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When It's What's Outside That Matters: Recent Findings on Product and Packaging Design

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[to cite]:

Julio Sevilla (2012) , "When It's What's Outside That Matters: Recent Findings on Product and Packaging Design " , in NA - Advances in Consumer Research Volume 40, eds. Zeynep Gürhan-Canli, Cele Otnes, and Rui (Juliet) Zhu, Duluth, MN : Association for Consumer Research, Pages: 308-312.

[url]:

<http://www.acrwebsite.org/volumes/1510978/volumes/v40/NA-40>

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When It's What's Outside That Matters: Recent Findings on Product and Packaging Design

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Paper #1: Transparent Packaging and Consumer Purchase Decisions

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Paper #2: The Effect of Product Shape Closure on Perceptions of Quantity, Preference and Consumption

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Paper #3: Aesthetics versus Humor in Product Packaging: Their Impact on Ownership Pride

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Paper #4: Where You Say It Matters: How Product Packaging Increases Message Believability

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SESSION OVERVIEW

More than half of purchase decisions are made at the retail place (Inman and Winer 1998) and manufacturers are aware of this. This phenomenon has spawned a new emphasis on "shopper marketing," which entails examining consumer's in-store decision making from the store back and identifying what might influence the shopper. One of the key ways a product can stand out from others is through its package or shape, as it has been shown that functional and aesthetic appearance is an imperative factor in determining a product's appeal (Bloch 1995). Despite the growing awareness of the importance of product packaging, it is only fairly recently that we as consumer researchers have begun to develop theory to understand how consumers respond to the appearance of a product or package (Patrick and Peracchio 2010). This session is designed to help fill that gap.

This session offers four research papers that study the area of packaging from four separate but complementary view points. All of these projects are in very advanced stages, as they combine for a total of 18 completed experiments. Three of these projects are either under review or being prepared for submission. The first paper in the session, "Transparent Packaging and Consumer Purchase Decisions," by Darron Billeter, Meng Zhu and J. Jeffrey Inman, shows that consumers prefer transparent packages as these enhance perceptions of product trustworthiness even in cases where product quality and freshness are controlled for. This finding clearly demonstrates how physical aspects of a product design can affect higher level perceptions such as consumer trust of the product and the manufacturer. Additionally this research reveals consumers to be extremely responsive to the environmental cues perceived in the retail environment, especially to those related to the physical aspects of the product.

Consistent with this notion, the second paper, "The Effect of Product Shape Closure on Perceptions of Quantity, Preference and Consumption," by Julio Sevilla and Barbara E. Kahn demonstrates how consumer perceptions of product size, purchase intentions, and actual consumption can be altered by another seemingly irrelevant external aspect of a product, such as the degree of closure or com-

pleteness evoked by its shape. In this research, the authors keep the size and weight of the products constant and found the effect to be so robust that it trumps other well documented packaging phenomena such as the primary dimension and the attention attraction effect, and can be extended to other aspects of a product such as its label.

The third paper of the session, "Aesthetics versus Humor in Product Packaging: Their Impact on Ownership Pride," by Gratiana Pol, C.W. Park and Martin Reimann, looks at the effect that more global aspects of a package's appearance, such as its aesthetic or humorous properties, can have on product preference. The authors go beyond the first two papers by showing that a product package can transmit its socially desirable or undesirable aspects to the consumer, which will in turn impact product preference through feelings of ownership pride.

The last paper of the session, "Where You Say It Matters: How Product Packaging Increases Message Believability," by Claudia Townsend, Tatiana Fajardo and Juliano Laran, reveals another important benefit that a product package may convey. Specifically, the authors show that product claims are perceived as more effective, more credible and psychologically closer when presented on a package than when present in an advertisement. The implication of this research is that findings related to advertisements cannot necessarily be applied to packages and therefore there is an entire area of important research on product packaging to be explored.

We believe that a special session on product packaging that deals with diverse, current, fresh and substantive topics such as the ones we propose, should draw a great deal of attention from a diverse group of researchers coming from areas such as marketing strategy, psychophysics and environmental cues, retailing, product design, nutrition and public policy, hedonic consumption, aesthetics, social psychology, advertising, among others. A session that could attract such a diverse crowd would be likely to spawn a synergic, unique and fruitful discussion that could potentially lead to collaboration among researchers from these different areas. Finally, the currently proposed session benefits from the unique and diverse insights of its authors, as three of them come from different countries of Latin America, two of them from different countries of Asia, and one from Europe, while the rest are from the United States.

Transparent Packaging and Consumer Purchase Decisions

EXTENDED ABSTRACT

Due to limited processing capacity, consumers are frequently uncertain about their own preferences and the value of product offerings (e.g. Bettman, Luce and Payne 1998), and they often make inferences and construct meaning based on information that is salient in the immediate purchase context, such as product packaging. Existing literature confirms that consumers make inferences about product unit cost, capacity and consumption norms based on packaging size (Wansink 1996), packaging shape (Wansink and van Ittersum 2003) and packaging servings (Geier, Rozin and Doros 2006, Cheema and Soman 2008, Scott, Nowlis, Mandel, and Morales 2008, Coelho do Vale, Pieters, and Zeelenberg 2008).

In the current work, we study the impact of packaging transparency on consumer purchase decisions. Firms can select to encase a product in many different levels of packaging transparency, yet firms

often choose to present their products in non-transparent packaging. We suggest that consumers will exhibit greater preference for products in transparent as compared non-transparent packaging even when explicitly controlling for product freshness and quality. We argue this is the case because that (1) people associate the notion of “transparent” with honesty, openness, candidness, and forthcoming behavior (2) they often make inferences and judgment about products based on non-diagnostic packaging cues that are salient in the purchase context (such as transparency) rather than diagnostic product information (such as ingredients) that is not salient in the local decision context (e.g. Wansink and Van Ittersum 1999; Zhu, Billeter and Inman 2012). Thus, products covered in transparent packaging will be viewed as more trustworthy as compared to the exact same products presented in non-transparent packaging, leading to greater purchase intention for and higher choice of transparent products.

Experiment 1a tests whether transparent packaging increases perceptions of the products trustworthiness. To do so, we first exposed participants to a picture of a bottle of orange juice in either a transparent or a non-transparent package. Then, we asked participants to rate the product’s trustworthiness using the trustworthiness scale developed by De Wulf, Schroder, and Iacobucci (2001). Consistent with our theory, we find that consumer’s perceive the orange juice as being more trustworthy when it is in a transparent as opposed to a non-transparent package.

The natural question that follows is how perceptions of freshness and quality are impacted by the transparent packaging. To address this, we conducted Experiment 1b. Participants were presented with a variety pack of well-known wrapped chocolate bars (Hershey’s, Reeses, Kit Kats) that were altogether wrapped in either a transparent, cellophane wrapping or wrapped with a picture on the top of the packaging that depicted the exact same information shown through the transparent packaging. After viewing the variety pack, participants rated the product’s trustworthiness (using the same scale from Experiment 1a) and find greater brand trust for the transparent packaging even after controlling for freshness (the expiration dates on the packages were highlighted and identical) and quality expectations (these are well known chocolate bars with consistent quality expectations). This test demonstrates that even when consumers know that the products are identical, consumers still rely on the non-diagnostic cue of transparent packaging in determining how much they trust the product.

In experiment 2, we investigate the next step in our conceptual framework by testing whether transparent packaging impacts purchase intention. In Experiment 2, participants view either a transparent or a non-transparent bottle of liquid laundry detergent. Then, participants rate their purchase intention for the laundry detergent on a scale developed by Baker and Churchill (1977). Confirming our hypothesis, we find greater purchase intention for the product in transparent packaging.

In Experiment 3, we return to the orange juice category and test the entire framework by testing whether transparent packaging increases purchase intention; and whether that increase in purchase intention is mediated by brand trust. Participants were shown either the transparent or non-transparent orange juice bottle (as in Experiment 1a). Then, they were asked to rate the product’s trustworthiness (using the De Wulf, Schroder, and Iacobucci 2001 scale) and their purchase intention (using the Baker and Churchill 1977 scale). Consistent with our hypothesis we find greater purchase intention for the product in the transparent orange juice bottle. Additionally, we find that the relationship between transparent packaging and purchase intention is (complementary) mediated by brand trust (Preacher and

Hayes, 2004; Zhao, Lynch and Chen 2010). This result is consistent with our conceptual framework.

In Experiment 4 we investigated whether people prefer transparent to non-transparent packaging. 181 students were asked to choose between an actual transparent shampoo bottle and an actual non-transparent shampoo bottle of the same color as the shampoo. 77% of participants selected the transparent package confirming consumer preference for transparent packaging.

Finally, in Experiment 5, we propose and investigate a boundary condition for the effect. Unappealing products, rotting products, or products that do not meet consumer expectations would likely not benefit from transparent packaging. The inferences made about products in transparent packaging would likely not overcome the actual, observed negative attributes inherent in viewing rotting or unappetizing products or even icy, pale, frozen French fries. To test this, participants began Experiment 5 by looking at either a puke green transparent laundry detergent package or a non-transparent package. Then, participants rated the trustworthiness of the product. Consistent with the notion that inferences made about transparent packaging cannot overcome the judgments made when viewing unappealing products, we find that participants viewing the non-transparent laundry detergent have greater trust in the product than participants viewing the puke green transparent package.

To summarize, results from five experiments suggest that transparent (vs. non-transparent) leads to higher purchase intention and increased product choice, even when explicitly controlling for product freshness and quality. We identify perceptions of product trustworthiness as the mediator and physical appeal of products as an important boundary condition for this effect.

The Effect of Product Shape Closure on Perceptions of Quantity, Preference and Consumption

EXTENDED ABSTRACT

Consumers attend to environmental cues in the retail place in order to make inferences about the properties of a product (Zeithaml 1988). One of the most important indicators of a product’s characteristics is its external aspect, including its shape. A product’s shape has been shown to influence perceptions of size (Raghubir and Krishna 1999; Krider, Raghubir and Krishna 2001; Folkes and Matta 2004), preference (Raghubir and Krishna 1999; Krider, Raghubir and Krishna 2001; Folkes and Matta 2004) and consumption (Raghubir and Krishna 1999; Krider, Raghubir and Krishna 2001; Wansink and Van Ittersum 2003).

Past research on product shapes has demonstrated that people estimate products that have a longer (Raghubir and Krishna 1999) or more prominent primary dimension to be bigger (Krider, Raghubir and Krishna 2001). This is because consumers make effort-accuracy trade-offs that lead to heuristic processing of area estimations and size judgments biases. Moreover, research by Folkes and Matta (2004) has reversed this effect by showing that a product’s ability to attract attention affects size perceptions due to mental contamination.

In this research, we introduce “product shape closure” as an even more robust determinant of perceptions of size judgments, preference and food consumption. Psychological closure refers to the feeling that a life experience is past or complete (Beike, Adams, and Wirth-Beaumont 2007). Past research has also defined need for closure as the desire to quickly reach firm answers that allow closing the door on a matter (Kardes et al. 2004, 2007; Kruglanski and Webster 1996). Reaching psychological closure allows individuals to pursue

other goals and avoid negative affect (Beike, Markman, and Karadogan 2009; Beike and Wirth-Beaumont 2005).

In the current research, we tested if perceptions of the physical closure associated to the shape or the design of a package could have an effect on people size estimations and preference for a product. We manipulate product shape closure by keeping the size and weight of a product constant and by altering physical aspects of its design. For example, we compare cheese slices which surfaces include holes or not, sandwiches which are cut in halves or offered in their complete form, a shampoo bottle which possesses an overture on its package against one that does not, etc. Our results showed that products whose shapes evoked feelings of closure against those who did not were perceived as bigger and were preferred. This effect persisted in cases where the product that evoked the most feelings of closure and completeness did not have a larger primary dimension and did not attract more attention.

We ran seven studies to test the robustness and generalizability of this phenomenon, its underlying mechanism, and explore some boundary conditions for it. Study 1 was a field study held during a business lunch attended by medical doctors and healthcare executives. In this field experiment, subjects located in two different rooms ate equal weight snack sandwiches. Subjects in each group were invited to serve themselves snack size sandwiches which shape was complete (evoked closure) or incomplete (did not evoke closure). Despite the group that was assigned to the incomplete sandwiches condition had significantly less males (50%) than the other (70.7%), we found that subjects in that condition ate more sandwiches than those in the other group ($M_{\text{unclosed}} = 3.23$ vs. $M_{\text{closed}} = 2.38$; $t(44) = 3.96, p < .0001$). As we expected, participants in the incomplete condition probably found the sandwiches to be smaller, which led them to eat more.

Study 2A demonstrated the phenomenon in a more controlled laboratory experiment and extended the findings from food consumption to size perceptions. This study showed that a bread bun and a cheese slice are considered to contain more quantity when their shape is closed or complete as opposed to unclosed or incomplete, even if the latter has a larger primary dimension. However, this effect will be reversed if the incomplete stimuli are assigned names of products for which an incomplete shape is representative of the product category (i.e. bagel and swiss cheese). In this case, the incompletely shaped products will be estimated to contain more quantity, as their incompleteness will not be used to adjust down consumer estimations, and instead participants will anchor on their prominent primary dimension and estimate them to be bigger. Study 2B used a similar design to demonstrate that the closure effect is mediated by the extent to which consumers perceive that a product corresponds to a full unit, as they will use this “unity heuristic” to estimate size perceptions and will ignore the fact that a product which is a fraction of a unit may be bigger than one which corresponds to a full unit, if the unit from which the former is a fraction is considerably larger. This bias is similar to the numerosity heuristic (Pelham, Sumarta and Myaskovsky 1994).

Studies 3A and 3B employed choice tasks to demonstrate that when participants compare products they will estimate that the completely shaped ones contain more quantity, are bigger, and will be more likely to be bought than the incomplete ones. Study 3A used sandwiches and packages of Babybel cheese to demonstrate that the effect will reverse the primary dimension heuristic, while Study 3B used bread buns and cheese slices to show that the phenomenon will also trump the attention attraction effect.

Study 4 used a similar design as the one used in Studies 3A and 3B to provided additional evidence in favor of the shape closure ef-

fect by showing that the phenomenon will be significantly stronger among participants who have high versus low Need for Cognitive Closure (NFCC). Finally, Study 5 demonstrated the robustness of the closure effect by showing that it can be extended to package labels and is not limited to package shapes. This experiment replicated the effect for cases where two products (juice galloons) have the same shape and size but one of them contains a more closure evoking label image than the other (i.e. a complete versus an incomplete apple picture).

Aesthetics versus Humor in Product Packaging: Their Impact on Ownership Pride

EXTENDED ABSTRACT

Product designers often strive to create designs whose sight elicits a positive emotional reaction in consumers (Desmet, 2003). To accomplish this, two of the most frequently used approaches consist in creating either an aesthetically appealing (Bloch, 1995; Coates, 2003) or a humorous-looking design (Doyle, 1998). Yet, while consumers' reactions to aesthetically appealing designs have garnered substantial attention in consumer research (Patrick & Peracchio, 2010), we know little to nothing about responses to humorous-looking designs. Aside from triggering a smile or a giggle, does a humorous-looking design provide any other value to consumers—most importantly, social value? Prior research has found aesthetically appealing designs to generate social value in the form of enhanced ownership pride (e.g., Townsend & Shu, 2010), but has not yet shown similar responses for humorous-looking designs. If such designs do indeed provide social value, how does it compare to that offered by a functionally equivalent, yet aesthetically appealing design? The present research will address these questions.

A visually attractive appearance represents a socially valued characteristic in interpersonal relationships (e.g., Sigall & Landy, 1993), but also in a consumption context, where aesthetically appealing products instill pride in their owners (Pol & Park, 2012; Townsend & Shu, 2010), who are often eager to display such products to the world (Bloch, 1995). Humor, on the other hand, while a highly socially desirable trait (Apte, 1978), can also evoke negative social connotations, such as impressions of inappropriateness or low source credibility (Eisend, 2008; Bressler & Balshine, 2006). In the context of a utilitarian product, such connotations may cause one to dismiss a humorous-looking product as a gimmick because of a perceived disconnect between its appearance and its functional purpose (Buchanan, 1989). This should, in turn, negatively affect the social benefits of owning such a product, potentially even triggering embarrassment rather than ownership pride in consumers. We hence propose that, between an aesthetically appealing and a humorous-looking product that are functionally equivalent and equally pleasant to look at, the humorous item should provide significantly lower social benefits to consumers, as evidenced through lower expectations of ownership pride. We tested this hypothesis in Study 1.

Visually appealing products have been associated with a host of desirable social connotations, most notably impressions of tastefulness (Cziksentmihalyi & Robinson, 1990; Wagner, 1999). Consistent with a self-signaling account (Bodner & Prelec, 2001), owning a visually attractive product should hence convey to oneself (and also to others) that one possess good taste, which in turn is conducive to instilling feelings of pride in consumers (Chang & Wu, 2007). A humorous-looking item, on the other hand, is unlikely to provide signals about one's level of taste (provided, of course, that the humor is not perceived as blatantly distasteful). It should, however, be perceived as interesting and original (Ludden, Schifferstein, & Heckert,

2008), such that its ownership would convey that one possesses a unique and distinctive personality—a social signal that typically enhances individuals' sense of self-worth (Kim & Markus, 1999). We hence propose that aesthetically appealing products provide social value (i.e., elicit pride) because they signal that their owner has good taste, while humorous-looking products do so because they signal uniqueness. This second hypothesis was tested in Study 2.

In Study 1, we verified that humorous-looking product designs create less social value than humorous-looking ones do. The study employed a one-way (visual appearance: aesthetically appealing vs. humorous-looking vs. neutral-looking) within-subjects design. Each participant in the study saw a total of nine computer speakers (three in each category), which were described as identical in terms of price, manufacturer, quality, and functionality. Afterwards, participants indicated how proud they would be to own each item. The manipulation check confirmed that the aesthetically appealing products were significantly more attractive than all the other items, while the humorous products were perceived as the funniest. Respondents further reported the same degree of pleasure when looking at the attractive and the humorous-looking items. Consistent with our hypothesis, a repeated-measure ANOVA with planned contrasts revealed that the humorous-looking items did indeed trigger lower expectations of ownership pride compared to the aesthetically appealing products ($p < .05$). Interestingly, however, they elicited higher pride expectations than the neutral-looking ones (the latter of which served as a control group) ($p < .05$). These results show that, while an aesthetically appealing product offers stronger social benefits than a humorous-looking item does, humor may bring some social value to a product's design after all.

In Study 2, we examined whether aesthetically appealing and humorous-looking designs create social value through different mechanisms. The study employed a one-way (visual appearance: aesthetically appealing vs. humorous-looking vs. neutral-looking) between-subjects design. We showed participants a range of household products (such as teapots, desk lamps, and alarm clocks) and asked them to select three items they would best describe as beautiful, funny, and neutral-looking, respectively. Each participant was then presented with one of the three items based on the group he or she belonged to. We chose household items as stimuli because they are traditionally designed for private consumption, and would allow for a rather conservative replication of our previous results. In line with Study 1, we again found that the pride expectations elicited by the humorous-looking products were lower than those triggered by the aesthetically appealing products ($p < .05$), yet higher than those associated with the neutral-looking items ($p < .05$). Consistent with our hypothesis, two mediation analyses based on bootstrap further suggested that, while good taste best explained the impact of visual attractiveness on ownership pride, the relationship between humor and pride was explained by uniqueness ($p < .001$).

This research shows that a humorous-looking product design does provide social value to consumers, though to a lesser extent than an equally pleasant, yet aesthetically appealing design would. Moreover, aesthetics is socially valuable because it signals good taste, while humor providing social value because it connotes uniqueness. These findings provide initial evidence for how consumers' responses to hedonically appealing product designs vary across hedonic characteristics.

Where You Say It Matters: How Product Packaging Increases Message Believability

EXTENDED ABSTRACT

For a message to have any effect it must be believed. Broadly speaking, persuasion research has identified three factors which influence message believability: source (Hovland and Weiss 1951), audience (Petty, Cacioppo, and Schumann 1983), and context (Oppenheimer 2006). In addition to this, proximity of the message to its audience may also influence believability (Latané et al. 1995). In effect, spatial distance can be considered part of a larger concept, that of psychological distance, the subjective experience of something being close or far away from the self. In the context of believability this is particularly relevant as there is a strong connection between psychological distance and construal level and moreover there is evidence to suggest construal level also influences believability (Wright et al. 2012).

Building on this work, we propose a new determinate of believability - psychological proximity of a message to its subject. Specifically we hypothesize that, all else equal, the closer a message seems to its object, the more believable it will be. We consider this in a consumer decision-making context by examining how product message placement (whether on a package versus in an advertisement) influences believability. Across three studies, we demonstrate that decision-makers consider product claims more (less) believable when presented on a package (advertisement) and that this effect is mediated by perceived proximity of the claim to the product.

Study 1a establishes the basic effect of presentation material on message believability and the moderating role of claim strength. Participants were shown a product description for an electric kettle with a claim that it boils water in either two or eighteen seconds. We manipulated whether the message was presented on a package or in an advertisement through introductory language and simple graphic variations. Analysis of believability ratings revealed a significant two-way interaction between claim strength and presentation material ($F(1, 159) = 7.73, p = .01$). When presented with a strong product claim, participants rated it as more believable if presented on a package than in an advertisement ($M_{\text{strong claim, package}} = 4.00, M_{\text{strong claim, advertisement}} = 3.23, F(1, 79) = 4.37, p = .04$). There was no effect of presentation material on message believability in the weak claim conditions ($F < 1$) suggesting that this effect is only relevant with strong claims where believability may be called into question.

Some consumers may be immune to the effect of presentation material; study 1b tested this possibility by examining the role of product knowledge. We used nail polish as our product category and gender as an indicator of product knowledge. All participants were shown either an advertisement or package for a nail polish top coat. Analysis of believability ratings revealed a significant two-way interaction between gender and presentation material ($F(1, 178) = 4.60, p = .03$). Men rated the product claim as more believable when presented on a package ($M_{\text{male, package}} = 4.06, M_{\text{male, advertisement}} = 3.22, F(1, 99) = 8.50, p < .01$). Presentation material did not influence the believability ratings of female participants ($F < 1$). We find, therefore, that the effect of claim placement, and presumably closeness, is stronger when participants have less knowledge of the product category.

Studies 2 and 3 examined the mechanism through which package messages seem more believable than those in advertisements. If the proximity of the product to the message is indeed the key difference between an advertisement and a package in terms of believability, then varying alternative forms of psychological distance should moderate our effect. In study 2 we primed different degrees of spa-

tial distance. Additionally, we tested our theory using a new product, digital video recorders (DVRs). We used current DVR ownership as an indicator of product knowledge. Analysis of believability ratings revealed a significant three-way interaction between presentation material, distance prime, and ownership ($F(2, 347) = 3.59, p = .03$). Under control conditions, presentation material did not influence perceived believability among participants who own a DVR ($F < 1$) but did affect believability among those who do not; these participants rated the product claim as more believable when presented on a package than in an advertisement ($M_{\text{control, package, do not own}} = 5.97, M_{\text{control, advertisement, do not own}} = 4.91, F(1, 347) = 4.92, p = .03$). Furthermore, among these participants there was an effect of distance prime on package claim believability; this effect was driven by decreased believability in the far distance conditions ($M_{\text{control, package, do not own}} = 5.97, M_{\text{far, package, do not own}} = 4.98, F(1, 76) = 4.46, p = .04$; $M_{\text{near, package, do not own}} = 5.75, M_{\text{far, package, do not own}} = 4.98, F(1, 80) = 2.93, p = .09$). There was no significant effect of the distance prime on advertisement claim believability, however we did see that the near prime slightly increased the believability of an advertisement claim ($M_{\text{control, advertisement, do not own}} = 4.91, M_{\text{near, advertisement, do not own}} = 5.68, F(1, 71) = 2.55, p = .12$).

In study 3 we considered varying psychological distance in a third manner, narrative voice. We found a significant three-way interaction between presentation material, narrative voice, and ownership ($F(2, 251) = 4.98, p < .01$). Results replicated prior findings and were mediated by perceptions of the proximity between the product and the product information. Once presented in a first-person (third-person) voice the claim was perceived as close to (far from) the product regardless of presentation material and thus relatively believable (unbelievable).

Across three operationalizations of psychological proximity we see that presenting a claim as closer to its subject will increase believability. These findings extend our knowledge of psychological distance and its effects on persuasion. Beyond the current context of advertisements and packages, our results are relevant in any situation where message-to-subject proximity may be manipulated and of particular use in situations where a claim appears improbable (e.g. fundraising campaigns where need is extreme) or where the consumer's best interest is in complying with the stated message (e.g. usage of OTC pharmaceuticals or public safety campaigns). Furthermore, our results challenge the implicit notion that consumer responses to advertisements and packaging are the same.