (foreground) position of the product imagery on the package positively influences purchase intention compared to the distal (background) position.

Methodology

The emotional ~~involvement-state~~ of individuals watching the picture of the product on the package in the two spatially distance conditions (foreground and background) was measured through the affective computing technology. The FaceReader 5 software by Noldus was used to track and

measure the presence and intensity of emotional reactions of participants as captured in their facial expressions while watching the stimuli, namely the product package images. Such facial-recognition device captures images of human face through the use of a webcam and can identify the six basic emotions described by Ekman (1970): happiness, sadness, anger, surprise, scare, disgust and a neutral state. Moreover, the software provides measures of overall emotional valence, which indicates whether the person’s emotional status is positive or negative. The face modelling method uses a database of over 10.000 annotated images and calculates the main sources of variation found in the model dimensionality. New faces can then be described as deviations from the mean face, using a vector. The actual classification of the facial expressions is done by training an artificial neural network, which takes the above vector as input. FaceReader can recognize facial expression with an accuracy of 90%. The output of FaceReader is a vector of values for the seven emotions and an overall valence of emotional state. The possible values of each emotion range from 0 to 1, and valence ranges from -1 to +1. The valence measure compares the conformity of the facial expression to “happy”, the only positive emotion, with that to the four negative emotions (sad, angry, scared, disgusted).

Two between-subjects experimental designs were conducted. The research design and the data collection procedure are the same for the two studies. They differ with regard to the sample composition and the materials used as stimuli. Specifically, well-known brands were used in Study 1 and fictional brands in Study 2. In the first case, the subjects were familiar with the brands, while in the second case individuals were not ~~been~~-exposed to them before. Investigating these two conditions reduced the potential bias due to the familiarity with actual brands.

The information on behavioural intentions was collected through a self-administered questionnaire. Questions measuring purchase intention were adaptations of the 3-item scale proposed by Putrevu (2008). Responses ranged from 1 (= unlikely) to 7 (= likely). Participants were asked to indicate the level of probability towards three statements: “The next time I buy *product category*, I will consider *product’s name*”, “The next time I consider purchasing *product category*, I will enquire about *product’s name*”, “The next time I buy *product category*, I will buy *product’s name*”. The scale exhibited high reliability ($\alpha = .92$).

Study 1

Experimental Stimuli

Two well-known brand name food products were chosen as stimuli for the study: biscuits for breakfast by Balocco and [flatbreadfocaccia snack](#) by Mulino Bianco.

In the original packaging design, the picture of the two products is in the foreground. Therefore, both package images were manipulated to “move” the product in the background. Specifically, in the background condition, the foreground imagery of the product was substituted with the image of some of its ingredients (milk and chocolate for biscuits and flour for [flatbreadfocaccia snack](#)). In synthesis, four images were used as experimental stimuli (Fig. 1): the package featuring the biscuits in the foreground (prox_bisc); the package featuring the biscuits in the background (dist_bisc); the package featuring the [flatbreadfocaccia snack](#) in the foreground (~~prox_bread~~prox_focaccia); the package featuring the [flatbreadfocaccia snack](#) in the background (~~dist_bread~~dist_focaccia).

Insert Figure 1 here

Sample and Procedure

The study was conducted at University of Parma, Italy. Forty students (males = 12; females = 28; mean age = 24), habitual buyers of the products selected as stimuli, were recruited for participation. They were equally and randomly distributed among the four conditions (“prox_bisc”, “dist_bisc”, “~~prox_bread~~prox focaccia”, and “~~dist_bread~~dist focaccia”).

Subjects were welcomed in a laboratory room and received the instructions for conducting the study. They were seated in front of a computer equipped with a webcam and were shown a video in which experimental stimuli appeared interspersed with various pictures (landscapes, foods, animals). A total of 17 images were projected for three seconds each and the experimental stimuli appeared in the video for three times, in 12 seconds distance from each other. Moreover, to maintain a high level of attention, a red dot was presented at the centre of the screen for two times during the video projection. At the sight of the red dot, the participants were required to say “red”. Each of the four videos (one for each experimental condition) lasted about 60 seconds. While viewing the video, subjects were videotaped and the videotapes were later analysed with the Noldus FaceReader.

Subjects completed the task using pen and paper. After viewing the video, they received a printed image of the product they had observed in the video and the self-administered questionnaire aimed at assessing their purchase intention, in addition to general demographics (age and gender). Two versions of the questionnaire were prepared for each types of product (biscuits and ~~flatbread~~focaccia snack).

Results

The non-parametric Mann-Whitney U-test was used to compare means and test the hypotheses. This was necessary as the sample size is small, which precluded the use of parametric techniques.

Findings from facial expressions showed a range of viewers’ reactions while watching the stimuli. The level of global emotional ~~involvement-response~~ was quite high for three of the four experimental groups (“prox_bisc”, “dist_bisc”, “~~prox_bread~~prox focaccia”). People in the “~~dist_bread~~dist focaccia” condition exhibited the lowest level of ~~involvement-reaction~~ (Tab. 1).

In each experimental condition, a predominant emotion emerged. Excluding the neutral state, subjects who were shown the original ~~flatbread~~focaccia snack package registered the higher level of happiness (0.181), followed by those who were shown the original biscuits package (0.140). When the biscuits were positioned in the background (“dist_bisc” condition) sadness prevailed over the other emotions (0.246). As just said, the package featuring the ~~flatbread~~focaccia snack in the background (“~~dist_bread~~dist focaccia” condition) raised a weak response for all the six basic emotions, although a slight prevalence of happiness emerged (0.092).

Combining the results for the two types of package (original and modified), the comparison of the “happy” average level highlighted how seeing the product imagery in the proximal position stimulated more positive emotions than the distal position (0.161 vs 0.075). Mann-Whitney comparison between the two samples revealed a significant difference on this variable ($Z = -2.242$, $p < .05$), thus supporting H1. This result is in line with the CLT basic assumption that differences in psychological (spatial) distance of a stimulus lead to differences in the ways that individuals evaluate it. Specifically, the proximal (foreground) position of the product imagery on the packaging may reduce its psychological distance and stimulate more positive ~~involvement~~emotions,

compared to distal (background) position. Analysis of the overall emotional valence supported such results showing higher and positive values for the original package conditions and lower or negative values for the modified package conditions.

The measure of behavioural intentions highlighted a higher level of purchase intention for the original package experimental groups compared to modified package experimental groups (8.7 vs 7.9; Tab. 2). However, this difference was not statistically significant ($Z = -.277$; $p > .05$). Therefore, H2 was not supported by empirical data.

Insert Table I here

Insert Table II here

Study 2

Experimental Stimuli

The products chosen as stimuli are crackers and a lemon cake. A fictional brand and two versions of the package design were created for each types of product. In the first version, the picture of the product (crackers or cake) was in the foreground. In the second version, the product was depicted in the background and some of its ingredients (flour for crackers and lemons, eggs and milk for the cake) in the foreground. In synthesis, four images were used as experimental stimuli (Fig. 2): the package featuring the crackers in the foreground (prox_crack); the package featuring the crackers in the background (dist_crack); the package featuring the lemon cake in the foreground (prox_cake); the package featuring the lemon cake in the background (dist_cake).

Insert Figure 2 here

Sample and Procedure

Sixty students (males = 28; females = 32; mean age = 26) from University of Parma, Italy, were recruited for participation, after checking that they usually purchased the products selected as stimuli. They were equally and randomly distributed among the four conditions (“prox_crackers”, “dist_crackers”, “prox_cake”, and “dist_cake”).

Similarly to Study 1, four video lasting 64 seconds were created in which experimental stimuli appeared interspersed with various pictures (landscapes, foods, animals). Each stimulus appeared in the video for three times, in 15 seconds distance from each other. To maintain a high level of attention, participants were required to say “red” at the sight of a red dot. While viewing the video, subjects were videotaped and the videotapes were later analysed with the facial-recognition software. Subsequently, they received a printed image of the product they had observed in the video and filled in the self-administered questionnaire. Two versions of the questionnaire were prepared for each types of product (crackers and cake). In addition to general demographics (age and gender) and purchase intention, the three seven-point semantic differential scale of Schoormans and Robben (1997) was used to assess participants’ evaluation of the package as a whole (“ugly-beautiful”, “badly finished-very well finished”, and “does not confer quality-confers quality”). Higher scores on the summated scale indicated more positive evaluation of the package. The scale exhibited good reliability ($\alpha = .71$).

Results

The non-parametric Mann-Whitney U-test was used to compare means.

Excluding the neutral state, happiness prevailed over the other emotions when the products were positioned in the foreground (“prox_crack”: 0.233; “prox_cake”: 0.224; Tab. 2). Mann-Whitney U-tests revealed significant differences ($p < .05$) on this variable comparing with the background conditions (“dist_crack” and “dist_cake”). Subjects who were shown the package featuring the lemon cake in the background registered the higher level of sadness (0.078). Finally, people in the “dist_crack” condition raised a weak response for all the six basic emotions, exhibiting the lowest level of involvementreaction. Analysis of the overall emotional valence supported such results showing positive values for the foreground conditions and negative values for the modified package conditions.

Combining the data for the two types of package (foreground condition and background condition), the comparison of the “happy” average level highlighted how seeing the product imagery in the proximal position stimulated significantly more positive emotions than the distal position (0.228 vs 0.030; $Z = -2.882$, $p < .05$). Conversely, anger significantly prevailed when the products were positioned in the background (0.010 vs 0.004; $Z = -2.242$, $p < .05$).

These results support the hypothesis that the proximal position of the product imagery on the packaging may reduce its psychological distance and stimulate more positive involvementemotions, compared to the distal position.

The analysis of the questionnaire did not support H2. Although subjects watching the product images in the foreground showed a higher level of purchase intention compared to the others (Tab. 4), this difference was not statistically significant ($Z = -1.090$; $p > .05$). However, the packaging attractiveness counterbalances this effect as packages featuring the products in proximal position received a significantly better evaluation compared to packages featuring the products in distal position ($Z = -2.972$; $p < .05$).

Insert Table III here

Insert Table IV here

Discussion

In a context of growing competitive market conditions, the package has become a key element for conveying image, symbolism and/or brand meaning, thus effectively differentiating the product from competitors (Underwood and Ozanne, 1998). As a consequence, opportunities for packaging to attract, communicate and influence consumers’ choices are growing thing relative to more traditional marketing communication vehicles (e.g. mass media advertising). According to Harchkham (1989), the package is the “shopper’s window” to a product because it often projects the initial impression he forms about the product, its quality or its value. Therefore, literature has focused on the communication elements in the package and, among these, on the presence of the product imagery as a vehicle to influence consumers’ evaluation in terms of perception of intrinsic characteristics of the product and purchase decisions.

The purpose of the present research was to examine the effect of different spatial representations (foreground and background) of a product on the package on the consumer's (a) ~~involvement with the product~~ emotional state and (b) intention to buy it, drawing upon recent theoretical advances related to the Construal Level Theory (CLT). In two affective computing experiments, ~~involvement was measured in terms of the~~ emotional state was measured through the use of a facial-recognition software.

The results show that the foreground representation of the product on the packaging, triggered by a lower perceived spatial distance between the subject and the product, generates on average more positive emotional responses compared to the background representation. Moreover, packages featuring the products in proximal position received better evaluation compared to packages featuring the products in distal position. These evidences support the literature on CLT, which suggests that differences in psychological (spatial) distance of a stimulus lead to differences in the ways that individuals evaluate it. The positive emotional responses and the greater appreciation for the packaging is likely to result in a more favourable image and perception of the product itself.

However, the analysis of behavioural intentions does not support the second research hypothesis (the proximal position of the product imagery on the package increases purchase intention compared to the distal position). In both studies, the higher level of purchase intention for subjects watching the package featuring the product in the foreground was not statistically significant. Therefore, if the perception of spatial distance alters the emotional responses in favour of the product in foreground, cognitive responses showed that the "distance" variable does not consistently affect the buying process. It is conceivable that the spatial distance affects the emotional ~~involvement-reaction~~ but it is the combination of different elements of packaging (colours, words, and images) which can have a stronger impact on the consumer's choice than an image change alone. However, the present research shows that the attention to specific variables, such as the position of the product imagery on the package, combined with other elements of packaging capable of influencing the consumer's response to the product, can improve the effectiveness of packaging as a communication vehicle.

The study has useful implications for both academics and professionals. From a theoretical point of view, it enriches the CLT literature by investigating how spatial distance affects consumers' ~~involvement with~~ emotional response to the products and supporting the use of such approach as a framework for explaining and predicting some important aspects of the consumers' evaluation process. Contextually, it contributes to the understanding of the role of packaging in influencing consumers' responses to a product. To the author's knowledge, this is also the first application of face reading to support CLT's basic assumption and enrich extant marketing research on packaging. From a professional standpoint, the research provides some guidance for manufacturers and product or category managers. To achieve the communication goals effectively and to optimize the potential of packaging, managers must understand consumers' response to their packages, and take into account their perceptual processes during design decisions (Nancarrow et al., 1998). Based on present results, the proximal position of the product in the spatial context of the illustration on the package stimulates more positive emotions than the distal position. Such emotional response state ~~translates into more positive involvement, which~~ may reduce the psychological distance between the consumer and the product. This information should be particularly beneficial in strategic decision-making aimed at communicating effectively a product's core essence and creating a differential advantage at the point of purchase. Managers should design and test packages that

feature the product picture in the foreground. Such design decisions may help to gain attention for the product and create positive beliefs about its intrinsic attributes.

Second, the study has implications for companies managing unfamiliar brands that compete with leading brands and need to develop positioning strategies that increase their products and brand's familiarity to consumers. They may leverage the product representation on the package by emphasizing some superior secondary attributes of their products and reducing consumers' perceived psychological distance to them.

The results also have potential managerial importance for e-commerce, in which spatial distance is becoming an increasingly prevalent aspect of consumer decisions (Troepe et al., 2007). With the growth of online shopping, the buying process frequently occurs with sellers in remote spatial locations and the images projected on the screen become the substitute of the packaging. In this context, the image's design and the ways of representing the products play a crucial role in reducing the perceived psychological distance.

Guidance from this study could apply to all media that allow visual representation of the product: print and television advertising; digital media; in-store signage. If the perceived distance affects the interpretation we have of an object or event, then the following questions arise that should be addressed:

- Are ads that tend to minimize the product representation (e.g. for luxury goods) in favour of other attributes really effective? For such types of products, has the perception of distance an influence or in the luxury sector is just the brand to influence the emotional **involvement reaction** of individuals?
- Does the perception of spatial distance change depending on the fact that the consumer is physically in front of the product or not? Does the screen of the device (PC, smartphone) increase the perceived distance between the consumer and the product?
- In advertising videos where the product is represented by different perspectives, could frames showing it in the background be eliminated, thus achieving cost savings without losing communication effectiveness?
- Can social marketing take advantage from the results of the present research? May social marketing communication campaigns decrease the individuals' perception of distance with regard to a far catastrophic event or an incorrect behaviour, thus increasing the emotional **involvement-response** and the effectiveness of the message?

Limitations and future research

Some limitations of this work merit future inquiry. First, the sample composition focused on a student target may have partially influenced the findings of the study, limiting its generalizability. Further studies are recommended in order to extend the investigation to a larger sample that is representative of the general population. Second, because the position of the product imagery on the package does not influence purchase intention, it would be appropriate to include in the analysis variables that may mediate the causal relationships. Third, only intentions were measured, not actual behaviours. A new empirical research should be undertaken to investigate if the differences in the product representation on the package translate into different purchasing decisions. Contextually, further research in this field should verify whether the product imagery position is capable of affecting other aspects of the consumer's response to the product (e.g. attention, evaluation, taste expectation). Fourth, it would be interesting to replicate the study focusing on

private labels in order to assess if the consumers' emotional reaction differ compared to industrial brand products. Finally, investigating the hypothesized relationships through an in store experiment would enrich the results of the study. The attention prompt in the experiments could elevate cognitive elaboration or product involvement, which may in turn affect the purchase intention measured. If in the store individuals are less thoughtful and show a lower level of involvement towards the product, then the packaging would have more impact on behaviour.

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Figure 1. Experimental Stimuli. Study 1

Table I. Intensity of emotions for each experimental condition. Study 1

| Experimental stimuli | Neutral | Happy | Sad | Angry | Surprised | Scared | Disgusted | Total | Valence |
|---------------------------------|---------|--------------|--------------|-------|-----------|--------|-----------|-------|---------|
| Original biscuits package | 0.776 | 0.140 | 0.112 | 0.003 | 0.023 | 0.001 | 0.001 | 0.281 | 0.034 |
| Modified biscuits package | 0.764 | 0.057 | 0.246 | 0.002 | 0.013 | 0.005 | 0.002 | 0.326 | -0.179 |
| Original focaccia snack package | 0.635 | 0.181 | 0.124 | 0.019 | 0.007 | 0.001 | 0.048 | 0.380 | 0.125 |
| Modified focaccia snack package | 0.785 | 0.092 | 0.049 | 0.006 | 0.031 | 0.001 | 0.014 | 0.193 | 0.064 |
| Original package | 0.706 | 0.161 | 0.118 | 0.011 | 0.015 | 0.001 | 0.025 | 0.330 | 0.080 |
| Modified package | 0.775 | 0.075 | 0.147 | 0.004 | 0.022 | 0.003 | 0.008 | 0.260 | -0.057 |

Table II. Descriptive Statistics for Purchase Intention. Study 1

| | Purchase intention (min = 3; max = 21) | |
|---------------------------------|---|-----|
| | mean | SD |
| Original biscuits package | 9.8 | 6.4 |
| Modified biscuits package | 8.7 | 5.3 |
| Original focaccia snack package | 7.6 | 5.3 |
| Modified focaccia snack package | 7.1 | 6.1 |
| Original package | 8.7 | 5.9 |
| Modified package | 7.9 | 5.6 |

Figure 2. Experimental Stimuli. Study 2

Foreground condition



Background condition



Figure 2. Experimental Stimuli. Study 2

127x120mm (150 x 150 DPI)

Table III. Intensity of emotions for each experimental condition. Study 2

| Experimental stimuli | Neutral | Happy | Sad | Angry | Surprised | Scared | Disgusted | Total | Valence |
|----------------------|---------|--------------|--------------|-------|-----------|--------|-----------|-------|---------|
| Prox_crack | 0.746 | 0.233 | 0.052 | 0.002 | 0.002 | 0.001 | 0.002 | 0.292 | 0.180 |
| Dist_crack | 0.892 | 0.047 | 0.045 | 0.014 | 0.006 | 0.000 | 0.001 | 0.113 | -0.006 |
| Prox_cake | 0.647 | 0.224 | 0.061 | 0.006 | 0.003 | 0.000 | 0.001 | 0.295 | 0.161 |
| Dist_cake | 0.855 | 0.013 | 0.078 | 0.005 | 0.006 | 0.003 | 0.001 | 0.106 | -0.068 |
| Foreground condition | 0.697 | 0.228 | 0.056 | 0.004 | 0.003 | 0.001 | 0.001 | 0.293 | 0.171 |
| Background condition | 0.874 | 0.030 | 0.061 | 0.010 | 0.006 | 0.002 | 0.001 | 0.110 | -0.037 |

Table IV. Descriptive Statistics for Purchase Intention and Package evaluation. Study 2

| | Purchase intention | | Package evaluation | |
|----------------------|--------------------|-----|--------------------|-----|
| | mean | SD | mean | SD |
| Prox_crack | 10.0 | 4.2 | 13.5 | 3.7 |
| Dist_crack | 9.5 | 3.6 | 11.0 | 2.3 |
| Prox_cake | 10.4 | 5.2 | 14.5 | 3.6 |
| Dist_cake | 8.8 | 5.2 | 12.6 | 3.6 |
| Foreground condition | 10.2 | 4.6 | 14.0 | 3.6 |
| Background condition | 9.2 | 4.3 | 11.8 | 2.2 |