



Research report

When good deeds leave a bad taste: Negative inferences from ethical food claims

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ARTICLE INFO

Article history:

Received 7 August 2012

Received in revised form 13 October 2012

Accepted 11 November 2012

Available online 26 November 2012

Keywords:

Halo effect

Organic foods

Environmental attitudes

Values-based labeling

Greenwashing

ABSTRACT

Consumer research has demonstrated halo effects arising from advertising claims on food packaging (e.g., “organic,” “no cholesterol”) that promote misperceiving products more positively on other dimensions (e.g., low-calorie, low-fat). However, little research has explored the conditions under which such claims might give rise to more negative rather than positive evaluations. This paper highlights two domains of judgment in which an ethical or values-based claim (“organic”) can promote negative impressions. In Study 1, participants judged organic foods relative to conventional foods on healthfulness and expected taste quality. Results suggest that whereas organics are perceived as more healthful than conventional foods (consistent with previous findings), they are also perceived as less tasty, especially among participants low in environmental concern. In Study 2, participants judged the effectiveness of a formula drink intended to help alleviate malnourishment that was described as organic or not, depending on experimental condition. Results showed that participants high in environmental concern (who typically evaluate organic products positively) judged the drink more negatively (i.e., as less effective) when it was described as “organic.” Discussion focuses on possible mechanisms for these effects, as well as the moderating role of judgment type and perceivers’ values in halo effects more broadly.

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Introduction

Recent years have witnessed growing consumer demand for foods bearing ethical or values-based advertising claims, such as “organic,” “local,” and “fair trade” (Barham, 2002; Conner, Campbell-Arvai, & Hamm, 2008; Reynolds, 2009). In particular, the “organic” claim—which signals that foods were produced in adherence with certain environmental quality standards established by the US Department of Agriculture (e.g., little or no synthetic pesticides, fertilizers, or additives; USDA, 2012)—has become commonplace on grocery shelves. Despite being considered merely a niche market a decade or so ago (e.g., Wheatley, 2003; Wier & Calverly, 2002), more than three-quarters of US households now report having purchased organic foods (OTA, 2011).

The rising popularity of ethical advertising claims has prompted much research into the ways that consumers perceive foods that feature them (e.g., Cunningham, 2002; Harper & Makatouni, 2002; Hay, 1989; Lyon, 2006; Weatherell, Tregear, & Allinson, 2003; Wolf, 2002). When asked why they prefer organic foods to conventional alternatives, consumers typically cite benefits related to health, food safety, and environmental sustainability as chief factors (e.g., Arvola et al., 2008; Michaelidou & Hassan, 2008;

Mondelaers, Verbeke, & Van Huylenbroeck, 2009; see Yiridoe, Bonti-Ankomah, & Martin, 2005 for a review). These perceived benefits, of course, are consistent with the intended meaning of the organic claim, and may factor more heavily in the decisions of certain consumer segments, such as those with higher education and greater environmental concern (e.g., Magnusson, Arvola, Hursti, Åberg, & Sjöden, 2003; Thompson, 1998). The demand among the latter group presumably stems from the alignment between their personal values and the pro-environmental ethics communicated by the organic claim. Namely, because they likely feel positively toward organic production in the first place, consumers high in environmental concern are expected to perceive organic foods more positively in myriad ways that contribute to increased demand—a prediction derived from the logic of halo effects.

Health halos in nutritional judgments

Although it may be logical to perceive organics as generally healthier, safer, and more environmentally friendly than conventional alternatives, recent findings in the tradition of halo theory suggest that consumers routinely draw inferences from food advertising claims that are less logical. The halo effect, in which an initial positive impression of a person or object promotes subsequent positive evaluations that may be unwarranted (Asch, 1946; Kelley, 1950; Nisbett & Wilson, 1977; Snyder, Tanke, & Berscheid,

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1977; Thorndike, 1923), has been applied to explain consumers' tendency to see foods bearing "healthy" advertising claims in an unrealistically positive light. For example, research into how relative nutrition claims affect consumer perceptions finds that "low-fat" and "no cholesterol" labels can lead consumers to perceive foods as lower in calories (Wansink & Chandon, 2006) and fat (Andrews, Netemeyer, & Burton, 1998), respectively. Like the ubiquitous reduced fat and low fat claims of the 1990s, "organic" now commonly appears on packages of less nutritious foods (including cookies, ice cream, snack chips, and cotton candy), raising concerns about whether this ethical claim—because of its strong connotations of healthiness among the consumer public (Harris Interactive, 2007)—might evoke similar health halos. In this vein, recent research finds that cookies are perceived as lower-calorie when they are described as organic (Schuldt & Schwarz, 2010), an effect that persists even when participants actually taste an identical cookie that is labeled "organic" or not (Wan-Chen Lee, Shimizu, & Wansink, 2011). Moreover, this research suggests that consumers with strong pro-environmental values and beliefs are particularly likely to perceive organics in an overly positive light, presumably reflecting their especially positive initial attitude toward organic production.

In addition to health halos from explicit advertising claims, researchers have explored other attributes that encourage consumers to see foods in an overly healthy light. For instance, research on branding effects demonstrates the tendency to underestimate the calories in sandwiches from Subway (long marketed as a healthy alternative to other fast food) relative to sandwiches from McDonald's (Chandon & Wansink, 2007). Interestingly, it appears that these healthy interpretative frames can also be evoked in context. For example, people perceive an ambiguously healthy snack food (an oatmeal raisin cookies) as healthier and consume more of it when their attention is simply drawn to the food's more healthful attributes (e.g., higher fiber versus brown sugar) (Provencher, Polivy, & Herman, 2009). Aside from healthy frames that are externally imposed, merely adding a healthy item to a relatively unhealthy meal can encourage the irrational perception that the combined meal (i.e., unhealthy + healthy item) has fewer calories than the unhealthy item alone, a bias that is larger among people concerned with watching their weight (Chernev, 2011; Chernev & Gal, 2010).

Are consumer inferences always positive?

Although the bulk of research has explored how advertising claims on food packaging promote positive impressions, there are some domains of judgment in which more negative impressions might be expected, a possibility that has received relatively little attention from scholars. Previous research suggests that one such domain is taste quality. As advertisers have long known, food labels can powerfully influence taste expectations and experiences (e.g., Wolfson & Oshinsky, 1966), and although "healthy" food labels (e.g., "low-fat") promote the positive expectation that foods are healthier in other ways (e.g., low-calorie), they can also promote the negative expectation that such foods have lower taste quality (e.g., Tuorila, Cardello, & Leshner, 1994). This "healthy = un-tasty" heuristic appears powerful enough to affect not only consumer judgments but also the hedonic quality of consumers' actual taste experience. For instance, Westcombe and Wardle (1997) had participants taste and rate the pleasantness of products such as cheese and yogurt that were labeled "lower fat," "normal fat," or "higher fat" (in actuality, fat content was held constant). Results showed not only that foods labeled "lower fat" received lower taste ratings than foods labeled "higher fat," but also that personal factors mattered for these perceptions: Whereas participants unconcerned about healthy food choices judged "lower fat"

foods as less tasty than "higher fat" foods, participants highly concerned about healthy food choices rated the "higher fat" foods as tasting the least pleasant of all. These results appear to reflect the implicit tradeoff between hedonic experience and health goals that consumers routinely experience in food consumption decisions (Dhar & Simonson, 1999; Ramanathan & Menon, 2006) and further reflect the importance of the alignment between the focal claim and consumers' personal goals or values in shaping evaluations of food products.

Like these relative nutrition claims, we expect that ethical claims such as "organic" may similarly bias taste expectations and experiences. Because "organic" and "low-fat" both carry strong health connotations (e.g., Harris Interactive, 2007; Wansink & Chandon, 2006), we expect that organics may be perceived as less tasty than conventional products on average. Additionally, we expect these inferences to vary as a function of consumers' claim-relevant personal values, namely, their level of environmental concern. Just as Westcombe and Wardle (1997) observed lower taste ratings among consumers with claim-incongruent personal goals (i.e., when those high in health concern rated the "higher fat" foods), participants low in environmental concern might rate organic foods significantly lower in terms of taste quality.

Although scant research has explored this possibility directly, some suggestive evidence comes from an experiment in which consumers tasted and evaluated pineapple that was described as organic, fair trade, or both (Poelman, Mojet, Lyon, & Sefa-Dedeh, 2008). While no significant main effect of ethics information on evaluations emerged, results of a post hoc analysis that separated participants into groups based on an indirect measure of attitudes toward organic and fair trade production found divergent effects. Specifically, organic labeling led to more favorable impressions of the pineapple among participants who held positive attitudes toward organics but to more *unfavorable* impressions among those who held negative attitudes toward organics. However, because attitudes about organic production were not measured directly, or separately from the evaluation task, it is unclear whether these effects were driven by participants' attitudes or peculiarities of the task itself. To avoid this complication, the present research uses a standard scale measure of environmental concern, administered separately from the main evaluation tasks, to assess attitudes toward organic production.

The present work

Building on past research into halo effects arising from food advertising claims, the present studies explore possible negative impressions arising from the popular ethical claim "organic." Specifically, Study 1 explores consumer perceptions of organic food compared to conventional food along two attributes—one expected to engender more positive impressions (healthfulness) and one expected to engender more negative impressions (taste quality)—and whether these perceptions vary as a function of environmental concern. Study 2 examines whether highly pro-environmental consumers might judge an organic product more negatively than a conventional version when the product context is incompatible with the positive attributes that these consumers normally associate with organics (e.g., *low-calorie, natural/pure*; Lockie, Lyons, Lawrence, & Grice, 2004; Lockie, Lyons, Lawrence, & Mummary, 2002; Schuldt & Schwarz, 2010; Schösler, de Boer, & Boersema, 2012). Specifically, in contrast to the Western context tacit in most research on health halo effects (where "low calorie" and "no artificial additives" are considered healthy, positive attributes), Study 2 featured a context that called for a high-calorie and highly artificial product—namely, a formula drink engineered to relieve severe malnutrition among impoverished children in Africa.

Study 1

Method

Two hundred and fifteen students (117 females, 98 males) at a large Midwestern university participated in a laboratory study on “thinking about food” in exchange for partial course credit.¹ As part of a longer (approximately 30-min) experimental session during which they completed a number of food-related questionnaires at individual computer stations, participants first completed a personal background questionnaire to measure a number of variables plausibly related to attitudes about organic foods, notably sex, socioeconomic status, and political orientation. Later on, they were asked to make judgments about the general category of organic food relative to conventional food along two dimensions, one shown by past research to invite more positive impressions (healthfulness) and one that we predicted would invite more negative impressions (taste quality): *Compared to other foods, please rate how healthy organic foods tend to be (1 = Less healthy; 7 = More healthy)*, and *Compared to other foods, please rate how tasty organic foods tend to be (1 = Less tasty; 7 = More tasty)* (underlining is original). The USDA organic seal that appears on certified organic products in the US was displayed directly above these questions in order to keep the organic category salient during the judgment task. Importantly, the order of the healthfulness and taste quality judgments was counterbalanced and treated as an experimental factor in the design, which allowed us to rule out any question order effect.

Near the end of the laboratory session, participants completed the 15-item New Ecological Paradigm scale (NEP; Dunlap, Van Liere, Mertig, & Jones, 2000), a measure of individual differences in environmental concern. Sample items are “We are approaching the number of people the earth can support” and “Humans are severely abusing the environment” (1 = Strongly disagree to 5 = Strongly agree). They were then thanked and debriefed.

Results

The main analysis took the form of a repeated measures ANOVA in which judgment type (healthfulness, taste quality) was treated as a within-subjects factor, question order was treated as a between-subjects factor, and environmental concern (i.e., NEP score) was entered as a covariate. Results revealed a number of significant findings. First, a main effect of judgment type emerged, such that organics received higher healthfulness judgments ($M = 5.44$, $SD = 1.05$) than taste quality judgments ($M = 3.68$, $SD = 1.43$), $t(211) = 5.48$, $p < .001$. Thus, compared to the scale mid-point (4.0), which may be taken to represent participants' evaluation of conventional foods on average, organics were perceived as significantly *more* healthful ($t = 20.20$, $p < .001$) but *less* tasty ($t = -3.25$, $p < .01$). Second and more important, a significant interaction emerged between judgment type and environmental concern, $t(211) = 2.90$, $p < .01$. The nature of this interaction was such that taste quality judgments were significantly correlated with environmental concern (NEP score) ($r = .28$, $p < .001$) whereas healthfulness judgments showed no such association ($r = .08$, $p = .27$). Put another way, whereas organics received relatively low taste quality judgments ($M = 3.28$) compared to healthfulness judgments ($M = 5.36$) among participants low in environmental concern ($M - 1SD$), this difference was attenuated among participants high in environmental concern ($M + 1SD$) ($M_{\text{taste quality}} = 4.08$ vs. $M_{\text{healthfulness}} = 5.53$) (see Fig. 1). Finally, question order and the other personal

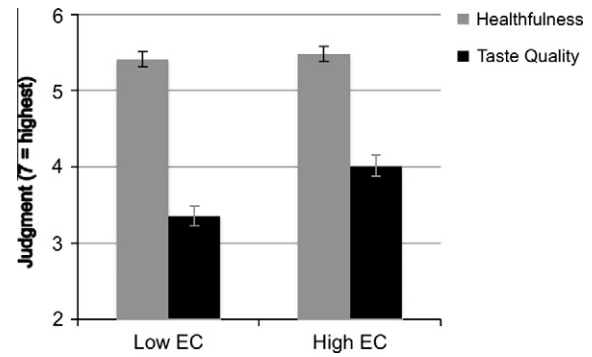


Fig. 1. Graph depicting mean healthfulness and taste quality ratings by environmental concern (EC) in Study 1 (median split for clarity; Low EC = NEP scores < 56 , High EC = NEP scores ≥ 56). Error bars represent mean standard errors.

background variables (sex, socioeconomic status, political orientation) did not moderate these effects.

Discussion

Results from the present study extend previous findings on consumer inferences from ethical advertising claims and organic claims in particular. Echoing previous observations in the literature (e.g., Estes, Herrera, & Bender, 1994; Grunert, 2002; Jolly, 1991; Radman, 2005), the present results imply that organics are widely perceived as more healthful than their conventional counterparts. Regardless of consumers' level of environmental concern, organics were rated significantly above the scale mid-point in terms of healthfulness. In contrast, taste quality ratings differed significantly as a function of environmental concern, such that participants low in environmental concern provided lower taste quality judgments than did those high in environmental concern. Furthermore, participants low in environmental concern provided taste ratings that were lower than the scale mid-point, implying an expectation for organics to taste worse than conventional foods. Therefore, while previous research—when it finds a difference—typically reports a taste advantage for organics (Estes et al., 1994; Morgan, Barbour, & Greene, 1990; but see also Harris, Burress, & Eicher, 2000; Jolly & Dhesi, 1989; Sparling, Wilken, & McKenzie, 1992), it appears that not all taste inferences arising from organic claims are positive. Consistent with findings for relative nutrition claims (“higher fat”; Westcombe & Wardle, 1997), incongruence between consumers' personal values and those conveyed by an ethical claim also seems to promote more negative taste inferences.

Why do participants low in environmental concern perceive organics as having inferior taste quality? Although the current study was not designed to illuminate the process or processes underlying this effect, we note some possible explanations from the literature. One is more experiential: Perhaps participants low in environmental concern are simply less familiar with organic foods, a possibility that would seem plausible given studies reporting that environmental concern positively predicts organic food purchases (e.g., Davies, Titterington, & Cochrane, 1995). Limited exposure to organics may in turn promote negative inferences automatically and non-consciously (Zajonc, 1980) and deprive those low in environmental concern of opportunities to directly compare the taste of organic and conventional options. Other possibilities are more motivational: Consumers who are high in environmental concern are more likely to purchase organics (e.g., Goldman & Clancy, 1991), which tend to cost more than conventional alternatives (Magnusson, Arvola, Hursti, Åberg, & Sjöden, 2001), and as a result, they may evaluate organics more positively in terms of taste as a way to rationalize the premium paid (e.g.,

¹ One female participant was removed due to a computer glitch, leaving $N = 214$ for analysis.

Festinger, 1957). Similarly, because eco-friendly purchases are widely perceived as socially responsible (e.g., Arvola et al., 2008; Laroche, Bergeron, & Barbaro-Forleo, 2001), consumers low in environmental concern may feel pressure to justify their decision to forgo purchasing organics and may do so in part by concluding that organics likely taste worse than conventional options. We will return to considering the underlying mechanisms for these effects in the general discussion.

While Study 1 suggests that organic labeling can sometimes elicit more negative impressions, the comparison to conventional alternatives (as “other foods”) was rather implicit. Moreover, the fact that these negative inferences were most pronounced among participants low in environmental concern is perhaps not too surprising given that organic claims are unlikely to appeal strongly to this group. Seeking a more conservative and explicit test of whether organic claims can promote more negative evaluations, in Study 2 we aimed to create a context in which consumers high in environmental concern might evaluate an organic product more negatively. Drawing on previous research into the connotations carried by “organic” among the highly pro-environmental (e.g., *low-calorie, natural/pure*), we had consumers consider a product context in which the opposite connotations may be seen as more desirable (i.e., *high-calorie, artificial*)—namely, the case of a highly engineered formula drink designed to alleviate malnourishment in a famine-stricken region that was explicitly described as “organic” or not.

Study 2

Method

One hundred and fifty-six students (85 females, 71 males) at a large Midwestern university participated in a laboratory study in exchange for partial course credit.² As part of the approximately 30-min session during which participants completed a variety of different tasks at individual computer stations, participants read an ostensibly genuine (but actually fictional) news article describing the development of a highly engineered drink product designed to relieve the symptoms of African children suffering from severe malnutrition. To convey that the drink was highly engineered and likely contained numerous artificial additives, it was described as a “formula” resulting from a collaboration between “scientists and the food industry”. In addition, the product’s name, “Relief Drink 1.1,” was similarly chosen to conjure thoughts of artificiality and laboratory food technology. Depending on the randomly assigned experimental condition, the formula drink was either described as “organic” throughout the text of the article (i.e., five times to ensure its salience) or not. Otherwise, the wording of the articles was identical (see Appendix A).

Below the article, participants were asked to rate how optimistic they were that the drink would be effective in relieving malnutrition, which served as the main dependent variable: (the word “Organic” appeared in the organic condition only) *How optimistic are you that this (Organic) Relief Drink can help alleviate starvation? (1 = Not at all optimistic; 7 = Very optimistic)*. Immediately before the effectiveness judgment, we also asked participants to judge the relative number of calories that they believed the drink to contain, which was intended to draw attention to calorie content as an important factor for effectiveness in this context: *Compared to other drinks of its kind, do you think that this (Organic) Relief Drink contains fewer calories or more calories? (1 = Fewer calories; 7 = More calories)*.³ We expected that if the article conveyed the intended message, calorie estimates would corre-

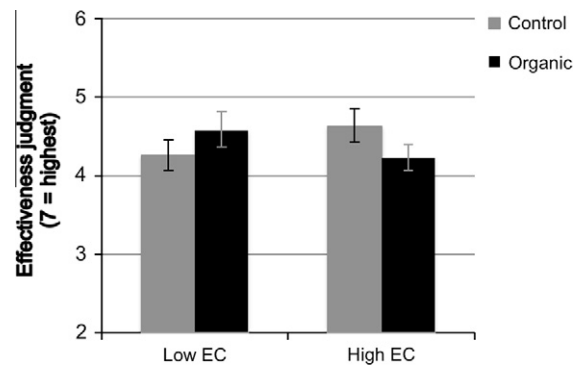


Fig. 2. Graph depicting mean effectiveness ratings by condition and environmental concern (EC) in Study 2 (median split for clarity; Low EC = NEP scores <50, High EC = NEP \geq 50). Error bars represent mean standard errors.

late positively with effectiveness ratings, given that more calories should be seen as a virtue in this context.

Finally, as in Study 1, participants completed the 15-item New Ecological Paradigm scale near the end of the study to measure individual differences in environmental concern and reported on personal background variables plausibly related to attitudes about organic foods, including sex, socioeconomic status, political orientation, as well as the importance of health considerations in their food consumption decisions (from 1 = Not at all important to 7 = Very important). We included this last variable (importance of health considerations) in light of recent studies demonstrating that healthy eating concerns moderate some health halo effects (e.g., Chernev, 2011).

Results

The main analysis took the form of an ANOVA that examined the effect of experimental condition (organic vs. control) and its interaction with environmental concern (NEP score) on effectiveness judgments. Results again revealed a number of significant findings. First, although no main effect of condition on effectiveness judgments emerged ($M_{\text{organic}} = 4.40$ vs. $M_{\text{control}} = 4.48$; $t < 1$, *ns*), the interaction between condition and environmental concern was significant, $t(148) = 2.42$, $p = .02$. Following Aiken and West (1991), the nature of this interaction was diagnosed using multiple regression analysis. As expected, regression results revealed that among participants high in environmental concern ($M + 1SD$), the drink was judged as significantly *less* effective when it was described as “organic” ($M = 4.02$) than when it was not ($M = 4.77$), $t(148) = 2.01$, $p = .05$; in contrast, no difference emerged among participants low in environmental concern ($M - 1SD$) ($M_{\text{organic}} = 4.59$ vs. $M_{\text{control}} = 4.18$, $t(148) = 1.45$, $p = .15$) (see Fig. 2). Also, although we found no effect on calorie judgments, calorie judgments were significantly and positively correlated with effectiveness judgments overall ($r(156) = .21$, $p = .01$), suggesting that participants who perceived the drink as higher-calorie tended to believe it would be more effective in this context. We therefore concluded that the article successfully conveyed its intended message. Finally, none of the other personal background variables (sex, socioeconomic status, political orientation, importance of healthy eating) moderated this interaction effect.

Discussion

Results from the present study suggest that under certain circumstances, even consumers who are predisposed to favor a specific ethical claim may evaluate products that bear that claim more negatively. In contrast to the bulk of health halo research,

² Four participants (two females and two males) were excluded because they did not complete the environmental concern measure (NEP), leaving $N = 152$ for analysis.

³ We note that similar comparative calorie judgments have been utilized in previous food judgment research (e.g., Schuldt, Muller, & Schwarz, 2012).

which tacitly assumes a Western food product context (e.g., examining perceptions of fast food and snacks; e.g., Chandon & Wansink, 2007; Schuldt & Schwarz, 2010), we found that—in the context of a food product designed to alleviate starvation in a famine-stricken developing nation—highly pro-environmental consumers judged the product more negatively (i.e., as less effective) when it was organic. We surmise that the tendency for highly pro-environmental consumers to evaluate the organic version as less effective than the conventional version is driven by halo-based associations (*lower-calorie, natural/pure*) that are activated among this group in particular, given their generally favorable attitudes toward organics. If so, the results point to a somewhat more complex conceptualization of health halo effects. Whereas a straightforward halo account might predict that an initial positive impression should promote more positive evaluations regardless of the context, the present findings imply that halo-based associations may combine with more deliberative, context-based inference processes to affect judgments.

In this way, the current results suggest that these evaluations are not made in a vacuum; rather, they appear to be highly context-dependent, consistent with a situated cognition perspective on judgment and decision making which highlights that the influence of accessible knowledge content is constrained by its applicability in the immediate context (Higgins, 1996; Schwarz, 2007; Smith & Semin, 2004). For instance, Study 2 was designed to feature a context in which calories and artificial additives were desirable attributes. We reasoned that if pro-environmental consumers typically see organics as having the opposite qualities (as previous work suggests), then this group in particular ought to rate an organic product more negatively in this context. In other words, the positive reaction of the highly pro-environmental to “organic” may promote associations that would be positive in a Western context (in which high-calorie and highly processed foods are health risks) but that would be negative in the famine context. Having been made aware of this novel context, pro-environmental participants may have reasoned that an organic drink intended to alleviate malnutrition was not ideal. So although past studies have found that the highly pro-environmental typically evaluate organics more positively than conventional products (Schuldt & Schwarz, 2010; Wan-Chen Lee et al., 2011), the present results suggest that the opposite effect can be observed under the right set of circumstances.

Although this research was focused on demonstrating negative inferences from ethical advertising claims rather than systematically investigating their underlying mechanisms, the fact that the highly pro-environmental did not rate the organic formula drink as lower-calorie than the conventional version calls into question whether such associations contributed to the observed effect. We note, however, that previously documented halo effects on specific nutrient inferences (e.g., “organic” = “low-calorie”) might be less pronounced when consumers are unlikely to desire the target food. That is, whereas a highly pro-environmental consumer might perceive numerous phantom health benefits of “organic” cookies and chocolate (including that they are lower-calorie), they may not be so motivated in the case of a highly engineered, medicine-like dietary supplement. Moreover, other cognitive associations of “organic” that were not measured here but would be expected among the highly pro-environmental (e.g., connotations of naturalness and purity) might have contributed to the effect. If “organic” evokes thoughts of “all natural” and “no additives” among these consumers, they may perceive an organic formula drink as less likely to be effective in part because such associations contrast with the highly engineered nature of the “formula” remedy. Therefore, superior knowledge of the claim’s meaning may help explain why the highly pro-environmental perceived the “organic” formula drink as less effective.

General discussion and conclusion

Numerous studies in consumer research and psychology have explored how ethical information biases consumer judgments (e.g., Klein & Dawar, 2004; Shrahilevitz, 2003; Vanhamme & Groben, 2009). Grounded in the classic literature on the halo effect, which originated in psychometrics (Thorndike, 1923) and was later extended to person perception (Asch, 1946) and health-related judgments (e.g., Andrews, Burton, & Netemeyer, 2000), the bulk of halo-based food research has focused on how learning about one positive attribute of a food company or food product promotes positive evaluations that may be unwarranted. Regarding the ethical claim “organic” in particular, research suggests that it can evoke a so-called “health halo” (Andrews et al., 1998; Chandon & Wansink, 2007; Roe, Levy, & Derby, 1999) that leads consumers to see products as healthy along dimensions on which the claim is silent (e.g., low-calorie) (Elliott, 2012; Schuldt & Schwarz, 2010; Wan-Chen Lee et al., 2011), similar to how relative nutrition claims such as “no cholesterol” can promote additional “healthy” (but unclaimed) inferences, such as “low fat” (Andrews et al., 1998).

Much less research, however, has considered the conditions under which ethical advertising claims might promote more negative inferences (see Poelman et al., 2008 for a notable exception). The dramatic rise in popularity of ethical food claims over the last two decades (OTA, 2011) suggests a belief among marketers that drawing attention to a food product’s ethical attributes will encourage people to buy it, perhaps especially when consumers want to rationalize an indulgence (Nestle, 2002). Although ethical claims such as organic may promote positive impressions among most consumers on average (e.g., Harris Interactive, 2007), given that such claims convey specific progressive values (Barham, 2002) that appeal to some consumer segments more than others (e.g., Davies et al., 1995), it is reasonable to expect that they may promote negative impressions among certain consumer groups in certain contexts.

Specifically, the present research focused on “organic,” a claim that communicates a firm’s adherence to certain pro-environmental production standards and which is arguably the most widely recognized ethical food claim (Barham, 2002). Because this research investigated consumer evaluations of organics, we focused on individual differences in consumers’ level of environmental concern in predicting the conditions under which positive versus negative claim-based inferences would emerge. Drawing on past research exploring the effects of label-based health inferences and taste evaluations (e.g., Roberto, Baik, Harris, & Brownell, 2010; Wansink, van Ittersum, & Painter, 2005; Westcombe & Wardle, 1997), we expected to observe more negative impressions when consumers’ personal values were (1) incongruent with the focal claim or (2) congruent with the claim but likely to evoke associations that were undesirable in the immediate product context. Consistent with this reasoning, Study 1 revealed that organic food as a category received lower ratings on the attribute “tastiness” compared to “healthfulness,” a difference that was larger among participants with lower environmental concern, whose ratings suggested that they perceived organics as tasting more inferior than conventional foods. Study 2 further demonstrated negative impressions of organics among participants with *higher* environmental concern: When judging a formula drink engineered to alleviate malnutrition—a context in which calories and artificial additives are likely construed as virtues rather than vices—pro-environmental consumers expected that the organic version of the product would be *less* effective. Whereas the bulk of the literature on halo effects has emphasized main effects over the moderating influence of relevant personality and context variables, these

results suggest that more attention to the latter may be crucial for understanding the conditions under which halo effects are likely to emerge.

Although these studies contribute to our understanding of halo effects in food marketing by demonstrating that “good” advertising information can sometimes promote “bad” impressions in consumers’ minds, this work raises a number of questions for future research, the most fundamental of which regard the underlying mechanisms for these effects. Taking Study 1 first, why do environmentally unconcerned participants give organics high healthfulness but low taste quality ratings, while environmentalists rate organics more highly on taste? Although this research was not designed to systematically test different theoretical accounts, it is worth briefly considering some relevant possibilities here. A strict halo-theoretic account—whereby “good” labels promote positive evaluations across perceivers—does not adequately explain this pattern; nor does a model incorporating divergent impressions of consumers high versus low in environmental concern, which might predict low ratings for *both* healthfulness and taste quality among the latter group. However, the (high) healthfulness ratings provided by those low in environmental concern may have been constrained by the strong “healthy” connotations carried by organic labeling (Harris Interactive, 2007). In addition, given the consumer tendency to judge healthy foods as less tasty (Tuorila et al., 1994), it might be reasonable to expect low taste quality ratings for those high and low in environmental concern alike. Our data do not neatly support this prediction, either, but instead suggest that positive attitudes toward organic production may interrupt the “healthy = untasty” heuristic or perhaps directly influence both judgments independently.⁴ Overall, our data point toward a more complex process model that allows for different associations between health and taste inferences as a function of environmental values (e.g., one in which the moderating effect of environmental concern on taste quality judgments is mediated by perceived healthfulness; see Muller, Judd, & Yzerbyt, 2005, for a discussion of mediated moderation), which future research may fruitfully test using a more diagnostic experimental design than that employed here.

Questions regarding underlying mechanisms are relevant to our Study 2 findings as well. Specifically, why exactly do highly pro-environmental participants evaluate the organic formula drink more negatively? Although the results appear to be consistent with halo-based inferences as described above (e.g., environmentalists may associate “organic” more strongly with “low-calorie” and “pure/natural,” attributes that may make the product seem less effective in the experimental context), other possibilities certainly exist. For example, perhaps pro-environmental participants are simply skeptical that a highly engineered product is truly organic given their likely familiarity with the claim’s meaning, which may lead them to judge it as less effective as a way to signal their distrust. Although the design of our experiment precludes ruling out this alternative (non-halo) explanation, it sets the stage for future research to consider whether the observed effect among the highly pro-environmental is rooted primarily in affect-based or more knowledge-based processes.

Underlying mechanisms aside, other interesting questions remain. For example, we did not control for current hunger levels, which may be especially relevant to the judgments of healthfulness and taste quality measured in Study 1. Given that satiation

can influence liking and wanting (e.g., Finlayson, King, & Blundell, 2008), might hunger bolster taste quality ratings for organics even among environmentally unconcerned consumers? Moreover, does the observed relationship between organic taste ratings and environmental concern extend to actual taste experience? In addition, are these effects observed among key populations, such as grocery shoppers at the point of purchase? Although our college student samples match many of the demographic characteristics of typical organic food consumers (e.g., in terms of education and income potential; Fotopoulos & Krystallis, 2002), they are unlikely to be representative of the organic consumer public, which may limit the generalizability of these findings.

Limitations aside, this research carries important practical as well as theoretical implications. On the practical side, in an age when “greenwashing” has become ubiquitous as companies attempt to appeal to consumers with growing concerns about the ethical and environmental implications of their food choices (Barham, 2002; Sirieix, Delanchy, Remaud, Zepeda, & Gurviez, 2012), our data suggest that careful attention should be paid to the likely personal values of target consumers to avoid unintentionally discouraging purchases. Theoretically, this work adds to the literature on health halos and the halo effect more generally by underscoring the crucial role of personality variables and their interaction with context variables. Echoing some of the earliest halo theorists, who noted that some trait labels (*warm*) gave rise to more positive impressions than did other trait labels (*polite*) (Asch, 1946), our work emphasizes the often-overlooked importance of the focal attribute by perceiver interaction in determining who is likely to form a positive impression of targets in the first place.

Appendix A

Below is the text of the fictional news article describing the development of a relief drink to mitigate symptoms of malnutrition among famine-stricken children in Africa (the word “organic” appeared five times as below, or did not appear at all, depending on condition).

Organic relief drink brings hope to starving children

By: Thomas Jenkins

A five-year-long partnership between leading scientists and the food industry has resulted in a promising new weapon for combating starvation among children. The new formula, known as “Organic Relief Drink 1.1,” has demonstrated success in bringing children back from advanced stages of starvation by promoting the rapid and efficient absorption of essential nutrients. Initial field-testing of this Organic Relief Drink has shown remarkable results. Dr. Bernard Shostack, the lead food scientist on the project, explained: “never before has a relief formula achieved such success among those in such extreme need”. Results from the field-testing, conducted in some of the poorest of African villages, found that “nearly 90% of those given Organic Relief Drink were stabilized and [expected to] recover fully,” according to Shostack.

In partnership with the United Nation’s World Food Program, scientists are planning widespread distribution of Organic Relief Drink 1.1 to some of the world’s poorest regions as soon as next month.

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⁴ Suggesting that the relationship between healthfulness and taste quality judgments does indeed vary by level of environmental concern, a follow-up correlational analysis revealed a significant positive correlation among participants high in environmental concern ($r = .24, p = .02$) but no significant correlation among those low in environmental concern ($r = .05, p = .62$) (categorization was based on a median-split for the purpose of this analysis only; median NEP score = 56 and $N = 107$ in each group).

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