

Too Cute to Be Healthy: How Cute Packaging Designs Affect Judgments of Product Tastiness and Healthiness

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ABSTRACT In the packaged food market, several brands use cute packaging designs, for example, by displaying playful colors or funny cartoon-like pictures. However, prior research has not systematically examined how cute packaging designs might affect product perception. In this research, we show that cute packaging designs increase perceptions of product tastiness and, at the same time, decrease perceptions of product healthiness. Importantly, as perceptions of both tastiness and healthiness jointly determine purchase intention, we further examine the role of the product type in order to demonstrate how marketers may benefit from using cute packaging designs. We find that cute packaging designs increase consumer purchase intention for relative vice products but decrease consumer purchase intention for relative virtue products. This article thus extends the current packaging design literature and demonstrates how marketers can strategically use cute packaging designs to communicate their desired product attributes. Furthermore, we outline implications for public policy makers.

Since 1975, worldwide obesity has nearly tripled, leading to more than 1.9 billion adults being overweight in 2016, of which more than 650 million are obese (<http://www.who.int>). The major cause of obesity and overweight is an imbalance between the number of calories that people consume through eating and the number of calories that people expend through physical activity. Consequently, there are two ways in which obesity can be reduced for consumers: making healthier food choices and exercising more. The current research focuses on the first: consumers' food choices. One critical factor that affects what products people buy is the packaging. For example, 64% of consumers say that they have chosen a new product based on the packaging's visual appeal (Nielsen 2016).

Academic research has investigated how consumers' product perceptions, choices, and consumption are affected by different food packaging design elements, such as the shape (Ngo et al. 2013; Fenko, Lotterman, and Galetzka 2016; van Ooijen et al. 2017), color (Karnal et al. 2016; Mai, Symmank, and Seeberg-Elverfeldt 2016), transparency (Deng and Srinivasan 2013), imagery (Deng and Kahn 2009; Machiels and Karnal 2016), and label placement (Dahl et al. 2019). However, very limited attention has been paid to the phenomenon of packaging cuteness, which refers to the fun and play-

fulness associated with a packaging's appearance (Nenkov and Scott 2014), and especially how cute packaging designs might affect product perception and purchase intention. For example, in the packaged food market, several brands use playful colors, rounded shapes, or funny cartoon-like pictures. Innocent Drinks makes use of anthropomorphic fruit pictures on their juice bottles, and Lindt's chocolate line "Hello" displays playful colors and typography on its packaging. Other brands, in contrast, tend to refrain from incorporating cuteness appeals in their packaging by relying on rather clean and simple designs. Trader Joe's juice bottles and Hershey's chocolate packages display nothing but reduced product information using functional typography (e.g., Helvetica) on a monochromatic background.

In response, this research investigates how cute packaging designs influence consumers' perceptions of product attributes and their subsequent purchase intention, as well as how the packaging design interacts with the product type. The results of three experimental studies demonstrate that cute packaging design serves as both a positive taste cue and a negative health cue. Consequently, consumers are more likely to purchase products with cute packaging designs when the products are relative vices (e.g., chocolate cookies). Conversely, consumers are less likely to purchase products

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with cute packaging designs when the products are relative virtues (e.g., vegetable juice).

THEORETICAL FRAMEWORK

Cute Packaging Design

Cuteness is generally defined as being pleasantly attractive in a delicate way (<http://webster-dictionary.org/definition/Cute>). Prior research has predominantly focused on the effects of *kindchenschema cuteness*, which regards an object's baby-like or infantile appearance (Hildebrandt and Fitzgerald 1978). Exposure to *kindchenschema cuteness* spontaneously triggers associations of weakness and vulnerability (Wang and Mukhopadhyay 2015) and, as a consequence, elicits caretaking (Sherman, Haidt, and Coan 2009) and prosocial behavior (Keating et al. 2003) in adults.

However, as cuteness is a broad concept entailing many different elements, Nenkov and Scott (2014) proposed a different conceptualization of cuteness, namely, *whimsical cuteness*, which is the focus of the current research. Different from *kindchenschema cuteness*, *whimsical cuteness* is not associated with vulnerability but with fun and playfulness. Thus, *whimsical cuteness* refers to the fun and playfulness that are associated with inanimate objects, such as consumer products or packaging. Perceptions of *whimsical cuteness* can be evoked by several visual cues such as anthropomorphic designs and colorful graphics (Nenkov and Scott 2014) or by using rounded shapes (Cho, Gonzales, and Yoon 2011).

Cute Packaging Design and Product Attribute Judgment

Consumers perceive visual packaging elements (e.g., color, shape, size, and visual image) not only in terms of their functional purpose (e.g., protection) but also in terms of their symbolic associations (Underwood 2003). Especially when they are without access to complete product information (Deval et al. 2013), consumers tend to use these symbolic associations when forming judgments about product attributes in which these associations spill over to the product. Of particular importance to the current study, existing research has demonstrated that altering packaging design elements, such as the shape, color, and imagery, can influence consumers' taste and health inferences. Consumers rate products as healthier when packages are angular rather than rounded (Fenko et al. 2016), are slim rather than wide (van Ooijen et al. 2017), are colored red rather than yellow (Karnal et al. 2016), and use light rather than dark colors (Mai et al. 2016). Consumers rate products as tastier when

packages are angular rather than rounded (Fenko et al. 2016), are colored dark rather than light (Mai et al. 2016), and display pictures of unprocessed rather than processed food (Machiels and Karnal 2016).

While these studies have investigated the effects of single design elements (e.g., shape angularity and color lightness), the goal of the current research is to examine the effects of packaging cuteness, which can be evoked by multiple design elements. Thus, the goal of the current research is to identify the specific design elements that drive perceptions of cuteness and to derive an overall assessment that results from a packaging's cuteness by manipulating different design elements.

However, how do perceptions of packaging cuteness influence consumers' judgments of specific product attributes? In a series of studies, Nenkov and Scott (2014) demonstrated that exposure to whimsically cute products increases consumers' indulgent consumption. Importantly, the authors showed that exposure to whimsically cute objects primes mental representations of fun. Research on mental imagery suggests that the mental representations that consumers create when exposed to visual stimuli affect their product judgments (MacInnis and Price 1987; Petrova and Cialdini 2005; Jiang et al. 2015). Therefore, exposure to cute packaging should lead consumers to generate mental images of having fun consuming the product, thus increasing their perceptions of hedonic benefits (Voss, Spangenberg, and Grohmann 2003). The hedonic value of food products is defined by how good the food tastes (Connell and Mayor 2013). Thus, this research proposes that cute packaging design increases consumers' perceptions of tastiness.

However, consumers are known to hold opposing theories about products and tend to make naïve judgments about product attributes (Deval et al. 2013). Thus, consumers may draw opposing inferences from the very same cue. For example, Deng and Srinivasan (2013) found that transparent packages both increase consumption, as they enhance food salience, and decrease consumption, as they facilitate consumption monitoring. Specifically, consumers categorize objects into those that are fun and exciting (tasty) and those that are wholesome (healthy, nourishing, and good for you; Raghunathan, Naylor, and Hoyer 2006). Consequently, this research proposes that while cute packaging design serves as a positive taste cue, it also serves as a negative health cue. In other words, it is expected that cute packaging design leads to positive inferences about a product's tastiness and to negative inferences about a product's healthiness. Stating this hypothesis formally:

H1: Cute packaging design increases (decreases) consumers' perceptions of product tastiness (healthiness).

In the following, three studies are reported using different products and a variety of cuteness manipulations. The studies investigate (1) the effect of cute packaging design on perceptions of tastiness and healthiness, (2) the downstream effect on consumer purchase intention, and (3) how the effect of cute packaging design on consumer purchase intention depends on the product type.

STUDY 1

Study 1 tested the basic hypothesis that cute packaging design would positively influence participants' ratings of the product's tastiness and negatively influence participants' ratings of the product's healthiness. Participants were exposed to a nut snack that was packaged with either a cute or a neutral design. Nut snacks were chosen as the focal product because they have both healthy and unhealthy attributes (Corleone 2013).

Method

A total of 100 US consumers (Amazon Mechanical Turk [MTurk], $M_{age} = 35$, 44% female) were randomly assigned to either the cute or the neutral packaging condition. The participants were told that the study was about people's food preferences.

Cuteness Manipulation. Cuteness was manipulated by altering the packaging's graphical features (see fig. 1), following Nenkov and Scott (2014; study 3). In a pretest, 60 different US consumers (MTurk, $M_{age} = 34$, 62% female) were randomly assigned to either the cute or the neutral packaging. Based on the procedure that was suggested by Nenkov and Scott (2014), participants indicated the extent to which they perceived the packaging as cute (cute, adorable, and endearing; $\alpha = .96$), whimsically cute (whimsical, playful, and fun; $\alpha = .93$), and kindchenschema cute (vulnerable, naive, and caretaking; $\alpha = .73$). Additionally, participants rated the packaging's visual appeal (attractive and beautiful; $r = .81$) and indicated their health regulatory focus based on the scales that were provided by Gomez, Borges, and Pechmann (2013), assessing participants' health promotion focus ($\alpha = .91$) and prevention focus ($\alpha = .81$). All of these items were measured using a 7-point scale from 1 (not at all) to 7 (very much). Furthermore, following Karnal et al. (2016), participants rated the packaging's heaviness



Figure 1. Cute (left) vs. neutral (right) packaging (study 1).

(1 = light to 7 = heavy) and arousal (1 = calming to 7 = arousing).

As intended, compared to the neutral packaging, participants rated the cute packaging as cuter and whimsically cuter but not different in terms of kindchenschema cuteness (see table 1 for the detailed results of all pretests). The packages did not differ in their visual appeal and heaviness, and they did not affect participants' health regulatory focus. However, participants rated the cute packaging as more arousing than the neutral packaging. Arousal will thus be included as a covariate in the main study.

Measures. After exposure to the packaging, the participants first indicated their intention to purchase the product on a scale from 1 (very unlikely) to 7 (very likely). They then rated the nut snack's tastiness and healthiness. To assess the product's perceived tastiness, participants rated the product on the following three items: "How tasty do you think this product is?" (1 = not at all tasty to 7 = very tasty), "How delicious do you think this product is?" (1 = not delicious at all to 7 = very delicious), and "How good do you think this product tastes?" (1 = bad to 7 = good) ($\alpha = .95$). To assess the product's perceived healthiness, participants rated the product on the following three items: "How healthy do you think this product is?" (1 = not at all healthy to 7 = very healthy), "How important would this product be as part of a healthy diet?" (1 = not important at all to 7 = very important), "How good do you think this product is for your health?" (1 = bad for my health to 7 = good for my health;

Table 1. Stimuli Pretests (Studies 1–3)

	Cuteness	Whimsical cuteness	Kindchenschema cuteness	Visual appeal	Heaviness	Arousal	Health promotion focus	Health prevention focus
Study 1:								
Cute	4.69	5.15	2.53	4.01	1.94	3.24	5.02	4.45
Neutral	2.39	2.28	2.38	3.61	1.69	1.92	5.25	4.59
	$t(1, 58) = 4.83,$ $p < .001$	$t(1, 58) = 6.98,$ $p < .001$	$t(1, 58) = .459,$ $p = .65$	$t(1, 58) = .85,$ $p = .39$	$t(1, 58) = .94,$ $p = .35$	$t(1, 58) = 3.22,$ $p < .01$	$t(1, 58) = -.67,$ $p = .51$	$t(1, 58) = -.35,$ $p = .73$
Study 2:								
Cute	5.14	5.09	3.49	4.37	3.19	4.78	5.19	4.79
Neutral	3.71	3.50	3.21	4.26	3.39	4.37	5.15	4.97
	$F(1, 130) = 26.15,$ $p < .001$	$F(1, 130) = 31.43,$ $p < .001$	$F(1, 130) = .95,$ $p = .33$	$F(1, 130) = .15,$ $p = .69$	$F(1, 130) = .41,$ $p = .52$	$F(1, 130) = 1.73,$ $p = .19$	$F(1, 130) = .06,$ $p = .81$	$F(1, 130) = .001,$ $p = .97$
Study 3:								
Cute	4.93	4.95	3.08	3.94	3.11	3.71	5.09	4.80
Neutral	2.85	2.36	2.67	3.59	2.83	2.50	4.76	4.63
	$t(68) = 5.11,$ $p < .001$	$t(68) = 7.05,$ $p < .001$	$t(68) = 1.04,$ $p = .30$	$t(68) = .98,$ $p = .33$	$t(68) = .69,$ $p = .49$	$t(68) = 2.84,$ $p < .01$	$t(68) = 1.03,$ $p = .30$	$t(68) = .50,$ $p = .62$

$\alpha = .89$). The order of all six items was randomized. Next, to assess participants' consumption imagery, participants indicated how much fun it would be to eat the nut snack (1 = no fun at all to 7 = a lot of fun). Finally, participants assessed the packaging's arousal using the same item as in the pretest.

Results

ANCOVAs with arousal as the covariate on the perceived tastiness, healthiness, consumption fun, and purchase intention revealed that participants rated the nut snack as tastier in the cute packaging condition than in the neutral packaging condition ($M_{\text{cute}} = 5.53$ vs. $M_{\text{neutral}} = 4.83$; $F(1, 97) = 4.83$, $p < .05$) and as less healthy in the cute packaging condition than in the neutral packaging condition ($M_{\text{cute}} = 4.50$ vs. $M_{\text{neutral}} = 5.22$; $F(1, 97) = 6.76$, $p < .05$). These results support hypothesis 1. Furthermore, participants rated the nut snack with the cute packaging as more fun to consume than the nut snack with the neutral packaging ($M_{\text{cute}} = 4.61$ vs. $M_{\text{neutral}} = 3.64$; $F(1, 97) = 9.29$, $p < .01$). The effect of the packaging design on purchase intention was not significant ($M_{\text{cute}} = 4.43$ vs. $M_{\text{neutral}} = 4.71$; $F < 1$).

A mediation analysis (Hayes 2013; model 4, $n = 5,000$) with tastiness and healthiness as parallel mediators and arousal as the covariate produced a positive indirect effect of the packaging design on purchase intention through tastiness ($b = .33$; standard error (SE) = .17; 95% confidence interval (CI_{95%}) = .02, .67) and a negative indirect effect of the packaging design on purchase intention through healthiness ($b = -.22$; SE = .11; CI_{95%} = -.47, -.04). The direct effect of the packaging design on purchase intention was nonsignificant ($b = -.39$, SE = .36, CI_{95%} = -1.09, .32). The packaging design positively predicted tastiness ($b = .69$; SE = .32, $p < .05$) and negatively predicted healthiness ($b = -.72$ SE = .28, $p < .05$), with both tastiness ($b = .47$; SE = .11, $p < .001$) and healthiness ($b = .36$; SE = .12, $p < .05$) positively predicting purchase intention.

A mediation analysis (Hayes 2013; model 6, $n = 5,000$) with consumption fun and tastiness as serial mediators and arousal as the covariate produced a significant positive indirect effect of cuteness on purchase intention through consumption fun and tastiness ($b = .15$; SE = .09; CI_{95%} = .01, .35). A mediation analysis with consumption fun and tastiness as serial mediators produced a significant negative indirect effect of cuteness on purchase intention through consumption fun and healthiness ($b = -.13$; SE = .09; CI_{95%} = -.34, -.01).

Discussion

Supporting the basic hypothesis, the cute packaging led to more favorable perceptions of the nut snack's tastiness and to less favorable perceptions of the nut snack's healthiness. Further, the results from the parallel mediation analysis show that the positive effect of the cute packaging design on the perceived tastiness and the negative effect of the cute packaging design on the perceived healthiness tend to annul each other when predicting purchase intention. The results from the serial mediation analyses demonstrate that the positive taste effect and the negative health effect are driven by the fun that consumers imagined that they would experience while consuming the product. To further increase the confidence in consumption fun being the main mechanism underlying the positive (negative) taste (health) effect of the packaging cuteness, we ran several additional mediation models including arousal as a parallel and serial mediator (see appendix, available online). The analyses demonstrate that our results are not driven by the cute packaging generating higher arousal.

STUDY 2

The product stimulus that was used in study 1 (nut snack) may be regarded as both relatively healthy and unhealthy. However, some products are healthy by nature (e.g., vegetables), while others are rather unhealthy by nature (e.g., chocolate cookies). Thus, one factor that is likely to influence the effect of the cute packaging design on consumer purchase intention is the product type. Specifically, this research suggests that cute packaging design affects consumers' purchase intention differently for vice and virtue products (Werthenbroch 1998). Vice products (also referred to as "wants") are unhealthy by nature and provide instant gratification and hedonic benefits (such as the immediate pleasure derived from eating a chocolate cookie). Virtue products (also referred to as "shoulds") are healthy by nature and provide long-term benefits. As such, when consumers make a deliberate food choice in favor of a vice product (e.g., pizza) for dinner, they do so mainly because of the product's great taste and the derived pleasure, irrespective of the meal's potentially negative health effects (Milkman, Rogers, and Bazerman 2008). However, when choosing a virtue product (e.g., salad) for dinner, they do so mainly because of the long-term health benefits that the meal provides. Consequently, it seems plausible that consumers' associated consumption goal of choosing between a vice product and a virtue product affects what kind of inferences that consumers draw from cute packaging designs.

Existing research has demonstrated that packaging cues signaling product healthiness affect consumer responses differently for vice and virtue products. Raghunathan et al. (2006) showed that nutrition negatively influences perceptions of tastiness for vice products. Van Doorn and Verhoef (2011) found that organic claims lead to negative quality perceptions of vice products and to positive quality perceptions of virtue products. While these studies have shown different effects for positive health cues (nutrition labels and organic claims), cute packaging design is supposed to positively affect perceived tastiness and negatively affect perceived healthiness. Thus, cute packaging design should positively influence the perceived tastiness for vice products and negatively influence the perceived healthiness for virtue products.

As vice products (e.g., chocolate cookies, beer, and coffee) are consumed especially for their enjoyment, consumers focus on any cue that informs them about the product's tastiness. Therefore, for vice products, consumers should interpret cute packaging designs as positive signals for tastiness, thus increasing their purchase intention for vice products with cute packaging designs. As vice products are already unhealthy by nature, cute packaging design as a negative health cue should not play a major role for consumers in purchasing vice products. In contrast, as virtue products (e.g., natural yogurt, green tea, and fruit juice) are consumed especially because these products are healthy and provide beneficial long-term effects, consumers focus on any cue that informs them about the product's healthiness. Therefore, for virtue products, consumers should interpret cute packaging designs as negative signals of healthiness, thus leading to lower purchase intentions of virtue products with cute packaging designs. In other words, the healthiness that is associated with virtue products would become partly spoiled by a cute packaging design, which serves as a positive taste cue and a negative health cue. Cute packaging design as a positive taste cue should not play a major role for consumers in purchasing virtue products. Thus, we state the following:

H2a: For vice (virtue) products, cute packaging design increases (decreases) purchase intention.

H2b: The positive (negative) effect of cute packaging design on purchase intention for vice (virtue) products is mediated by perceptions of product tastiness (healthiness).

To test these predictions, participants were presented with a cute (vs. neutral) packaging of a relative vice (virtue) product.

Method

A total of 186 US consumers (M_{Turk} , $M_{\text{age}} = 25$, 43% female) were randomly assigned to one of four conditions in a 2 (packaging design: cute vs. neutral) \times 2 (product type: vice vs. virtue) between-subjects design.

Product Type Manipulation. A total of 12 different food products, which were to be classified as either vice products (e.g., chocolate cookies, beer, and vanilla ice cream) or virtue products (e.g., vegetable juice, natural yogurt, and bottled water), were pretested. Fifty US consumers (M_{Turk} , $M_{\text{age}} = 37$, 48% female) rated all 12 products in a randomized order from 1 (complete virtue) to 7 (complete vice), following the introductory explanation that "virtue products tend to be healthier and provide long-term benefits, while vice products tend to offer instant gratification, be healthier, or provide short-term benefits" (Olsen, Slotegraaf, and Chandukala 2014). For the main study, we selected chocolate cookies as the vice product ($M = 5.70$) and vegetable juice as the virtue product ($M = 2.30$; $t(49) = 16.47$, $p < .001$).

Cuteness Manipulation. In this study, the cuteness of the packaging was manipulated using anthropomorphic characters, in accordance with Nenkov and Scott (2014; studies 1, 2, and 4). Thus, for the vice product (chocolate cookies), the packaging featured a picture of a real chocolate cookie in the neutral condition and a picture of a cartoon-like smiling cookie in the cute condition. For the virtue product (vegetable juice), the packaging featured a picture of a real apple in the neutral condition and a picture of a cartoon-like smiling apple in the cute condition (see fig. 2). In a pretest, 133 US consumers (M_{Turk} , $M_{\text{age}} = 38$, 45% female) were randomly exposed to one of the four packages. Using the same scales as in the previous study, participants rated the packaging's cuteness ($\alpha = .91$), whimsical cuteness ($\alpha = .91$), kindchenschema cuteness ($\alpha = .83$), visual appeal ($r = .72$), heaviness, and arousal and indicated their health promotion ($\alpha = .82$) and prevention focus ($\alpha = .72$).

Separate 2×2 ANOVAs produced only significant main effects of the packaging design on perceptions of cuteness and whimsical cuteness (see table 1). As intended, compared to the neutral packages, the cute packages were rated as cuter and whimsically cuter. All other main and interaction effects were not significant (all $p > .13$). This result shows that the packages did not differ in their perceived kindchenschema cuteness, visual appeal, heaviness, and arousal and did not influence participants' health regulatory focus. Further, the



Figure 2. Vice (top) and virtue (bottom) products with cute (left) vs. neutral (right) packaging (study 2).

product type did not affect participants' ratings of the packages or their health regulatory focus.

Measures. After being exposed to the product packaging, participants first indicated their purchase intention. The participants then indicated their perceptions of the product's tastiness ($\alpha = .97$) and healthiness ($\alpha = .95$) on the same scales as in study 1 in a randomized order.

Results

Tastiness. A 2×2 ANOVA with the packaging design and product type as independent variables on the perceived tastiness revealed a nonsignificant main effect of the packaging design ($F < 1$). The main effect of the product type was significant ($F(1, 182) = 43.79, p < .001; M_{vice} = 5.53$ vs. $M_{virtue} = 4.13$). This main effect was qualified by a significant interaction between the packaging design and product type ($F(1, 182) = 5.23, p < .05$). Planned contrasts revealed that participants rated the vice product with the cute packaging as tastier than the vice product with the neutral packaging ($M_{cute} = 5.84$ vs. $M_{neutral} = 5.23; F(1, 182) = 4.54, p < .05$). For the virtue product, the packaging design

had no effect on the perceived tastiness ($M_{cute} = 3.94$ vs. $M_{neutral} = 4.31; F(1, 182) = 1.34, p = .25$).

Healthiness. A 2×2 ANOVA on the perceived healthiness produced a nonsignificant main effect of the packaging design ($F < 1$). The main effect of the product type was significant ($F(1, 182) = 298.26, p < .001; M_{vice} = 2.09$ vs. $M_{virtue} = 5.25$). The interaction between the packaging design and product type was significant ($F(1, 182) = 6.91, p < .01$). According to the planned contrasts, the packaging design did not affect participants' ratings of healthiness of the vice product ($M_{cute} = 2.25$ vs. $M_{neutral} = 1.95; F(1, 182) = 1.51, p = .22$). Participants rated the virtue product with the cute packaging design as less healthy than the virtue product with the neutral packaging design ($M_{cute} = 4.92$ vs. $M_{neutral} = 5.58; F(1, 182) = 5.92, p < .05$).

Purchase Intention. A 2×2 ANOVA on purchase intention produced a nonsignificant main effect of the packaging design ($F < 1$) and a significant main effect of the product type ($M_{vice} = 4.54$ vs. $M_{virtue} = 3.63; F(1, 182) = 11.50, p < .01$). Most importantly, the interaction between the packaging design and product type was significant ($F(1, 182) = 10.08, p < .01$; see fig. 3). The planned contrasts showed that participants indicated higher purchase intention for the vice product when the packaging was cute rather than when the packaging was neutral, thus supporting hypothesis 2a ($M_{cute} = 4.94$ vs. $M_{neutral} = 4.14; F(1, 182) = 4.96, p < .05$). Participants indicated lower purchase intention for

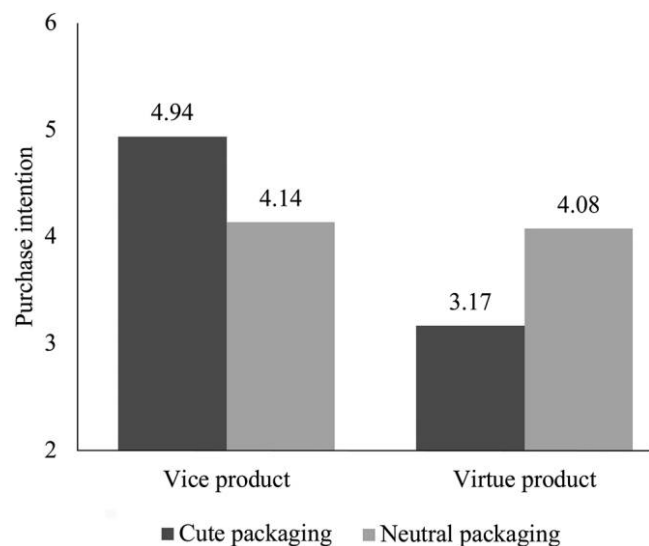


Figure 3. Purchase intention as a function of the packaging design and product type (study 2).

the virtue product when the packaging was cute rather than when the packaging was neutral ($M_{\text{cute}} = 3.17$ vs. $M_{\text{neutral}} = 4.08$; $F(1, 182) = 5.13$, $p < .05$).

Moderated Mediation Analysis. The study predicts a positive effect of cute packaging design on purchase intention through the perceived tastiness of the vice product and a negative effect of cute packaging design on purchase intention through the perceived healthiness of the virtue product. A moderated mediation analysis (Hayes 2013; model 7, $n = 5,000$) was conducted that included the packaging design as the independent variable (0 = neutral, 1 = cute), purchase intention as the dependent variable, the product type as the moderator (0 = virtue, 1 = vice), and tastiness and healthiness as parallel mediators. The analysis produced significant indices of moderated mediation for both tastiness ($b = .70$; $SE = .35$; $CI_{95\%} = .07, 1.43$) and healthiness ($b = .17$; $SE = .09$; $CI_{95\%} = .03, .41$). Specifically, for the vice product, the model produced a significant positive indirect effect of the packaging design on purchase intention through tastiness ($b = .44$; $SE = .17$; $CI_{95\%} = .14, .79$) and a nonsignificant indirect effect of the packaging design on the purchase intention through healthiness ($b = .05$; $SE = .05$; $CI_{95\%} = -.01, .18$). For the virtue product, the model produced a nonsignificant indirect effect of the packaging design on purchase intention through tastiness ($b = -.26$; $SE = .29$; $CI_{95\%} = -.86, .28$) and a significant negative indirect effect of the packaging design on purchase intention through healthiness ($b = -.12$; $SE = .07$; $CI_{95\%} = -.29, -.02$). Together, these results support hypothesis 2b.

Discussion

Study 2 extends our understanding of the effects of cute packaging designs by showing that the product attributes that consumers infer from a cute packaging design interact with the product type when predicting purchase intention. Consistent with expectations, cute packaging design increased purchase intentions for the vice product but decreased purchase intentions for the virtue product. Importantly, while the former positive effect was mediated by the perceived tastiness, the latter negative effect was mediated by the perceived healthiness. These results demonstrate that the positive taste effect of cute packaging design only holds for products that consumers choose primarily for their taste. Likewise, the negative health effect leads to negative effects on consumer purchase intention for products that consumers choose primarily for their health benefits.

STUDY 3

Study 3 investigates the moderating effect of the product type further by manipulating the product type (vice vs. virtue) through verbal advertising messages. Specifically, so far, the studies have examined the effects of cute packaging design on product attribute judgments without considering verbal product information. However, consumers are typically not exposed to visual packaging cues in isolation, but rather in a context (such as advertising) with additional verbal product information. As such, marketers use verbal product information to highlight specific taste benefits (e.g., Sunkist: “Taste the Joy”), which positions the product as a relative vice, or health benefits (e.g., Naked Juice: “No sugar added”), which positions the product as a relative virtue. Thus, from a managerial standpoint, it seems critical to investigate the possible interaction effects between the visual packaging design of a product and the verbal product information that is presented. Accordingly, in study 3, participants were exposed to advertisements featuring cute (vs. neutral) packaging of cereals that promotes the cereals’ taste (health) benefits.

Method

A total of 173 students from a European University ($M_{\text{age}} = 23$, 66% female) were randomly assigned to one of four conditions in a 2 (packaging design: cute vs. neutral) \times 2 (product type: vice vs. virtue) between-subjects design.

Cuteness Manipulation. In this study, cuteness was manipulated by displaying colorful dots (vs. no dots) on the cereals’ packaging (see fig. 4), similar to study 1. In a pretest, 70 different students ($M_{\text{age}} = 22$, 57% female) were randomly assigned to either the cute or the neutral packaging. Using the same scales as in the previous studies, participants rated the packaging’s cuteness ($\alpha = .94$), whimsical cuteness ($\alpha = .94$), kindchenschema cuteness ($\alpha = .84$), visual appeal ($r = .65$), heaviness, and arousal and indicated their health promotion ($\alpha = .92$) and prevention focus ($\alpha = .71$). Compared to the neutral packaging, participants perceived the cute packaging as cuter and whimsically cuter (see table 1). The packages did not differ in their visual appeal and heaviness and did not affect participants’ health regulatory focus. However, as participants rated the cute packaging as more arousing than the neutral packaging, arousal will be included as a covariate in the main study.

Product Type Manipulation. In the vice product condition, the advertisement contained product descriptions focusing

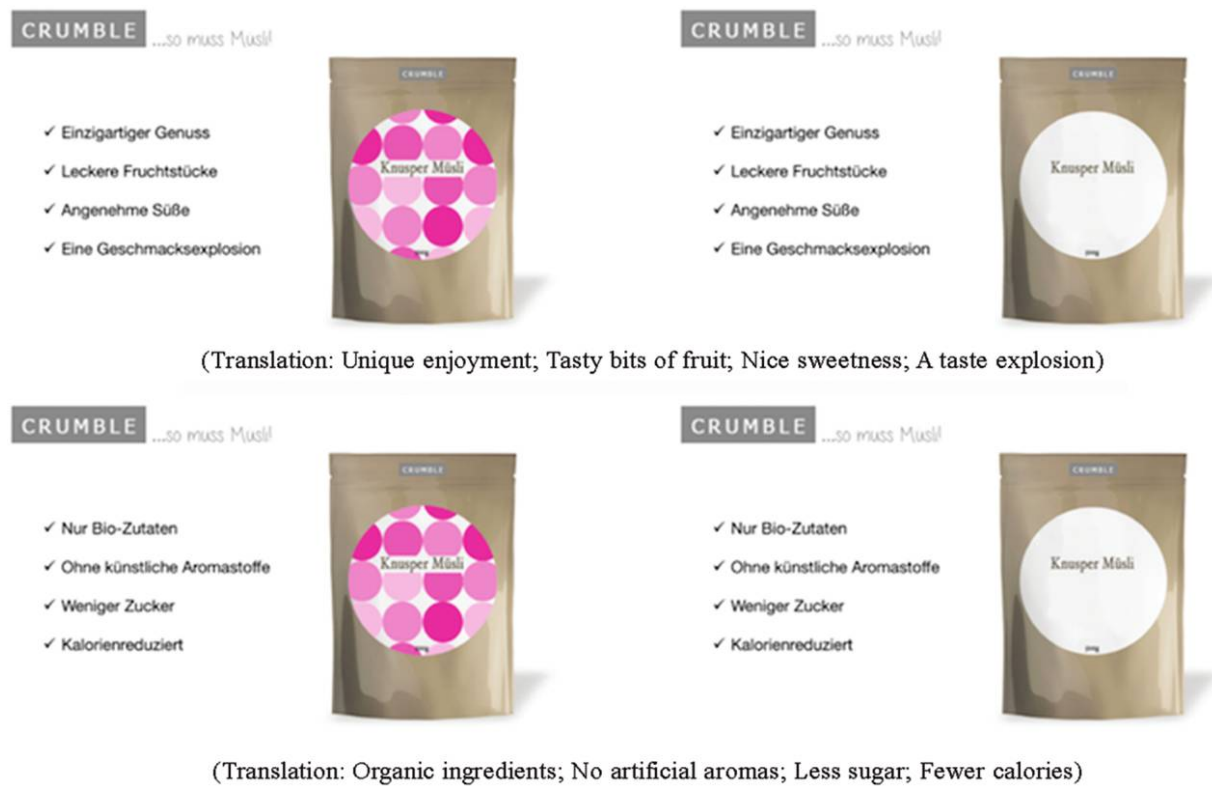


Figure 4. Vice (*top*) and virtue (*bottom*) product with cute (left) vs. neutral (right) packaging (study 3).

on the cereals' tastiness, while in the virtue condition, the advertisement contained product descriptions focusing on the cereals' healthiness (see fig. 4).

In a pretest, 145 students ($M_{\text{age}} = 23$, 65% female) were randomly assigned to one of four conditions in a 2 (packaging design: cute vs. neutral) \times 2 (product type: vice vs. virtue) between-subjects design and rated the product type on the same scale as in study 2. A 2 \times 2 ANOVA produced only a significant main effect for the advertising message ($F(1, 141) = 165.15$, $p < .001$; $M_{\text{taste emp}} = 5.36$ vs. $M_{\text{health emp}} = 3.02$). Thus, participants perceived the cereals to be a relative vice (vs. virtue) when the advertisement communicated the cereals' tastiness (vs. healthiness). The main effect of the packaging and the interaction effect were not significant (all $F < 1$). Thus, the manipulation of the product type was successful and was not affected by the manipulation of the packaging design.

Measures. After being exposed to the advertisement, participants first indicated their purchase intention and then indicated their perceptions of the product's tastiness ($\alpha = .87$) and healthiness ($\alpha = .81$) in a randomized order. Further, participants rated the packaging's arousal.

Results

Tastiness. A 2 \times 2 ANCOVA with arousal as the covariate on perceptions of tastiness revealed a nonsignificant main effect of the packaging design ($p = .39$) and a significant main effect of the product type ($F(1, 168) = 9.49$, $p < .01$; $M_{\text{vice}} = 4.66$ vs. $M_{\text{virtue}} = 4.19$). The interaction between the packaging design and product type was significant ($F(1, 168) = 6.01$, $p < .05$). Planned contrasts revealed that participants rated the vice product with the cute packaging as tastier than the vice product with the neutral packaging ($M_{\text{cute}} = 4.91$ vs. $M_{\text{neutral}} = 4.41$; $F(1, 168) = 5.60$, $p < .05$). For the virtue product, no differences emerged ($M_{\text{cute}} = 4.08$ vs. $M_{\text{neutral}} = 4.31$; $F(1, 168) = 1.09$, $p = .29$).

Healthiness. A 2 \times 2 ANCOVA on the perceived healthiness produced a nonsignificant main effect of the packaging design ($p = .20$) and a significant main effect of the product type ($F(1, 168) = 11.72$, $p < .01$; $M_{\text{vice}} = 3.48$ vs. $M_{\text{virtue}} = 4.01$). Importantly, the interaction between the packaging design and the product type was significant ($F(1, 168) = 5.08$, $p < .05$). According to the planned contrasts, the packaging design had no effect on participants' ratings of the product's healthiness for the vice product

($M_{\text{cute}} = 3.57$ vs. $M_{\text{neutral}} = 3.39$; $F(1, 168) = .42$, $p = .52$). Participants rated the virtue product with the cute packaging design as less healthy than the virtue product with the neutral packaging design ($M_{\text{cute}} = 3.67$ vs. $M_{\text{neutral}} = 4.35$; $F(1, 168) = 5.86$, $p < .05$).

Purchase Intention. A 2×2 ANCOVA on purchase intention produced a nonsignificant main effect of the packaging design ($p = .92$), a significant main effect of the product type ($M_{\text{vice}} = 4.59$ vs. $M_{\text{virtue}} = 4.24$; $F(1, 168) = 5.33$, $p < .05$), and a significant interaction effect ($F(1, 168) = 18.15$, $p < .001$; see fig. 5). Planned contrasts showed that participants indicated higher purchase intentions for the vice product when the packaging was cute rather than when the packaging was neutral ($M_{\text{cute}} = 4.92$ vs. $M_{\text{neutral}} = 4.25$; $F(1, 168) = 9.52$, $p < .01$). Participants indicated lower purchase intentions for the virtue product when the packaging was cute rather than when the packaging was neutral ($M_{\text{cute}} = 3.92$ vs. $M_{\text{neutral}} = 4.55$; $F(1, 168) = 7.81$, $p < .01$). These results provide further support for hypothesis 2a.

Moderated Mediation Analysis. A moderated mediation analysis (Hayes 2013; model 7, $n = 5,000$) that was similar to study 2 produced significant indices of moderated mediation for both tastiness ($b = .33$; $SE = .16$; $CI_{95\%} = .06, .66$) and healthiness ($b = .17$; $SE = .11$; $CI_{95\%} = .01, .44$). For the vice product, the analysis produced a significant pos-

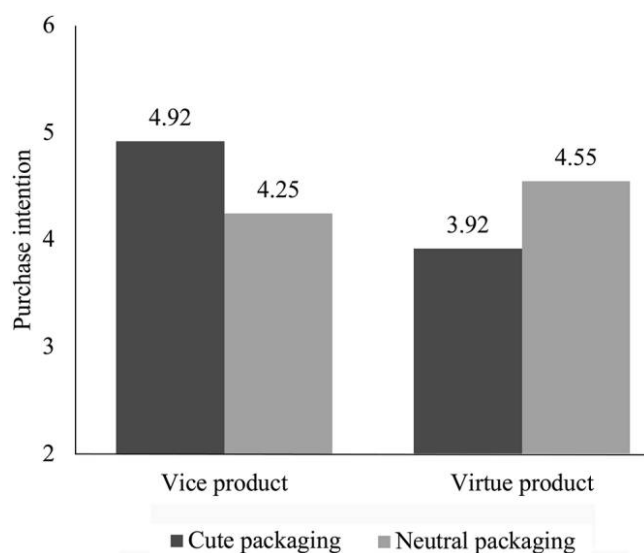


Figure 5. Purchase intention as a function of the packaging design and product type (study 3).

itive indirect effect of the packaging design on purchase intention through tastiness ($b = .23$; $SE = .11$; $CI_{95\%} = .03, .47$) and a nonsignificant indirect effect of the packaging design on purchase intention through healthiness ($b = .03$; $SE = .06$; $CI_{95\%} = -.07, .19$). For the virtue product, the analysis produced a nonsignificant indirect effect of the packaging design on purchase intention through tastiness ($b = -.10$; $SE = .11$; $CI_{95\%} = -.33, .09$) and a significant negative indirect effect of the packaging design on purchase intention through healthiness ($b = -.13$; $SE = .08$; $CI_{95\%} = -.31, -.02$). These results provide further support for hypothesis 2b.

Discussion

Study 3 replicates the findings from study 2 by manipulating the product type via verbal advertising messages. For the vice product, cute packaging design increased purchase intentions through the perceived tastiness. For the virtue product, the cute packaging design decreased purchase intentions through the perceived healthiness.

GENERAL DISCUSSION

The current research demonstrates that cute packaging design serves as an extrinsic cue that leads consumers to perceive products as tastier but less healthy. While Nenkov and Scott (2014) demonstrated that exposure to whimsically cute objects increases consumers' indulgent behavior (e.g., eating ice cream and watching lowbrow movies), the current research demonstrates that cute packaging designs influence consumers' judgments of specific product attributes: tastiness and healthiness. Relatedly, while prior research has shown that consumers draw inferences about products' tastiness and healthiness from packaging design elements such as the color brightness (Mai et al. 2016), color hue (Karnal et al. 2016), shape angularity (Fenko et al. 2016; Velasco et al. 2014), and product visuals (Machiels and Karnal 2016), the current study extends this line of research to the concept of cute packaging designs.

The results from study 1 suggest consumption imagery as the underlying process. Specifically, being exposed to food packaging with a cute design leads consumers to believe that the product is actually fun to consume. Previous studies have shown that visual stimuli can activate specific mental associations (MacInnis and Price 1987; Petrova and Cialdini 2005; Jiang et al. 2015). The current study demonstrates that imagined consumption fun results in inferences about food tastiness and healthiness.

Furthermore, this research demonstrates that the effect of cute packaging design on consumer purchase intention depends on the product type. Prior research has demonstrated that the effects of product and package design elements on consumer behavior greatly vary depending on contextual factors, such as verbal product attribute information (Hoegg and Alba 2011; Noseworthy and Trudel 2011), the brand (Wansink 1996), the product category (Sevilla and Kahn 2014), or the intrinsic characteristics of packaged products (Scott et al. 2008; Deng and Srinivasan 2013). Studies 2 and 3 demonstrate that cute packaging designs increase purchase intentions for relative vices but decreases purchase intentions for relative virtues.

In turn, the findings of this research provide actionable managerial implications that can be adapted according to a company's current profile and product assortment. For products that may be regarded as both rather healthy and rather unhealthy, such as nut snacks, the findings suggest that marketers should make use of cute packaging designs if their goal is to promote the product's tastiness. If their goal is to promote the product's healthiness, marketers should refrain from using cute packaging designs. For companies already making use of cute packaging designs, emphasizing taste benefits in marketing communication, such as advertising, would be a preferable strategy. For companies not making use of cute packaging designs, emphasizing health benefits would be the preferable strategy.

Whether or not to make use of cute packaging designs also depends on the product type. As vice products are predominantly consumed for the immediate pleasure that they provide, consumers are looking for cues that signal tastiness with less regard for how unhealthy the product might be. Because vice products are intrinsically unhealthy, the cute packaging design as a negative health cue has no effect on consumer purchase intention. Thus, making use of cute packaging design is the preferable strategy for communicating the tastiness of vice products. Virtue products, on the other hand, are consumed for the health benefits that they provide. Thus, consumers are looking for cues that signal healthiness. Consequently, cute packaging design as a negative health cue has a negative effect on consumer purchase intention, and using rather simple and clean packaging designs is the preferable strategy for virtue products.

The current study also provides implications for public policy makers. Leading consumers to make healthier food choices is one major strategy to fight worldwide obesity (www.who.int). Studies 2 and 3 demonstrate that cute packaging de-

signs increase purchase intention for vice (unhealthy) products and decreases purchase intention for virtue (healthy) products. These findings thus resonate with Crolic et al.'s (2019) work, which suggests that aesthetics may result in negative consequences for consumer well-being. In public places (e.g., schools and colleges), policy makers can encourage consumers to choose healthy food products by limiting the availability of products featuring cute packaging designs. By choosing brands that use rather plain and simple packaging designs, consumers are more likely to purchase virtue products and less likely to purchase vice products, thus making healthier food choices.

On a larger scale, an option would be to make consumers engage in counterfactual thinking, which encourages consumers to question the influence that packaging cues might have on their food perceptions and choices (Chandon 2013). As packaging cuteness decreases consumers' perceived healthiness of virtue products, public campaigns may focus on the intrinsic health benefits of virtue products while, at the same time, encouraging consumers to think about the role of packaging.

Despite these contributions to theory and practice, there remain some limitations of this work that suggest room for future research. First, this study exclusively investigated the effects of cute packaging designs for food products. Future studies should broaden the scope of this research by investigating different industries and different cuteness elements. For example, another product category where cute packaging design becomes increasingly more prominent is cosmetics (e.g., Oliver Bonas, Treaclemoon, Lush, and Life NK). It would certainly be worthwhile to investigate whether the effect of cuteness positively (negatively) influencing consumers' perceptions of hedonic (functional) product benefits holds for other product categories. In the fashion industry, for example, the luxury brand Hugo Boss created a limited holiday collection featuring whimsical cartoon pictures. Due to the high hedonic potential that is associated with luxury brands (Hagtvedt and Patrick 2009), one might suspect that displaying such cute designs would result in favorable consumer responses for luxury brands. With respect to nonprofit organizations, the World Wide Fund for Nature (WWF) uses a rather cute brand logo compared to other similar organizations, such as the Wildlife Conservation Society. It would certainly be interesting to investigate whether brand logo cuteness affects consumers' donation behavior.

Second, we argued that imagined consumption fun would underlie the positive (negative) taste (health) effect of cute

packaging designs. Future researchers should look deeper into potential alternative explanations. Specifically, the cute packaging designs of studies 1 and 3 generated higher arousal compared to the neutral packaging designs due to the use of color. Although the results of study 1 support our theorizing, more research is necessary to investigate the role of arousal in consumers' responses to cute stimuli. Relatedly, we proposed that, on the one hand, the mental image of fun, which is triggered by exposure to the cute packaging design, would lead consumers to perceive the product as tastier. On the other hand, as consumers are known to draw opposing inferences from the very same cue (Deval et al. 2013), we proposed that the mental image of fun would lead consumers to perceive the product as less healthy. Future studies should investigate the role of learned associations. Packages of rather unhealthy products, such as candy or chocolate, mostly display cute elements, while packages of rather healthy products, such as organic tea or frozen broccoli, very seldomly display cute elements. It might be that consumers automatically associate cute packages with unhealthy products due to repeated exposure to these products.

Third, this article investigated the moderating effect of the product type, neglecting possible moderators on the individual level, such as design responsiveness (Bloch, Brunel, and Arnold 2003) or health consciousness (Prasad, Strijnev, and Zhang 2008). Jiang, Su, and Zhu (2019) show that consumers with more financial resources tend to prefer angular product shapes over circular product shapes. As perceptions of cuteness are evoked by circular shapes, future research may investigate whether poorer consumers are more likely to choose cute packaging design than richer consumers. Similarly, this research is limited in that it focuses on consumers' perceived tastiness without actually tasting the product. Although of high managerial relevance, it would be interesting to investigate whether cute packaging design affects consumers' actual taste perceptions. Relatedly, the current research assesses participants' purchase likelihood. Future researchers should investigate the effect of cute packaging design on actual purchase behavior in a field setting.

Finally, the findings of studies 2 and 3 imply that cute packaging leads consumers to make less healthy food choices by increasing purchase intentions for unhealthy (vice) products and decreasing purchase intentions for healthy (virtue) products. To gain deeper insights for public policy makers, future research should examine the possible strategies that might attenuate or even reverse these effects. For example, Wang, Mukhopadhyay, and Patrick (2017) demonstrated

that kindchenschema cute appeal enhances prosocial and sustainable behaviors among consumers with a high approach motivational orientation. As many brands use cute packaging designs, it would certainly be interesting to examine the conditions under which whimsically cute appeals may lead consumers to make healthier food choices.

REFERENCES

- Bloch, Peter H., Frédéric F. Brunel, and Todd J. Arnold (2003), "Individual Differences in the Centrality of Visual Product Aesthetics: Concept and Measurement," *Journal of Consumer Research*, 29 (4), 551–65.
- Chandon, Pierre (2013), "How Package Design and Packaged-Based Marketing Claims Lead to Overeating," *Applied Economic Perspectives and Policy*, 35 (1), 7–31.
- Cho, Sookyung, R. Gonzales, and Carolyn Yoon (2011), "Cross-Cultural Difference in the Preference of Cute Products: Asymmetric Dominance Effect with Product Design," *Proceedings of IASDR, the 4th World Conference on Design Research*, Delft, Netherlands.
- Connell, Paul M., and Lauren F. Mayor (2013), "Activating Health Goals Reduces (Increases) Hedonic Evaluation of Food Brands for People Who Harbor Highly Positive (Negative) Affect toward Them," *Appetite*, 65, 159–64.
- Corleone, Jill (2013), "Nutritional Value of Dried Fruits and Nuts," <http://www.livestrong.com/article/285078-nutritional-value-of-dried-fruits-nuts/> (accessed June 22, 2017).
- Crolic, Cammy, Yanmei Zheng, JoAndrea Hoegg, and Joseph W. Alba (2019), "The Influence of Product Aesthetics on Consumer Inference Making," *Journal of the Association for Consumer Research*, 4 (4), in this issue.
- Dahl, Darren W., Rong Huang, Shenyu Li, and Qiong Zhou (2019), "The Effect of Packaging Perceptual Cues on Consumer Disposal Behavior of Partially Consumed Products," *Journal of the Association for Consumer Research*, 4 (4), in this issue.
- Deng, Xiaoyan, and Barbara E. Kahn (2009), "Is Your Product on the Right Side? The 'Location Effect' on Perceived Product Heaviness and Package Evaluation," *Journal of Marketing Research*, 46 (6), 725–38.
- Deng, Xiaoyan, and Raji Srinivasan (2013), "When Do Transparent Packages Increase (or Decrease) Food Consumption?" *Journal of Marketing*, 77 (4), 104–17.
- Deval, Hélène, Susan P. Mantel, Frank R. Kardes, and Steven S. Posavac (2013), "How Naive Theories Drive Opposing Inferences from the Same Information," *Journal of Consumer Research*, 39 (6), 1185–201.
- Fenko, Anna, Henriët Lotterman, and Mirjam Galetzka (2016), "What's in a Name? The Effects of Sound Symbolism and Package Shape on Consumer Responses to Food Products," *Food Quality and Preference*, 51, 100–108.
- Gomez, Pierrick, Adilson Borges, and Cornelia Pechmann (2013), "Avoiding Poor Health or Approaching Good Health: Does It Matter? The Conceptualization, Measurement, and Consequences of Health Regulatory Focus," *Journal of Consumer Psychology*, 23 (4), 451–63.
- Hagtvedt, Henrik, and Vanessa M. Patrick (2009), "The Broad Embrace of Luxury: Hedonic Potential as a Driver of Brand Extendibility," *Journal of Consumer Psychology*, 19 (4), 608–18.
- Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, New York: Guilford.

- Hildebrandt, Katherine A., and Hiram E. Fitzgerald (1978), "Adults' Responses to Infants Varying in Perceived Cuteness," *Behavioural Processes*, 3 (2), 159–72.
- Hoegg, JoAndrea, and Joseph W. Alba (2011), "Seeing Is Believing (Too Much): The Influence of Product Form on Perceptions of Functional Performance," *Journal of Product Innovation Management*, 28 (3), 346–59.
- Jiang, Yuwei, Gerald J. Gorn, Maria Galli, and Amitava Chattopadhyay (2015), "Does Your Company Have the Right Logo? How and Why Circular- and Angular-Logo Shapes Influence Brand Attribute Judgments," *Journal of Consumer Research*, 42 (5), 709–26.
- Jiang, Yuwei, Lei Su, and Rui Zhu (2019), "The Impact of Financial Resources on Product Shape Preference," *Journal of the Association for Consumer Research*, 4 (4), in this issue.
- Karnal, Nadine, Casparus J. A. Machiels, Ulrich R. Orth, and Robert Mai (2016), "Healthy by Design, but Only When in Focus: Communicating Non-verbal Health Cues through Symbolic Meaning in Packaging," *Food Quality and Preference*, 52, 106–19.
- Keating, Caroline F., David W. Randall, Timothy Kendrick, and Katharine A. Gutshall (2003), "Do Babyfaced Adults Receive More Help? The (Cross-Cultural) Case of the Lost Resume," *Journal of Nonverbal Behavior*, 27 (2), 89–109.
- Machiels, Casparus J. A., and Nadine Karnal (2016), "See How Tasty It Is? Effects of Symbolic Cues on Product Evaluation and Taste," *Food Quality and Preference*, 52, 195–202.
- MacInnis, Deborah J., and Linda L. Price (1987), "The Role of Imagery in Information Processing: Review and Extensions," *Journal of Consumer Research*, 13 (4), 473–91.
- Mai, Robert, Claudia Symmank, and Berenike Seeberg-Elverfeldt (2016), "Light and Pale Colors in Food Packaging: When Does This Package Cue Signal Superior Healthiness or Inferior Tastiness?" *Journal of Retailing*, 92 (4), 426–44.
- Milkman, Katherine L., Todd Rogers, and Max H. Bazerman (2008), "Harnessing Our Inner Angels and Demons: What We Have Learned about Want/Should Conflicts and How That Knowledge Can Help Us Reduce Short-Sighted Decision Making," *Perspectives on Psychological Science*, 3 (4), 324–38.
- Nenkov, Gergana Y., and Maura L. Scott (2014), "'So Cute I Could Eat It Up': Priming Effects of Cute Products on Indulgent Consumption," *Journal of Consumer Research*, 41 (2), 326–41.
- Ngo, Mary Kim, Carlos Velasco, Alejandro Salgado, Emilia Boehm, Daniel O'Neill, and Charles Spence (2013), "Assessing Crossmodal Correspondences in Exotic Fruit Juices: The Case of Shape and Sound Symbolism," *Food Quality and Preference*, 28 (1), 361–69.
- Nielsen (2016), "Perfecting Package Design," <http://www.nielsen.com/be/en/insights/news/2016/perfecting-package-design.html> (accessed March 28, 2017).
- Noseworthy, Theodore J., and Remi Trudel (2011), "Looks Interesting, but What Does It Do? Evaluation of Incongruent Product Form Depends on Positioning," *Journal of Marketing Research*, 48 (6), 1008–19.
- Olsen, Mitchell C., Rebecca J. Slotegraaf, and Sandeep R. Chandukala (2014), "Green Claims and Message Frames: How Green New Products Change Brand Attitude," *Journal of Marketing*, 78 (5), 119–37.
- Petrova, Petia K., and Robert B. Cialdini (2005), "Fluency of Consumption Imagery and the Backfire Effects of Imagery Appeals," *Journal of Consumer Research*, 32 (3), 442–52.
- Prasad, Ashutosh, Andrei Strijnev, and Qin Zhang (2008), "What Can Grocery Basket Data Tell Us about Health Consciousness?" *International Journal of Research in Marketing*, 25 (4), 301–9.
- Raghunathan, Rajagopal, Rebecca Walker Naylor, and Wayne D. Hoyer (2006), "The Unhealthy = Tasty Intuition and Its Effects on Taste Inferences, Enjoyment, and Choice of Food Products," *Journal of Marketing*, 70 (4), 170–84.
- Scott, Maura L., Stephen M. Nowlis, Naomi Mandel, and Andrea C. Morales (2008), "The Effects of Reduced Food Size and Package Size on the Consumption Behavior of Restrained and Unrestrained Eaters," *Journal of Consumer Research*, 35 (3), 391–405.
- Sevilla, Julio, and Barbara E. Kahn (2014), "The Completeness Heuristic: Product Shape Completeness Influences Size Perceptions, Preference, and Consumption," *Journal of Marketing Research*, 51 (1), 57–68.
- Sherman, Gary D., Jonathan Haidt, and James A. Coan (2009), "Viewing Cute Images Increases Behavioral Carefulness," *Emotion*, 9 (2), 282–86.
- Underwood, Robert L. (2003), "The Communicative Power of Product Packaging: Creating Brand Identity via Lived and Mediated Experience," *Journal of Marketing Theory and Practice*, 11 (1), 62–76.
- van Doorn, Jenny, and Peter C. Verhoef (2011), "Willingness to Pay for Organic Products: Differences between Virtue and Vice Foods," *International Journal of Research in Marketing*, 28 (3), 167–80.
- van Ooijen, Iris, Marieke L. Franssen, Peeter W. J. Verlegh, and Edith G. Smit (2017), "Packaging Design as an Implicit Communicator: Effects on Product Quality Inferences in the Presence of Explicit Quality Cues," *Food Quality and Preference*, 62, 71–79.
- Velasco, Carlos, Alejandro Salgado-Montejo, Fernando Marmolejo-Ramos, and Charles Spence (2014), "Predictive Packaging Design: Tasting Shapes, Typefaces, Names, and Sounds," *Food Quality and Preference*, 34, 88–95.
- Voss, Kevin E., Eric R. Spangenberg, and Bianca Grohmann (2003), "Measuring the Hedonic and Utilitarian Dimensions of Consumer Attitude," *Journal of Marketing Research*, 40 (3), 310–20.
- Wang, Tingting, and Anirban Mukhopadhyay (2015), "How Consumers Respond to Cute Products," in *The Psychology of Design: Creating Consumer Appeal*, ed. R. Batra, C. Seifert, and D. Brei, New York: Routledge, 149–67.
- Wang, Tingting, Anirban Mukhopadhyay, and Vanessa M. Patrick (2017), "Getting Consumers to Recycle NOW! When and Why Cuteness Appeals Influence Prosocial and Sustainable Behavior," *Journal of Public Policy & Marketing*, 36 (2), 269–83.
- Wansink, Brian (1996), "Can Package Size Accelerate Usage Volume?" *Journal of Marketing*, 60 (3), 1–14.
- Wertenbroch, Klaus (1998), "Consumption Self-Control by Rationing Purchase Quantities of Virtue and Vice," *Marketing Science*, 17 (4), 317–37.