

The role of imagery in promoting organic food

Abstract

While prior research has examined the importance of organic food and the reasons why consumers might purchase it, how marketers can develop effective advertising strategies to promote organic food remains unclear. Drawing upon construal level theory, the present research investigates the role of visual imagery (illustrations vs. photographs) and advertising claims (altruistic vs. egoistic) in promoting organic (vs. conventional) food. Across three experimental studies, this research demonstrates that matching illustrations (photographs) with organic food (conventional) food increases advertising effectiveness (Study 1). Furthermore, matching illustrations (photographs) with altruistic (egoistic) claims can increase likelihood of purchasing (Study 2) and willingness to pay for organic food (Study 3). The findings of this research contribute to the literature on construal level and offer practical implications for marketers and how they can promote organic food.

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1. Introduction

The consumption of organic food has been growing rapidly in recent decades. The global organic food market was valued at \$77 billion in 2015 and is predicted to reach \$320 billion by 2025 (Grand View Research, 2017). Consistent with the rise of the organic industry, there is a growing interest in academic research on sustainable consumption (Balderjahn, Peyer, Seegebarth, Wiedmann, & Weber, 2018; Phipps et al., 2013), and organic food specifically (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007). Research has identified that consumers may engage in sustainable consumption due to health concerns (Hughner et al., 2007; Magnusson, Arvola, Hursti, Åberg, & Sjöden, 2003; McEachern & Mcclean, 2002). However, the consumption of organic food can also increase sustainable production and consumption or, more specifically, support a production method in harmony with the environment, local ecosystems and animal and human health (Seyfang, 2006). Supporting this notion, other studies suggest that such consumption is associated with altruistic motives such as preserving the environment and supporting local communities (Bauer, Heinrich, & Schäfer, 2013; Mainieri, Barnett, Valdero, Unipan, & Oskamp, 1997; Minton & Rose, 1997).

While previous studies are informative with regard to understanding the importance of organic food and the reasons why consumers might choose to purchase it, they offer limited practical implications for marketers in developing effective advertising strategies. Indeed, while there is a growing body of literature on green advertising in general, such as by employing guilt appeals (Chang, 2012), natural imagery (Hartmann & Apaolaza-Ibañez, 2009) and a regulatory focus (Kareklas, Carlson, & Muehling, 2012), there is a distinct lack of studies on the promotion of organic food specifically (Kareklas, Carlson, & Muehling, 2014), apart from the role of labels (Janssen & Hamm, 2012). The current research responds to calls to move beyond demographics to categorize and target organic food consumers (Hughner et al.,

2007). Specifically, we develop a novel perspective on how to improve the effectiveness of organic food advertising by examining visual imagery and advertising claims.

When promoting their products in advertising, marketers can use two types of visuals: photographs and illustrations. As real images have traditionally been considered more compelling than illustrated images, marketers typically used photographs in advertisements (Rossiter, 1982). However, there is growing interest among marketers in employing illustrations in their marketing communications (e.g., Dove's "Real Beauty" Campaign). Notably, illustrations are typically less concrete and bear less resemblance to actual objects than photographs. Building on construal level theory, which posits that a psychologically distant (close) object is construed in a more abstract (concrete) manner (Liberman, Trope, & Wakslak, 2007; Trope & Liberman, 2010), we argue that photographs are associated with low construal levels, whereas illustrations are associated with high construal levels.

We further theorize that compared to conventional food, organic food is associated with high (vs. low) construal levels. This is because while conventional food is a necessity to consumers in general, organic food is an exception to the ordinary. In fact, organic food can be considered a premium product and consumers may purchase it as a form of status-signaling (Griskevicius, Tybur, & Van den Bergh, 2010; Puska, Kurki, Lähdesmäki, Siltaoja, & Luomala, 2018). Past research has also associated the concept of luxury with high construal levels (Hansen & Wänke, 2011). Given the compatibility between organic (conventional) food and illustrations (photographs) because they are both processed at high (low) construal levels, we propose that illustrations will be more effective than photographs in promoting organic (vs. conventional) food.

Furthermore, we investigate the moderating role of egoistic versus altruistic claims (Kareklas et al., 2014). While most food consumption is associated with egoistic claims

(because we need to eat in order to survive), as discussed, there are two distinct claims involved in organic and sustainable food consumption. The motives for purchasing organic food can reflect egoistical (e.g., personal health; Hughner et al., 2007; Magnusson et al., 2003) and altruistic concerns (e.g., environment; Soler, Gil, & Sanchez, 2002; Squires, Juric, & Bettina Cornwell, 2001; Wandel & Bugge, 1997). Construal level theory posits that egoistical (altruistic) concerns are associated with low (high) construal levels (Baskin, Wakslak, Trope, & Novemsky, 2014; Lu, Xie, & Xu, 2013). Thus, we expect that when promoting organic food, matching photographs (illustrations) with egoistic (altruistic) claims will increase the effectiveness of an advertisement. In contrast, when promoting conventional food, only matching photographs with egoistic claims should work (and not illustrations with altruistic claims) because conventional food is rarely associated with altruistic benefits.

Through three experimental studies, this research contributes to sustainable decision making and consumption by testing a novel mechanism that shows when and how marketers can purposively match distinct food types, visual imagery, and advertising claims in developing effective advertising strategy. Study 1 tested the match (vs. mismatch) between illustrations and organic food and between photographs and conventional food. Study 2 examined how both illustrations and photographs might be effective in promoting organic versus conventional food, depending on egoistic versus altruistic advertising claims. Finally, Study 3 extended Studies 1 and 2 by showing the managerial relevance of our predictions. Specifically, we collaborated with an organic food store and examined a different dependent variable (i.e., willingness to pay).

These findings make several important contributions. First, we contribute to the literature on organic food and offer significant practical implications by developing a novel perspective on ways to improve the effectiveness of organic food advertising. Second, we

contribute to the literature on construal level theory by demonstrating that organic (vs. conventional) food is construed in an abstract, high-level manner. In addition, by showing that illustrations (vs. photographs) are associated with abstractness and high construal levels, whereas photographs are associated with concreteness and low construal levels, we add to our understanding of different types of visual imagery.

2. Theoretical background

2.1. Organic food

Most research on organic food in the consumer behavior literature emphasizes and focuses on the characteristics and motives of consumption (Hughner et al., 2007). In particular, organic food consumption is regularly linked to numerous egoistical (personal) and altruistic (social) motives. Specifically, motives include health concerns related to the use of pesticides, fertilizers and hormones (Hughner et al., 2007; Magnusson et al., 2003; McEachern & McClean, 2002) and perceived nutritional benefits (Hill & Lynchehaun, 2002; Hoefkens, Verbeke, Aertsens, Mondelaers, & Van Camp, 2009), environmental concerns (i.e., greenhouse gas emissions and water usage) (Bauer et al., 2013; Mainieri et al., 1997; Minton & Rose, 1997), and ethical standards related to animal welfare (Soler et al., 2002; Squires et al., 2001; Wandel & Bugge, 1997). Studies report mixed results as to which of these concerns dominate, with health usually predominant (Hughner et al., 2007; Magnusson et al., 2003; McEachern & McClean, 2002), but these motives may also differ according to socio-demographic characteristics (e.g., age, gender, education) and personal values (e.g., universalism, benevolence) (Aertsens, Verbeke, Mondelaers, & Van Huylenbroeck, 2009; Hughner et al., 2007; Krystallis, Vassallo, Chryssohoidis, & Perrea, 2008).

Notably, much research has neglected the ability of companies to encourage sustainable consumption, particularly organic food consumption (Kareklas et al., 2014), such as through corporate social marketing and advertising. Past organic food research has focused extensively on the impact of labels on consumer decision making (e.g., purchase intentions, willingness to pay) (Janssen & Hamm, 2012), but, to the best of our knowledge, only one study has examined (advertising) framing effects on organic food consumption (Kareklas et al., 2014). While some findings suggest that altruistic claims are more effective than egoistical claims in organic food advertising (Kareklas et al., 2014), organic food is also associated with numerous personal (egoistical) benefits (Hoefkens et al., 2009; Hughner et al., 2007; Magnusson et al., 2003). Thus, more research is needed to investigate the conditions under which egoistical and altruistic claims can be effective in organic food advertising. As such, we seek to match advertising claims, visuals, and food types to appeal to consumers. In particular, the research is based on construal level theory, a rich and popular theory for predicting consumer behavior (Fiedler, 2007; Liberman et al., 2007).

2.2. Construal level of organic food

Construal level theory posits that objects, individuals, and events can be construed as being either psychologically distant or near along different dimensions, namely spatial, social, temporal, and hypothetical (Liberman et al., 2007; Trope & Liberman, 2010). Consequently, psychological distance from an object increases an individual's inclination to construe an abstract representation (high construal levels) as opposed to a concrete representation (low construal levels) of that object (Liberman et al., 2007; Trope & Liberman, 2010). When there is congruence between an abstract (concrete) mindset and psychologically distant (near) focus, consumers can process information more fluently, leading to more favorable evaluations (Trope & Liberman, 2010; White, MacDonnell, & Dahl, 2011). Such construal level based

congruence has been established across different contexts, including product evaluations (Han, Duhachek, & Agrawal, 2014), emotional (vs. rational) advertising (Septianto & Pratiwi, 2016), and environmental behaviors (White et al., 2011).

We argue that organic food, as compared to conventional food, is associated with high construal levels. This stems from consumers' direct experience and motivations in consuming organic food. Specifically, organic food is linked with the concept of premium and can be used in conspicuous consumption to provide consumers with status (Griskevicius et al., 2010; Kafashan, Sparks, Griskevicius, & Barclay, 2014). Status is “the extent to which an individual is respected, admired, and highly regarded by others” (Fragale, Overbeck, & Neale, 2011, p. 767). This is consistent with costly signaling theory (Hardy & Van Vugt, 2006), whereby sustainable behaviors – purchasing or consuming organic food – can act as a signal, showcasing an individual's willingness and ability to incur costs (i.e. expenditure, changing habits) for their altruism (Brick, Sherman, & Kim, 2017; van der Wal, van Horen, & Grinstein, 2016).

Previous research has also demonstrated that for the majority of consumers, luxury products are construed in a more psychologically distant manner than conventional products, and thus are associated with high construal levels (Hansen & Wänke, 2011). This is because although highly desirable, luxury products are only affordable by some individuals (e.g., those with higher socio-economic or upper-class status) (Miyazaki, Grewal, & Goodstein, 2005). In fact, some consumers might claim that they feel “foreign” to luxury (Dubois, Laurent, & Czellar, 2001). Building on these findings, we can argue that organic food is considered more exclusive than conventional food, leading consumers to be more likely to construe organic (vs. conventional) food in a more psychologically distant representative manner. Thus, we predict there is an association between organic (vs. conventional) food and high construal levels. Importantly, we seek to examine the implications of this association by examining when and

how marketers can promote organic food in their advertising. In the following section, we discuss and argue the relevance of using different visuals – illustrations and photographs – in advertising.

2.3. Construal level of advertising visuals

While the importance of sustainable consumption and the potential benefits of organic food have been established in the research literature, consumers often receive such information from the media. Research indicates that media reports can significantly influence public attitudes when consumers have limited experience of an issue (Chan, 1999; Wanta & Hu, 1993). In particular, previous studies have established that visuals are important for news framing because they can emphasize a particular element of an issue (Graber, 1990). Visuals are also more memorable than textual messages, leading to better information recall (Newhagen & Reeves, 1992).

Particularly in the advertising context, marketers regularly use different types of visuals (photographs and illustrations) in promoting their products. Moriarty (1987), one of the first researchers to explore how photographs and illustrations are used in print advertisements, found that only 16 (approximately 7%) of the 222 advertisements analyzed used illustrations. In other words, photographs are generally the dominant medium in advertising based on the premise that concrete images are better than abstract images (Paivio, Yuille, & Madigan, 1968). However, there are situations where illustrations might be preferable, such as when imaginary characters are used to promote brands (Phillips & Gyoerick, 1999).

In addition, some studies have suggested how the two types of image may differ in terms of advertising effectiveness. For instance, Miller and Stoica (2004) compared the effectiveness of an artistic rendition of a beach scene and a photograph of the same beach in an

advertisement for a fictitious resort. They found the illustration of the beach drew attention more effectively than the photograph. However, the photograph elicited more vivid mental imagery and more favorable attitudes toward the brand. This is consistent with mental imagery theory which suggests that concreteness leads to more vivid mental imagery, in turn leading to more favorable recall and attitudes (Paivio et al., 1968).

However, this effect can be reversed with creativity. Heiser, Sierra, and Torres (2008) demonstrated that using an illustrative spokesperson to promote a product is more distinctive than using a photographic spokesperson. This is because using illustrations is perceived to be more creative, increasing the persuasion of an advertisement and resulting in more favorable attitudes toward the advertisement and higher purchase intentions of the product. These findings indicate that the effectiveness of illustrations and photographs in advertising is not straightforward and can be influenced by different factors.

We further argue that the effectiveness of these different visuals can be influenced by the degree of abstractness or concreteness associated with illustrations versus photographs. Concreteness reflects the extent to which an image looks real and vivid (Forsythe, Mulhern, & Sawey, 2008). In particular, drawing upon construal level theory (Trope & Liberman, 2010), illustrations, relative to photographs, are artistic, subjective interpretations of a real object (Ogilvy & Horgan, 1964). In contrast, illustrations (vs. photographs) provide a more abstract (vs. concrete) depiction of an object. Thus, we argue that illustrations are associated with higher construal levels than photographs.

So far, we have conceived organic food and illustrations as associated with higher construal levels. In contrast, conventional food and photographs are associated with lower construal levels. As such, matching organic food (vs. conventional food) with illustrations (vs. photographs) should lead to a congruent processing style (i.e., high vs. low construal levels,

respectively). Prior research suggests that when consumers have a congruent processing style, they are better able to process information in an advertisement (i.e., processing fluency), leading to more favorable evaluations (Lee & Aaker, 2004; Lee & Labroo, 2004; White et al., 2011). Thus, we propose that:

H1. Matching photographs (illustrations) with conventional (organic) food will increase the effectiveness of an advertisement.

2.4. The moderating role of egoistic and altruistic claims

We seek to further argue the effectiveness of the ‘match-up’ effect between visuals and food type by introducing a boundary condition – different advertising claims (egoistic vs. altruistic). In general, all consumers need to purchase and consume food, whether it is organic or conventional. However, the underlying motives for consumers purchasing food are not always straightforward (Stephoe, Pollard, & Wardle, 1995), and this is especially true in the case of organic food (Hughner et al., 2007). Consistent with this notion, previous studies suggest that egoistical (or personal) motives have largely dominated the motivations for buying organic food, particularly those related to health concerns (Hughner et al., 2007; Magnusson et al., 2003). For instance, organic food is consistently perceived as healthier and safer than conventional foods due to the elimination of pesticides, fertilizers and other harmful chemicals (Hughner et al., 2007; Michaelidou & Hassan, 2008). Similarly, other studies have found that organic produce is perceived to be more nutritious than conventional foods (Hill & Lynchehaun, 2002; Hoefkens et al., 2009).

However and more importantly, research has further highlighted altruistic motives for organic food consumption, such as the perceived environmental friendliness and improved animal welfare of organic food production (Soler et al., 2002; Squires et al., 2001; Wandel &

Bugge, 1997). Studies have also found that organic food consumption is associated with values related to altruistic motives (e.g., universalism, benevolence) (Hughner et al., 2007; Krystallis et al., 2008). In addition, more recent research has demonstrated that when consumers conceptualize sustainable food and effective strategies for reducing the environmental impact of their food consumption, organic food is seen to be a sustainable source of food over and above other strategies, such as reducing meat consumption (Hoek, Pearson, James, Lawrence, & Friel, 2017; Vlaeminck, Jiang, & Vranken, 2014). As such, consumers use organic labels as a surrogate indicator for sustainability (Lazzarini, Zimmermann, Visschers, & Siegrist, 2016). Consequently, while much research has examined the varying motives for organic food purchases for health, environmental, and ethical reasons, more research is needed on their use in advertising and the ‘match-up’ effects.

In summary, previous studies investigating the underlying reasons for food consumption have shown there are two foci of concern: self (egoistical motives) versus others (altruistic motives). Construal level theory further suggests that individuals who make decisions for themselves (others) are more likely to adopt low (high) construal levels (Baskin et al., 2014; Lu et al., 2013). This is because making decisions for others (vs. self) is associated with a more socially distant processing (Baskin et al., 2014; Lu et al., 2013). Hence, building on previous research (Hughner et al., 2007; Kareklas et al., 2014), we argue that thinking of personal health (environmental) concerns when purchasing organic food is associated with low (high) construal levels.

We predict that combining visual imagery (illustrations vs. photographs) and advertising claims (egoistic vs. altruistic) should lead to differential patterns for organic and conventional food. Because the motives of purchasing organic food reflect egoistical (Hughner et al., 2007; Magnusson et al., 2003) and altruistic concerns (Soler et al., 2002; Squires et al.,

2001; Wandel & Bugge, 1997), we predict we can match these concerns with different visuals. Accordingly, when promoting organic food, matching illustrations (photographs) with altruistic (egoistic) claims should lead to a congruent processing style and increase the effectiveness of the advertisement.

In contrast, conventional food is primarily associated with egoistical (but not altruistic) motives. Thus, consistent with our predictions for organic food, we expect that matching photographs with egoistic claims should increase the effectiveness of advertisements promoting conventional food. However, because no altruistic motives underlie conventional food consumption, we expect no differences to emerge between photographs and illustrations when altruistic claims are used. Formally:

H2a. When promoting organic food, matching illustrations (vs. photographs) with altruistic claims will increase advertising effectiveness.

H2b. When promoting conventional food, matching photographs (vs. illustrations) with egoistic claims will increase advertising effectiveness.

3. Study 1: effects of imagery in promoting organic and conventional food

Study 1 aimed to offer initial evidence for our first prediction by examining the ‘match-up’ effect between illustrations and organic food, and between photographs and conventional food. Consistent with Hypothesis 1, we expected that congruence between visual imagery and food type should lead to a higher purchase likelihood.

3.1. Method

3.1.1. Participation and design

One hundred and sixty-seven participants living in the U.S. (66% male, $M_{\text{age}} = 34.25$, $SD = 10.49$) were recruited from Amazon Mechanical Turk in exchange for financial compensation (see Appendix A for detailed demographics of the participants). This study employed a 2 (visual imagery: illustration, photograph) \times 2 (food type: organic, conventional) between-subjects design.

3.1.2. Procedure

Participants were asked to imagine there was a new fruit and vegetable store in their neighborhood. Afterwards, they randomly viewed one of four advertisements (see Appendix B). We manipulated visual imagery using illustrated images or photos of vegetables. We also manipulated food type (organic vs. conventional) using the tagline: “Buy our (organic) vegetables.” For the dependent variable, participants indicated their purchase likelihood (1 = very unlikely, 7 = very likely). As manipulation checks, participants indicated the extent to which the image used in the advertisement was abstract on a 7-point bipolar scale (1 = concrete, 7 = abstract). We also asked participants about their perception of the advertised product using two bipolar items (“inexpensive-expensive” and “low quality-high quality”; $\alpha = 0.73$). Lastly, as statistical controls, we asked participants to indicate their frequency of purchasing organic food on a 7-point scale (1 = never, 7 = always), and their affect using two bipolar items (“negative-positive” and “unpleasant-pleasant”; $\alpha = 0.94$) rated on a 7-point scale.

3.2. Results and discussion

3.2.1. Manipulation checks

Two-way ANOVA were conducted on the level of abstractness of the image and product perceptions. The results show a significant main effect of visual imagery on the level of

abstractness ($F(1, 161) = 14.14, p < .001$), such that illustrations ($M = 4.26$) were considered to be more abstract than photographs ($M = 3.22, t(161) = 3.76, p < .001$). The results also reveal a significant main effect of food type on product perceptions ($F(1, 161) = 26.43, p < .001$), such that organic food ($M = 5.21$) was considered to be more expensive and of higher quality as compared to conventional food ($M = 4.23, t(161) = 5.14, p < .001$). These findings show that our manipulations were successful.

3.2.2. Purchase likelihood

We ran a two-way ANOVA with visual imagery, food type, and their interaction as independent variables and purchase likelihood as the dependent variable. We also included frequency of purchasing organic food and affect as statistical controls. The results show that increasing frequency of purchasing organic food was associated with higher purchase likelihood ($\beta = 0.23, SE = 0.08, t(161) = 2.80, p < .01$). However, importantly and as expected, there was a significant interaction effect between visual imagery and food type ($F(1, 161) = 16.49, p < .001$). As can be seen in Fig. 1, we found that participants exhibited a higher likelihood of purchasing conventional food after viewing an advertisement featuring photographs ($M = 5.09$), as compared to illustrations ($M = 4.31, t(161) = 2.26, p < .05$). In contrast, participants reported a higher likelihood of purchasing organic food after viewing an advertisement featuring illustrations ($M = 5.55$) compared to one featuring photographs ($M = 4.28, t(161) = 3.43, p < .001$). These findings support Hypothesis 1 and demonstrate that illustrations (photographs) are more effective for promoting organic (conventional) food products.

< Fig. 1. Purchase likelihood by visual imagery and food type conditions (Study 1).>

4. Study 2: effects of imagery and advertising claims in promoting organic and conventional food

The results from Study 1 provide evidence of the congruence between organic food and illustrations and between conventional food and photographs (H1). Study 2 tested Hypotheses 2a and 2b by examining the moderating role of advertising claims (egoistic vs. altruistic). We expected there should be a congruent effect for organic food when considering the combination of illustrations and altruistic claims and the combination of photographs and egoistic claims (H2a). However, we also predicted distinct patterns for conventional food; that is, only the match between photographs and egoistic claims should emerge (H2b).

4.1. Method

4.1.1. Participation and design

Four hundred participants living in the U.S. (56% male, $M_{\text{age}} = 35.57$, $SD = 11.75$) were recruited from Amazon Mechanical Turk in exchange for financial compensation. This study employed a 2 (visual imagery: illustration, photograph) \times 2 (advertising claim: egoistic, altruistic) \times 2 (food type: organic, conventional) between-subjects design.

4.1.2. Procedure

Study 2 employed a similar procedure to Study 1 with the exception that we also manipulated advertising claims. Hence, we developed eight ads to manipulate different visuals, food types, and advertising claims. To manipulate egoistic (altruistic) claims we used the tagline: “Buy our vegetables and improve your health (save the environment).” As manipulation checks for the advertising claims, participants indicated their agreement on whether purchasing organic food

is concerned with (1) personal impact (e.g., health) and (2) societal impact (e.g., environment) on a 7-point scale (1 = strongly disagree, 7 = strongly agree) (Kareklas et al., 2014).

4.2. Results and discussion

We ran a three-way ANOVA with food type, visual imagery, advertising claim, and their interactions as independent variables and purchase likelihood as the dependent variable.¹ We also included frequency of purchasing organic food and affect as statistical controls. The results show that increasing frequency of purchasing organic food was associated with higher purchase likelihood ($\beta = 0.13$, $SE = 0.04$, $t(390) = 3.12$, $p < .01$). Increasing positive affect was also associated with a higher purchase likelihood ($\beta = 0.21$, $SE = 0.04$, $t(390) = 5.04$, $p < .001$). Importantly and as expected, there was a significant three-way interaction effect ($F(1, 390) = 3.98$, $p < .05$).

Examining the organic food condition, the results show that photographs ($M = 5.56$) were more effective than illustrations ($M = 4.72$, $t(390) = 3.16$, $p < .01$) in increasing purchase likelihood when combined with egoistic claims. In contrast, illustrations ($M = 5.49$) were more effective than photographs ($M = 4.97$, $t(390) = 2.20$, $p < .05$) in increasing purchase likelihood when combined with altruistic claims. In particular, we found non-significant differences between the combination of illustrations ($M = 5.49$) and altruistic claims and the combination of photographs and egoistic claims ($M = 5.56$, $t(390) = 0.26$, *NS*).

In contrast, examining the conventional food condition, photographs ($M = 5.30$) were more effective than illustrations ($M = 4.79$, $t(390) = 1.94$, $p = .05$) in increasing purchase likelihood when combined with egoistic claims. However and as expected, there were no significant differences between photographs ($M = 4.81$) and illustrations ($M = 4.62$, $t(390) = 0.70$, *NS*; see Fig. 2) on levels of purchase likelihood when combined with altruistic claims.

< Fig. 2. Purchase likelihood by visual imagery, advertising claim, and food type conditions (Study 2).>

These findings provide support for our predictions. Specifically, there was a ‘match-up’ effect between illustrations and altruistic claims and between photographs and egoistic claims for promoting organic food (H2a). However and as predicted, there was a different pattern for promoting conventional food. Specifically, only the match-up effect between photographs and egoistic claims emerged, whereas no significant differences were seen between using photographs and illustrations when combined with altruistic claims (H2b). These findings show a clear difference when altruistic claims are combined with illustrations (vs. photographs) for organic food (but not conventional food) because the effect of egoistic claims is the same for organic and conventional food.

5. Study 3: effects of imagery and advertising claims on willingness to pay

Study 3 sought to extend the findings of Studies 1 and 2 in two meaningful ways. First, we wanted to replicate our findings in a country with a different cultural background, in this case Indonesia. This is important because there is high growth in organic food production and consumption in Asia due to increasing availability and consumer awareness (Sahota, 2009), and especially in Indonesia (Euromonitor, 2017). Second, we wanted to provide further empirical evidence for our predictions. Thus, we collaborated with an organic food store in Yogyakarta, Indonesia.

5.1. Pretest

Before conducting the main study, we ran a separate pretest with two purposes. First, we wanted to establish the validity of the advertisement stimuli. Second and more importantly, we wanted to provide greater confidence in the proposed mechanism underpinning the differences

in advertising effectiveness between the use of illustrations versus photographs. Specifically, it is plausible that illustrations in general ‘feel’ more expensive and therefore match the price expectations for organic food.

5.1.1. Method

Fifty-eight adult consumers living in Yogyakarta, Indonesia (40% male, $M_{\text{age}} = 35.29$, $SD = 7.68$) were recruited from an online research panel in Indonesia. This study employed a one-factor, two-level (visual imagery: illustration, photograph) between-subjects design. Participants were randomly shown an illustrative image or photo of a fruit basket. Afterwards, participants evaluated the perceived value of that fruit basket according to two bipolar items (inexpensive-expensive, low quality-high quality; $\alpha = 0.70$) on a 7-point scale. In addition, they also completed ten items of the Behavioral Identification Form (BIF) to measure construal level (Vallacher & Wegner, 1989). Specifically, participants chose one of two possible explanations for different behaviors. For instance, “making a list” could be identified as “getting organized” (high construal level, coded as 1) or “writing things down” (low construal level, coded as 0). Hence, higher BIF scores reflect higher construal levels. Importantly, prior research has established the efficacy of using BIF to measure construal levels among Indonesians (Septianto & Pratiwi, 2016).

5.1.2. Results

Independent samples *t*-test were run on the scores for perceived value and BIF. The results reveal non-significant differences on perceived value scores between participants examining an illustration ($M = 4.34$) or a photograph of a fruit basket ($M = 4.66$, $t(56) = 1.21$, $p = .23$). However and as expected, participants evaluating an illustration ($M = 7.34$) reported higher BIF scores (indicating higher construal levels) as compared to those evaluating a photograph

($M = 5.17$, $t(56) = 3.23$, $p < .01$). These results provide support for our predictions that the effects of illustrations versus photographs can be explained by differences in construal levels and not by differences in perceived value.

5.2. Main study: method

5.2.1. Participation and design

One hundred and forty adult consumers living in Yogyakarta, Indonesia (43% male, $M_{\text{age}} = 34.75$, $SD = 8.25$) were recruited from an online research panel in Indonesia. This study employed a 2 (visual imagery: illustration, photograph) \times 2 (advertising claim: egoistic, altruistic) \times 1 (food type: organic) between-subjects design.

5.2.2. Procedure

Study 3 employed a similar procedure to that of Study 2 with three exceptions. First, we focused only on organic food because we collaborated with an organic food store. Second, after evaluating an advertisement for a (pretested) fruit basket, instead of measuring purchase likelihood, we asked participants about their willingness to pay (WTP) as the focal dependent variable. Specifically, we provided seven price points to choose from (\$0, \$5, \$10, \$15, \$20, \$25, and \$30). Afterwards, participants were told they would have the opportunity to receive the advertised organic fruit basket as a gift. We informed them the fruit basket had a reserve price known only to the seller. If they were chosen as a winner and their selected price was placed at or above the undisclosed reserve price, they would receive the organic fruit basket. However, if their selected price was placed below the undisclosed reserve price, they would receive a gift card with the amount they had indicated. This procedure has been established to encourage participants to indicate the actual price they will pay for a product (Rucker, Dubois, & Galinsky, 2010; Voelckner, 2006; Wertenbroch & Skiera, 2002). Third, because we

examined a real store, we also measured how familiar participants were with the organic food store on a 7-point scale (1 = not at all, 7 = extremely).

5.3. Results and discussion

A two-way ANOVA was conducted, with visual imagery, advertising claim, and their interaction as independent variables and WTP as the dependent variable.² Note the change in the dependent variable was equivalent (\$5) at each level and the variable was also ratio scaled. Hence, a two-way ANOVA regression was appropriate. Nonetheless, we also replicated the findings using an ordinal logistic model.³ As in Studies 1 and 2, we included statistical controls such as frequency of purchasing organic food, affect, and familiarity with the organic store. The results showed non-significant effects of all control variables.

However and as predicted, there was a significant interaction effect between the visual imagery and advertising claim ($F(1, 133) = 11.66, p < .001$). As can be seen in Fig. 3, photographs were more effective in increasing WTP when combined with egoistic claims ($M = 18.04$) than with altruistic claims ($M = 13.38, t(133) = 2.65, p < .01$). In contrast, illustrations were more effective in increasing WTP when combined with altruistic claims ($M = 19.50$) than with egoistic claims ($M = 15.47, t(133) = 2.15, p < .05$). In particular, we also found non-significant differences for levels of WTP between the combination of illustrations ($M = 19.50$) and altruistic claims and the combination of photographs and egoistic claims ($M = 18.04, t(133) = 0.79, NS$).

< Fig. 3. Willingness to pay (\$) for fruit basket by visual imagery and advertising claim conditions (Study 3).>

These findings support Hypothesis 2a such that matching illustrations (photographs) with altruistic (egoistic) claims can increase the effectiveness of an advertisement promoting organic food.

6. General discussion

The three empirical studies were conducted to test our underlying prediction that visual imagery can differentially influence likelihood of purchasing organic food products, as distinct from other conventional food advertising. Specifically, building on construal level theory (Trope & Liberman, 2010), we found that matching illustrations (photographs) with organic food (conventional food) will increase likelihood of purchasing a product (Study 1). Furthermore, focusing on organic food, we matched illustrations (photographs) with altruistic (egoistic) claims to increase likelihood of purchasing organic food (Study 2). However, this was not the case for conventional food, where only the match between photographs and egoistic claims emerged (Study 2). By collaborating with an organic food store in Study 3 and using a different dependent variable (willingness to pay), we identified important managerial implications, as discussed below.

6.1. Contributions and implications

The growing market for organic food and in turn, increased consumer skepticism about sustainable claims suggest a need for continued research on how to reach green consumers. There is a need to go beyond demographics to target consumers in the organic and green market as studies have shown mixed results for purchase behaviors (Hughner et al., 2007; Roberts, 1996). Thus, psycho-social characteristics may be more useful to segment and target consumers. Our work contributes to an emerging domain of research focused on the underlying characteristics which influence consumers to purchase organic food (Hughner et al., 2007;

Kareklas et al., 2014); specifically, how advertising visuals and messages (Chang, Zhang, & Xie, 2015; Segev, Fernandes, & Wang, 2015) can be improved to appeal to a (skeptical) consumer base in the green market to increase consumption and willingness to pay.

The current research makes several important contributions with implications for marketing practice. First, while past scholars have studied different motivations associated with purchasing organic food, including health and environmental concerns (Bauer et al., 2013; Hughner et al., 2007; Magnusson et al., 2003), it can be difficult for marketers to extrapolate such findings. The key purpose and the main contribution of the current research is to assist marketers to develop effective advertising strategy to promote organic food by demonstrating that advertisements using concerns/motivations and visual imagery in concert may be impactful in shaping organic food consumption.

Specifically, the results of three studies demonstrate that advertising messages highlighting the altruistic concerns (e.g., carbon emissions) of organic food should utilize illustrations rather than photographs, while advertising wishing to highlight egotistical concerns (e.g., health) should use photographs. This is because the match between illustrations (photographs) and egoistic (altruistic) claims leads to a congruent processing style (Lee & Labroo, 2004; White et al., 2011) and increases the effectiveness of organic food advertisements. Notably, our results also suggest these strategies are similarly effective. Thus, marketers have the freedom to choose the best combination for their organic food advertising and marketing campaigns. In contrast, when promoting conventional food, the best way is to match photographs and egoistic claims. This is because conventional food is not clearly associated with altruistic claims.

Second, we contribute to the literature on construal level by showing that organic (vs. conventional) food is associated with abstractness (high construal levels) because it is

perceived to be more exclusive than conventional food. In fact, prior research suggests that consumption of organic food can serve as status signaling (Griskevicius et al., 2010; Kafashan et al., 2014). This is consistent with costly signaling theory (Hardy & Van Vugt, 2006). Thus, organic food has a significant link with the concept of luxury, which is associated with the concept of abstractness (Hansen & Wänke, 2011).

Third, this research also contributes to the literature on visual imagery and construal level. Our findings establish that illustrations are associated with abstractness and high construal levels, whereas photographs are associated with concreteness and low construal levels, thus adding to our understanding of how different elements of visual imagery are associated with different construal levels. For instance, previous studies have found that black and white (color) images are associated with high (low) construal levels (Lee, Deng, Unnava, & Fujita, 2014). Words (pictures) are also construed in a more distal (proximal) way (Amit, Algom, & Trope, 2009). We show a more nuanced understanding of how pictures, which may typically be associated with high construal levels as compared to words (Amit et al., 2009), can also lead to differential construal levels depending on the color (Lee et al., 2014), and whether they are photographs versus illustrations.

Finally, our research demonstrates the applicability of our findings to two different cultures. While examining cultural context was not the main objective of this study, we have demonstrated that different imagery and advertising claim can consistently influence consumer behavior regarding organic food. Specifically, in the U.S. (Study 1 and 2), an individualist culture, and in Indonesia (Study 3), a collectivist culture (Jetten, Postmes, & McAuliffe, 2002), imagery and claim work similarly. This is particularly noteworthy as in individualist cultures individuals give priority to personal rather than social goals, whereas the opposite holds true for collectivist cultures (Jetten et al., 2002).

6.2. Limitations and future research

The research limitations of our three studies offer opportunities for future research in organic and green advertising. Our studies are limited to organic fresh fruit and vegetables and theoretically should extend to other organic food products (e.g., organic meat, organic frozen vegetables) and non-food products (e.g., clothing, personal care products). However, food has connotations for health, well-being and nutrition which other consumer products like clothing do not exhibit. In addition, previous research has found that green advertising effectiveness is influenced by product category (Kong & Zhang, 2014) and product involvement (Kong & Zhang, 2013). Thus, future studies are encouraged to expand on the concept of the visual imagery of products and empirically examine whether our findings hold for multiple product categories.

The advertisements used in this research did not use organic certifications to back-up the advertising claims, thus consumers may have been skeptical about their organic claims. Much research has shown that consumer skepticism is high in green marketing and that certification can help combat skepticism (Bickart & Ruth, 2012) and lead to favorable brand perceptions (Bauer et al., 2013). Therefore, future research should include the use of certified logos and examine the impact of credibility on purchase likelihood.

Our research demonstrates that organic food may be seen as a luxury item. Hence, the time is ripe to expand on the implications of organic food as luxury goods. In addition, the applicability of our findings to both collectivist and individualistic cultures needs further examination. We encourage more research on the promotion of organic food, especially across cultures to investigate and help explain our observations. In conclusion, the current research contributes to the literature on organic food and construal level by examining the conditions

under which marketers can effectively promote their organic food products via different visual imagery in advertising.

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Figure 1.

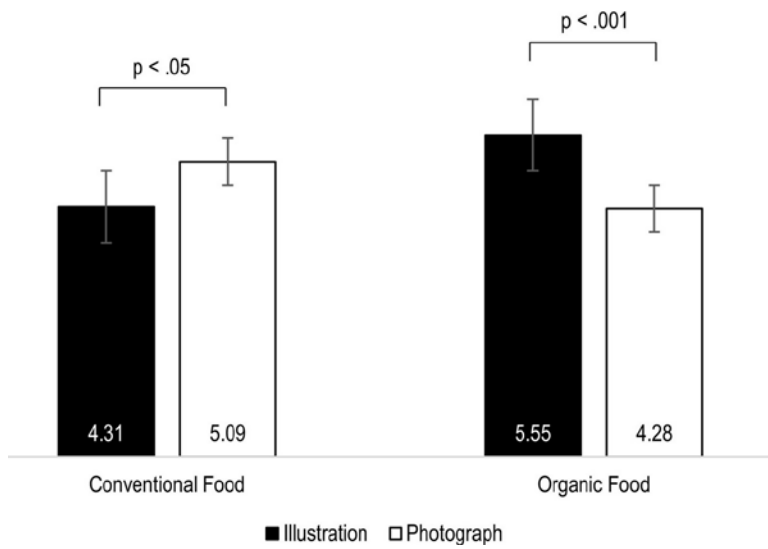


Figure 2.

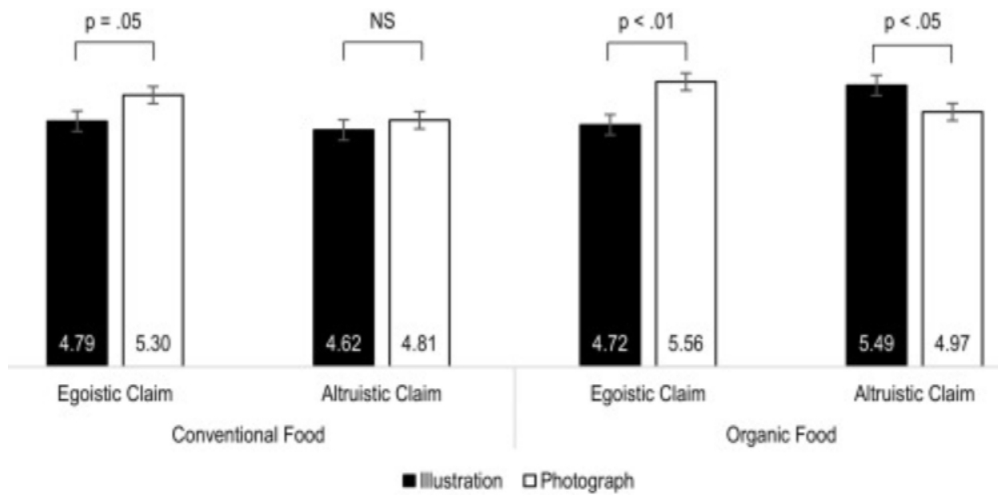
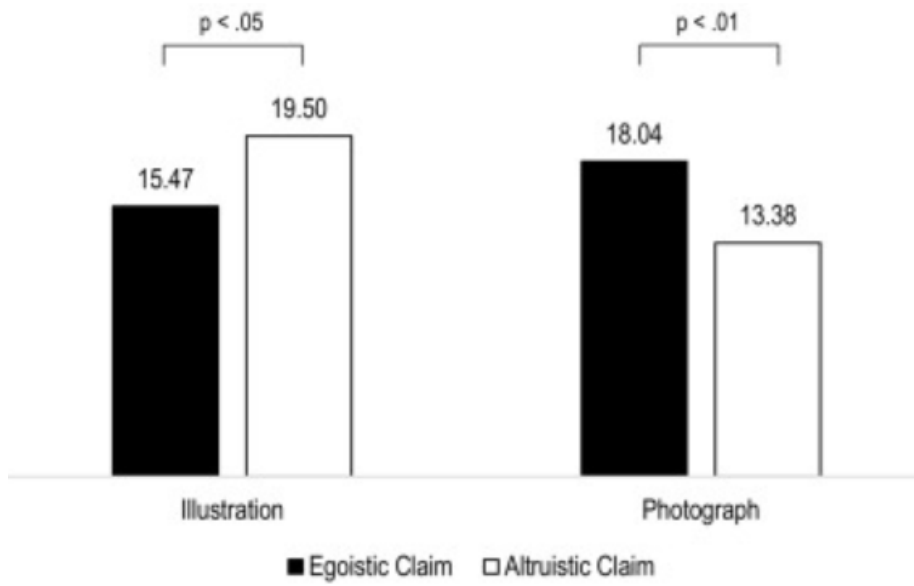


Figure 3.



Appendix A. Participants' Demographics (Studies 1 and 2)

	Study 1	Study 2
Sample Size	167	400
Gender		
Male	66%	56%
Female	34%	44%
Average Age	34.25	35.57
Education		
Less than High school	1%	0%
High School or equivalent (e.g., GED)	13%	22%
Trade/technical/vocational training	13%	16%
Bachelor's degree	58%	47%
Post-graduate qualification	15%	15%
Ethnic Background		
Caucasian	52%	62%
African American	2%	7%
Native Hawaiian or Other Pacific Islander	0%	1%
Asian	36%	17%
Native American or Alaska Native	4%	3%
Hispanic or Latino	4%	7%
Other	2%	3%
Annual Household Income		
Less than \$15,000	15%	10%
\$15,000 ~ \$24,999	15%	11%
\$25,000 ~ \$34,999	19%	17%
\$35,000 ~ \$49,999	16%	17%
\$50,000 ~ \$84,999	19%	25%
\$85,000 ~ \$99,999	7%	8%
Greater than \$100,000	9%	12%

Appendix B. Advertisements Stimuli



Photograph Conventional Food



Illustration Organic Food



Study 2: Photograph Egoistic Claim (Organic Food)



Study 2: Illustration Altruistic Claim (Organic Food)

BELILAH BUAH-BUAHAN ORGANIK
KARENA MEREKA **LEBIH BERNUTRISI**



Study 3: Photograph Egoistic Claim (Translation: “Buy organic food because they are nutritious”)

BELILAH BUAH-BUAHAN ORGANIK
KARENA MEREKA **RAMAH LINGKUNGAN**



Study 3: Illustration Altruistic Claim (Translation: “Buy organic food because it is good for the environment”)