

# When does an ethical attribute matter for product evaluation? The role of warm-glow feelings for low-rated products

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## Abstract

Research on the effects of ethical attributes has recently gained traction. However, limited research has addressed consumer response to ethical attributes in the current context where product ratings have become of primary importance to make decisions. Specifically, this study examines the relative effect of ethical attributes on product evaluations across different product ratings. Building on cue consistency theory and the negativity bias, we suggest that ethical attributes gain weight when consumers evaluate a low-rated product. This process leads consumers to anticipate more warm-glow feelings, generating better evaluations for such low-rated products featuring an ethical attribute (vs. another type of attribute). Two experiments provide consistent empirical support for this prediction, and demonstrate that, compared to other attributes or no attribute, an ethical attribute increases product evaluations to a larger extent when the product received low (vs. higher) ratings. We show that this effect occurs because of warm-glow feelings: when product ratings are low, consumers anticipate more warm-glow feelings from purchasing a product with an ethical attribute (vs. another type of attribute), leading to better product evaluations. These findings have direct managerial and ethical implications for practitioners.

## KEYWORDS

cue consistency, ethical attribute, ethical product, negativity bias, product ratings, sustainable attribute, sustainable product, warm-glow feelings

## 1 | INTRODUCTION

In 2019, the Fairphone company launched the third version of its Fairphone, labeled as the world's first ethical smartphone (Fairphone, 2019). *Wired* described the original Fairphone as a “heart-warming injection of ethics,” but also as expensive, ugly, and including a slow camera and dated hardware (Williams, 2016). On *Trustpilot*, a consumer review website, the Fairphone received a rating of 1.9 out of 5 (Trustpilot, 2019). Despite these negative reviews, over 100,000 Fairphones had been purchased by May 2016, and the

Fairphone 2 was sold out in 2019 (Fairphone, 2019). Therefore, one may wonder what explains consumers' willingness to purchase a product associated with such low ratings and whose quality is presumably so low. One might argue that the commercial success of such a product is related to its ethicality. More specifically, when products are poorly rated, does the mere presence of an ethical attribute make them more acceptable? If so, what would be the underlying psychological mechanism that explains such consumer behavior?

The above example illustrates the potential power of ethical attributes—those that reflect moral principles (Irwin & Naylor, 2009;

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Luchs, Naylor, Irwin, & Raghunathan, 2010)—in consumer decision-making. Such attributes have been increasingly used in the marketplace (e.g., Das, Agarwal, Malhotra, & Varshneya, 2019; Olsen, Slotegraaf, & Chandukala, 2014) but—in spite of recent attention in consumer research (e.g., Bodur, Tofghi, & Grohmann, 2016; Herédia-Colaço & do Vale, 2018; Schamp, Heitmann, & Katzenstein, 2019)—evidence about how consumers react to ethical attributes for products of different ratings is still lacking. Specifically, the recent literature has identified under which conditions—such as which product categories, types of brand, marketing tactics, or types of ethical claim (e.g., Andrews, Luo, Fang, & Aspara, 2014; Bodur et al., 2016; Herédia-Colaço & do Vale, 2018; Luchs et al., 2010)—the effects of ethical attributes vary. This line of research provides interesting insights into the factors that moderate the effect of ethical attributes. Nevertheless, by often comparing the effect of products with and without ethical attributes in different contexts (e.g., Lin & Chang, 2012), it leaves aside the incremental effects of ethical attributes over other types of attributes.

However, recent research has started to investigate the effects of ethical attributes in relation to other types of attributes. For instance, consumers make trade-offs between ethical and utilitarian—those that purely signal performance, functionality, or effectiveness (Dhar & Wertenbroch, 2000; Okada, 2005)—attributes (Bridges, Schramm, & Roy, 2019), often resulting in a decrease of the perceived benefits of ethical attributes (Barone, Miyazaki, & Taylor, 2000). Those trade-offs suggest that utilitarian benefits are preferred to ethicality, even when the goal of the consumer requires a product with both ethical and utilitarian benefits (Berens, Riel, & Rekom, 2007; Luchs, Brower, & Chitturi, 2012). While these findings suggest that ethical attributes may not be much weighted in consumer decision-making process, two limitations of prior research should be highlighted here. First, trade-offs occur only when the consumer is aware of the performance of each attribute and can compare them. However, such situations are only occasional, as in many instances consumers face incomplete information. Even in cases where ratings for some product attributes are provided (such as on *Consumer Reports* or *Tripadvisor*), a rating of the ethicality of the product is rarely present. Hence, there is a need for studies that examine ethical benefits using limited information about the ethical benefit. Second, recent research identified that consumers may actually consider ethical benefits, especially when the self is threatened (Trudel, Klein, Sen, & Dawar, 2019). Therefore, the door seems open for a more in-depth understanding of the conditions in which ethical attributes outweigh other attributes in increasing consumer evaluations of the product.

To fill this gap, this research builds on cue consistency theory (Maheswaran & Chaiken, 1991) and the negativity bias (Skowronski & Carlston, 1989) to predict and test the effect of ethical attributes across different product ratings. Two reasons motivate the investigation of the intersection of ethical attributes and product ratings. First, quality cues seem to condition the effect of ethicality cues. For instance, in a corporate context, corporate ability interact with corporate social responsibility (CSR) to affect consumer perceptions and behaviors (Berens et al., 2007; Luo & Bhattacharya, 2006). In a service provider context, perceived ethicality and competence interact to affect consumers' evaluation of the provider (Kirmani, Hamilton, Thompson, & Lantzy, 2017).

However, limited research has focused on the interaction of quality and ethicality cues at the product level. Second, relying on ratings as quality cues appear appealing due to their widespread use and impact. Indeed, ratings have become one of the most important source of information for consumers to judge product quality (De Langhe, Fernbach, & Lichtenstein, 2016; Moe & Trusov, 2011; Sridhar & Srinivasan, 2012). Therefore, this research aims to examine the relative effects of ethical attributes for products receiving different ratings.

With these goals in mind, we propose and test that for a product with low ratings, an ethical attribute exerts a more positive effect on product evaluations than other attributes (Studies 1 and 2) and than no attribute (Study 2). When product ratings increase, this incremental effect of the ethical attribute weakens or disappears. We show that an ethical attribute will prompt more warm-glow feelings when the product is poorly rated, eventually leading to better product evaluations. We test and provide evidence for these propositions in two experiments. First, we present the theoretical background for our hypotheses, rooted in the literature on cue consistency, negativity bias, warm-glow feelings, ethical attribute effects, as well as product ratings. Then, we present two experiments using different product categories and providing consistent empirical evidence, which leads to the discussion of theoretical and managerial implications.

## 2 | THEORETICAL BACKGROUND

### 2.1 | Third-party product ratings as functional performance cues

Consumers increasingly rely on product ratings to make their purchase decisions, in particular when shopping online (Sridhar & Srinivasan, 2012) and for product categories whose online reviews and expert opinions are easily available (Simonson & Rosen, 2014). Those ratings can emanate from other consumers (also referred to as peer-to-peer ratings or user ratings; Filieri, 2015) or from third-party organizations, such as *Consumer Reports*, *Runners' World*, *PC Magazine*, or *Wine Advocate*. While both third-party and consumer ratings are used by consumers to evaluate the functional performance of a product, or “its ability to fulfill its purpose” (Homburg, Schwemmler, & Kuehnl, 2015, p. 44), user ratings are not reliable indicators of a product's objective quality because users (a) rely in part on esthetic and symbolic dimensions to rate a product, and (b) are subjectively biased by others' ratings (De Langhe et al., 2016). By contrast, third-party ratings are often conducted by technical experts such as engineers or scientists, and represent a more accurate indicator of a product's objective quality (Aiken & Boush, 2006). In particular, expert reviews are judged as a more credible source of information than consumer testimonials for goods (De Maeyer & Estelami, 2011). Accordingly, consumers associate products with high (vs. low) third-party ratings with a high (vs. low) overall quality (Akdeniz, Calantone, & Voorhees, 2013).

While a third-party product rating influences consumers' overall appreciation of a product, it can also influence specific product attributes' evaluation. Golder, Mitra, and Moorman (2012) explain that

consumers evaluate the quality of an offering by comparing its “perceived attributes with their expectations to form summary judgments of quality [...]” (p. 5), this process occurring at different levels of attribute aggregation. Consumers perceive attributes and form expectations based on stored knowledge accruing from different sources, including other consumers' experiences, media reports, or quality signals associated with each attribute (Golder et al., 2012). Hence, as soon as consumers access product ratings, this information becomes part of their stored knowledge, which will affect the way they perceive product-specific attributes and form product expectations. For instance, high third-party ratings can reinforce the effect of a high price or a strong warranty on perceived product quality (Akdeniz et al., 2013).

## 2.2 | Ethical attributes and product ratings

Ethical attributes involve social or environmental issues (Luchs et al., 2010), thus appealing to people's moral beliefs (Irwin & Naylor, 2009; Luchs et al., 2010). Ethical attributes can be positively (e.g., fair trade) or negatively (e.g., child labor) valenced and are typically linked to sacred or protected values (Irwin & Naylor, 2009). They can take on many forms, from ethical claims (e.g., “child labor free”; Bodur, Gao, & Grohmann, 2014) to cause-related marketing campaigns (e.g., Schamp et al., 2019). Unlike other attributes—like utilitarian attributes, which signal functional benefits—ethical attributes derive their attractiveness mainly from their relation to ethical values (Ehrich & Irwin, 2005), thus creating symbolic benefits to consumers (Bodur et al., 2014) and serving a self-expressing function (Wicklund & Gollwitzer, 1982). As such, they are among the numerous potential product cues that consumers rely on to make their purchase decision (Ehrich & Irwin, 2005; Luchs et al., 2010), and to assess products' value (Auger, Burke, Devinney, & Louviere, 2003; De Pelsmacker, Driesen, & Rayp, 2005; Zander & Hamm, 2010).

Previous research highlights a decreased influence of ethical attributes, when consumers make trade-offs between ethical and utilitarian benefits (Barone et al., 2000; Luchs & Kumar, 2017). Specifically, consumers prefer utilitarian over ethical value when they have access to third-party evaluation of each attribute (Luchs & Kumar, 2017; Luchs et al., 2012). These effects were tested in situations where participants had access to third-party evaluations of each attribute leaving limited margin to interpret how each attribute performs. In many situations, however, consumers do not have a comparable score associated with ethicality, and consumers make choices using their interpretation of ethical cues coming from third parties (e.g., labels) or marketing. Therefore, in this research, we investigate the role of third-party's product (and not attribute) ratings on consumers' evaluations of products with an ethical attribute (vs. a control consisting of either a utilitarian attribute or no attribute). More specifically, we propose that (a) ethical attributes increase product evaluations more than control for low-rated products; and (b) this incremental effect of ethical attributes disappears for higher rated products. We develop below the logic underlying these

propositions, which find their roots in the symbolic benefits associated with ethical attributes.

Contrary to utilitarian attributes—which contribute to the functionality, effectiveness, efficiency, or practicality of the product (e.g., Dhar & Werthenbroch, 2000; Okada, 2005; Strahilevitz & Myers, 1998; Voss, Spangenberg, & Grohmann, 2003)—ethical attributes have more symbolic benefits and are less related to functional performance. Consumers intuitively associate ethicality with less strength (Luchs et al., 2010), which can trigger doubts about the quality of a product that features an ethical attribute (Mai, Hoffmann, Lasarov, & Buhs, 2017). An exemplary illustration of this phenomenon is that consumers use more of a product (e.g., hand sanitizer or laundry powder) when it is labeled as ethical or sustainable than when it is not labeled as such, because they associate ethical products with less effectiveness (Lin & Chang, 2012). So, ethical attributes are associated with less functional performance, but why would ethical attributes affect consumer evaluations differently according to product ratings?

Consumers allocate different weights to ethical attributes depending on the stage of the decision-making journey (Schamp et al., 2019). In the context investigated here, we suggest that the weight of the ethical attribute may also vary depending on the ratings of the product. This contention builds on cue consistency theory (Maheswaran & Chaiken, 1991), which suggests that when people face multiple sources of information, congruent (vs. incongruent) information is more useful and likely to be mobilized jointly in evaluations that use information integration models (Miyazaki, Grewal, & Goodstein, 2005). As an extension to this theory—and already used as a theoretical basis in research on third-party ratings (Akdeniz et al., 2013)—negativity bias suggests that when facing incongruent information, consumers weigh the less positive information more heavily than the more positive information and the less positive cue becomes dominant in consumers' evaluation (e.g., Miyazaki et al., 2005; Skowronski & Carlston, 1989).

Our contention also builds on the notion that product quality is by definition related to product attribute performance, quality being defined as “a set of three distinct states of an offering's attributes' relative performance generated while producing, experiencing, and evaluating the offering” (Golder et al., 2012, p. 2). As a result, because consumers use ratings to assess the objective quality of the product, low ratings signal low performance. Ethical attributes (e.g., a child labor free statement) are not directly connected to the functionality of the product. They may however still negatively affect consumers' perception of effectiveness (Lin & Chang, 2012) or strength (Luchs et al., 2010; Mai et al., 2017). Thus, contrary to other types of attribute such as utilitarian attributes, ethical attributes are not incongruent with low product ratings. As a result, consistent with negativity bias and cue consistency theories, ethical attributes, unlike other types of attributes, may represent useful information when consumers evaluate low-rated products. They are likely to be mobilized jointly with product ratings in the evaluation process. Therefore, compared to controls including no attribute or a utilitarian attribute, an ethical attribute should increase product evaluation when product ratings are low:

**H1** For low-rated (vs. higher rated) products, an ethical attribute (vs. control) will (vs. will not) increase product evaluations.

### 2.3 | Warm-glow feelings as a response to ethical attributes for low-rated products

We propose that when anticipating the purchase of products featuring ethical attributes, consumers also anticipate warm-glow feelings, that may play a mediating role in the effect of those attributes on consumer evaluations. Warm-glow feelings are “feelings of pleasure and satisfaction derived from the cognitive appraisal of contributing to the wellbeing of society” (Hartmann, Eisend, Apaolaza, & D'Souza, 2017, p. 45). They are often referred to as “impure altruism” (Andreoni, 1989, 1990) because they are self-focused, as opposed to pure altruism, which is only driven by others' needs. Warm-glow feelings are driven by the pursuit of the positive affective state that one feels following actions taken to help others (Andreoni, 1990). In other words, when one helps others, it is not only because they need help but also because the helper anticipates and experiences the warm glow of good feeling or moral satisfaction associated with giving aid. Nevertheless, warm-glow feelings do not only emerge when helping others directly. For instance, warm-glow feelings arise when acting environmentally friendly (Giebelhausen, Chun, Cronin Jr, & Hult, 2016; Taufik, Bolderdijk, & Steg, 2015), indicating that they affect consumer behavior in multiple domains. In the consumption domain, consumers may experience warm-glow feelings when they purchase a product with an ethical attribute because they know that the money spent on that product supports a good cause (Andrews et al., 2014; Chang & Chu, 2019; Habel, Schons, Alavi, & Wieseke, 2016).

In general, consumers should then anticipate more warm-glow feelings when the ethical attribute is given more weight in the evaluation process, as the feeling of doing something good for society should increase. As a result, building on our previous discussion on weight allocation during the evaluation process, we suggest that because the relative weight allocated to the ethical attribute (vs. controls such as a utilitarian attribute) should be greater when product ratings are low, consumers considering the purchase of a low-rated product should anticipate more warm-glow feelings when the product has an ethical attribute. Therefore, we expect:

**H2** For low-rated products, an ethical attribute (vs. control) will generate more (vs. less) anticipated warm-glow feelings. The incremental effect of an ethical attribute will decrease when product ratings increase.

An ethical attribute gives consumers a reason to feel good about the purchase of a product with low ratings. We suggest that the anticipation of these good feelings influence product evaluation. Indeed, previous research highlights that warm-glow feelings affect consumption-related attitudes and behaviors (Habel et al., 2016). More specifically, warm-glow feelings mediate the effect of marketing initiatives such as cause

marketing programs on service satisfaction (Giebelhausen, Chun, Cronin, & Hult, 2016) or purchase (Andrews et al., 2014). We previously argued that a low-rated product with an ethical attribute should increase the evaluation of the product. We suggest that this effect occurs through the mediating effect of warm-glow feelings. On the contrary, when consumers evaluate a product that received better ratings, they should focus more on attributes that relate to functional performance and less on ethical attributes. In this case, the relative effect of the ethical attribute on warm-glow feelings should decrease, removing the incremental effect of the ethical attribute on evaluation. Hence, we expect:

**H3** For low-rated products, anticipated warm-glow feelings will mediate the effect of an ethical (vs. control) attribute on product evaluations. This mediating effect will decrease when product ratings increase.

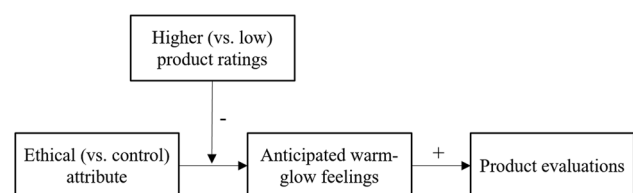
Figure 1 presents the theoretical model of the current research.

These hypotheses are tested across two studies. Study 1 tests H1–H3 using experts to manipulate the ratings of a t-shirt and an ethical claim (Guaranteed child labor free) to manipulate the ethical attribute. Study 2 tests H1–H3 using a different product (sunscreen), and different manipulations of the ratings (*Consumer Reports*) and ethical attribute (EcoConscious claim). It also extends Study 1 by providing an additional control for green consumption values and an additional control condition to increase the validity of our results. In both studies, we anchor our manipulation of the ratings as low (as this is the focus of this article) and compare it to higher ratings, which do not correspond to top ratings (as our theory focuses on the difference between low and relatively higher ratings). Finally, we use different samples (UK and US) to extend the external validity of our results.

## 3 | STUDY 1

### 3.1 | Pretest

Given the aforementioned evidence showing that consumers make trade-offs between ethical and utilitarian attributes, Study 1 tests the hypothesized effect of ethical attributes by opposing them to utilitarian attributes. Before designing the experiment, a pretest was conducted to select suitable ethical and utilitarian attributes, as well as rating criteria. One hundred participants residing in the United Kingdom (58.0% female;  $M_{Age} = 33.13$ ;  $SD = 12.89$ ) were recruited on



**FIGURE 1** Theoretical model

the platform Prolific.co in exchange for monetary compensation. The objective was to ensure that the selected attributes were equally realistic but differed in terms of perceived ethicality and utilitarianism. We also wanted to ensure that product rating manipulation included realistic criteria. First, we identified a series of ethical and utilitarian attributes based on a review of clothing e-commerce websites. We pretested three ethical attributes (“100% recyclable,” “Organic cotton,” and “Guaranteed child labour free”) as well as three utilitarian attributes (“Extra wash resistance,” “Extra fade-resistant fabric,” and “Guaranteed non-iron t-shirt”).

Participants read that an attribute was utilitarian if it offered functional, instrumental, and practical benefits (Chitturi, Raghunathan, & Mahajan, 2008) and were asked to rate each attribute on a 7-point scale from “Not at all utilitarian” to “Very utilitarian.” They also read that an attribute was ethical if it offered benefits to the society or the environment (Luchs et al., 2010), and were asked to rate each attribute on a 7-point scale from “Not at all ethical” to “Very ethical.” They also rated how realistic it was to find each attribute on a t-shirt’s label or packaging (7-point scale from “Not at all realistic” to “Very realistic”). The order of attribute presentation was randomized.

The pair of attribute “Extra fade-resistant fabric” and “Guaranteed child labour free” emerged as ideal candidates. “Extra fade-resistant fabric” was perceived as more utilitarian than “Guaranteed child labor free” ( $M = 5.96$  vs.  $M = 3.87$ ;  $t(99) = 8.66$ ;  $p < .001$ ), less ethical ( $M = 3.90$  vs.  $M = 6.50$ ;  $t(99) = -12.53$ ;  $p < .001$ ), and equally realistic ( $M = 4.59$  vs.  $M = 4.88$ ;  $t(99) = -1.33$ ;  $p > .1$ ).

In the experiment, we planned to manipulate product ratings by showing how experts rated the t-shirt based on explicit criteria. We drew an initial list of possible criteria based on how consumers perceive clothing (Swinker & Hines, 2006). Participants rated how realistic it would be if experts rated the quality of a t-shirt based on these criteria (7-point scale from “Not at all realistic” to “Very realistic”). We selected the three criteria that received the higher value for the experiment: “Comfort” ( $M = 5.98$ ), “Fabric holds shape” ( $M = 5.67$ ), and “Design features” ( $M = 5.51$ ). We also ensured that the utilitarian attribute and the criteria on which the t-shirt was rated were independent (i.e., the fact that the t-shirt does not fade does not impact experts’ rating of its comfort, design features, and how the fabric holds shape).

### 3.2 | Design and procedure

One hundred and seventy-five participants residing in the United Kingdom (77.1% female,  $M_{Age} = 36.39$ ,  $SD = 12.01$ ) were recruited on Prolific.co in exchange for monetary compensation. Participants were randomly assigned to one of four conditions in a 2 (product ratings: low vs. higher)  $\times$  2 (attribute type: ethical vs. utilitarian) between-subjects design and filled a questionnaire online. Participants read that “Trevy is a new brand that is specialized in casual clothing for women, men, and kids.” The brand was fictitious to avoid prior attitudes toward and knowledge about the product. They also read the following: “The picture and the product description come from the brand. The expert ratings come from an independent magazine that evaluates clothing.”

Below, they saw a picture of a Trevy t-shirt with a description of its characteristics. Following the pretest, the attribute type conditions included either the ethical attribute (“Guaranteed child labour free”) or the utilitarian attribute (“Extra fade-resistant fabric”). Product ratings were manipulated with a star system (two stars for the low product condition and four stars for the higher ratings). The criteria on which the magazine rated the t-shirt were explicitly stated as comfort, design features, and how the fabric holds shape, as supported by the pretest. The stimuli are presented in Appendix A.

Our dependent variable, product evaluations, was measured using a 4-item, 7-point, semantic differential scale (“Please choose the option that best reflects your opinion toward this t-shirt”—Dislike/Like, Bad/Good, Unfavorable/Favorable, Negative/Positive;  $\alpha = .95$ ). Participants expressed their anticipated warm-glow feelings by responding to the question “How would you feel if you bought this t-shirt?” using a 4-item (*ashamed/proud, in the wrong/in the right, wicked/virtuous, unethical/ethical*;  $\alpha = .91$ ; Giebelhausen et al., 2016), 7-point, semantic differential scale. As a manipulation check, we also measured product perceived quality on a scale from 0 (*extremely poor quality*) to 100 (*excellent quality*).

#### 3.2.1 | Rating manipulation checks

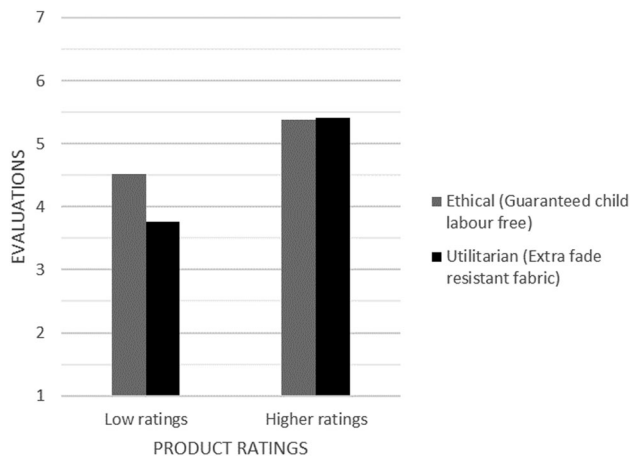
An analysis of variance (ANOVA) with product ratings and attribute type as fixed factors and perceived quality as the dependent variable revealed a main effect of product ratings on perceived quality ( $M_{Low} = 48.17$ ;  $SD = 20.41$ ;  $M_{Higher} = 72.36$ ;  $SD = 15.43$ ;  $F(1, 171) = 79.36$ ;  $p < .001$ ;  $\eta_p^2 = 0.32$ ). There was no effect of attribute type ( $F < 1$ ) and no interaction ( $F(1, 171) = 2.53$ ;  $p > .1$ ). These results support our manipulation.

#### 3.2.2 | Effect on evaluations

An ANOVA with product ratings and attribute type as fixed factors and product evaluations as the dependent variable revealed a main effect of product ratings ( $F(1, 171) = 46.76$ ;  $p < .001$ ;  $\eta_p^2 = 0.22$ ) and a main effect of attribute type ( $F(1, 171) = 3.93$ ;  $p = .049$ ;  $\eta_p^2 = 0.022$ ). Interestingly, and as predicted, an interaction effect ( $F(1, 171) = 4.45$ ;  $p = .036$ ;  $\eta_p^2 = 0.025$ ) was observed (see Figure 2). In the low product ratings condition, the ethical attribute ( $M = 4.52$ ;  $SD = 1.44$ ) resulted in higher product evaluations (compared to the utilitarian attribute;  $M = 3.77$ ;  $SD = 1.27$ ;  $F(1, 171) = 8.01$ ;  $p = .005$ ;  $\eta_p^2 = 0.045$ ). There was no significant difference in the higher product ratings condition ( $M_{Ethical} = 5.38$ ;  $SD = 1.19$ ;  $M_{Utilitarian} = 5.41$ ;  $SD = 0.87$ ;  $F < 1$ ). These results support H1.

#### 3.2.3 | Effect on anticipated warm-glow feelings

An ANOVA with product ratings and attribute type as factors and anticipated warm-glow feelings as the dependent variable revealed a main



**FIGURE 2** Results of Study 1

effect of product ratings ( $F(1, 71) = 4.91$ ;  $p < .028$ ;  $\eta_p^2 = 0.028$ ), a main effect of attribute type ( $F(1, 171) = 47.39$ ;  $p < .001$ ), and—as expected—an interaction effect ( $F(1, 171) = 7.25$ ;  $p = .008$ ;  $\eta_p^2 = 0.041$ ) on anticipated warm-glow feelings. Specifically, when product ratings were low, participants anticipated more warm-glow feelings with an ethical attribute ( $M_{\text{Ethical}} = 5.43$ ;  $M_{\text{Utilitarian}} = 3.90$ ;  $F(1, 171) = 45.36$ ;  $p < .001$ ;  $\eta_p^2 = 0.21$ ). A smaller but significant difference was also observed when product ratings were higher ( $M_{\text{Ethical}} = 5.35$ ;  $M_{\text{Utilitarian}} = 4.68$ ;  $F(1, 171) = 9.04$ ;  $p = .003$ ). These results support the notion that the difference in anticipated warm-glow feelings generated by a product with an ethical (vs. utilitarian) attribute is greater when the product ratings are low, which supports H2.

### 3.2.4 | Mediation through warm-glow feelings

A moderated mediation analysis (Hayes, 2017; model 8; 5,000 bootstrap samples) was performed to test our hypothesis that the indirect effect of attribute type (coded as ethical attribute = 1 and utilitarian attribute = 0) on evaluations through anticipated warm-glow feelings is moderated by product ratings (H3). Consistent with our prediction, the indirect effect of attribute type was significant in the low ratings condition ( $ab = 0.98$ ; 95% CI = 0.060 to 1.41). The indirect effect of attribute type was also significant in the higher ratings condition ( $ab = 0.43$ ; 95% CI = 0.14 to 0.75). Further, the index of the moderated mediation (index =  $-0.55$ ; 95% CI =  $-1.00$  to  $-0.15$ ) indicated that the indirect effect of the ethical (vs. utilitarian) attribute on product evaluations was significantly greater in the low rating condition than in the higher rating condition, which supports H3.

### 3.3 | Discussion

Results of Study 1 support H1 by showing that an ethical attribute compared to a utilitarian attribute, increases consumers' evaluations of a low-rated product, whereas it does not increase consumers'

evaluations in case of higher rated products. Also, consumers anticipate more warm-glow feelings with a product that includes an ethical (vs. utilitarian) attribute for low-rated products. This difference is smaller for higher rated products (H2). Finally, results indicate that anticipated warm-glow feelings mediate the effect of the ethical attribute in the low rating condition and that the mediation effect weakens when rating increase (H3). Study 2 replicates and extends these findings in another context.

## 4 | STUDY 2

Beyond replicating Study 1, Study 2 aims to better control the identified effects by providing an additional control condition for the attribute type, by measuring the green consumption values of the participants and by measuring potential confounding effects. Study 2 uses a different product (a sunscreen) and opposes the ethical attribute (EcoConscious claim) to a utilitarian attribute (water resistant) as well as to another control (no attribute). Also, Study 2 uses a different type of ratings (from *Consumer Reports*), and a different sample (MTurk). Study 2 uses a real brand (Daylong) that is not distributed in the United States to increase the credibility of the brand and its imagery while controlling for previous brand attitude and knowledge, in line with the suggestion of Morales, Amir, and Lee (2017) to improve the realism of experiments.

### 4.1 | Design and procedure

To manipulate attribute type, Study 2 used an ethical attribute, a utilitarian attribute, as well as a “no attribute” condition to provide an additional secondary baseline to compare the ethical attribute effect. This choice resulted in a 3 (attribute: ethical vs. utilitarian vs. no attribute)  $\times$  2 (product ratings: low vs. higher) between-subjects design. A sample of 615 U.S. citizens (52% women,  $M_{\text{Age}} = 39$  years old) completed a survey on Amazon Mechanical Turk (MTurk) in exchange for monetary compensation. To select attributes, we drew inspiration from real-life examples for the product category. Participants were first told the following: “Daylong, a sunscreen brand, is launching a new product and would like to evaluate consumer preferences. You can see the product packaging below, as well as one of the printed advertisement for the product.” They were then asked to carefully read the information given (the stimuli were adapted from a real Daylong product and advertisement). The ad manipulated the attribute by presenting the product as “EcoConscious” (ethical attribute), “Water Resistant” (utilitarian attribute), or without text (no attribute). The product itself was presented next to the ad with the claim EcoConscious, Water Resistant, or no claim featured on it (see Appendix B for the stimuli). A separate attribute test study (98 U.S. participants recruited on MTurk in exchange for monetary compensation) showed that EcoConscious was perceived as more ethical ( $M = 5.79$ ;  $SD = 1.29$ ) than Water Resistant ( $M = 3.85$ ;  $SD = 1.90$ ;  $t(96) = -8.84$ ;  $p < .001$ ), but less utilitarian ( $M = 3.94$ ;  $SD = 1.98$ ) than

Water Resistant ( $M = 5.85$ ;  $SD = 1.42$ ;  $t(96) = 8.31$ ;  $p < .001$ ), which supports the manipulation.

Then, participants were exposed to *Consumer Reports* ratings of this new product. The report mentioned on which criteria the sunscreens were evaluated (in particular UVA and SPF, which were explained) and also mentioned that “The worst score of our test program was 5 and the best 95.” Participants were randomly allocated to the low rating condition (5/100) or to the higher rating condition (55/100).

We then measured the dependent variable, sunscreen evaluations ( $\alpha = .99$ ), the mediator, anticipated warm-glow feelings ( $\alpha = .94$ ), and perceived quality of the sunscreen with the same measures as in Study 1. We also measured participants' green consumption values, using a 6-item, 7-point, Likert scale (e.g., “It is important to me that the products I use do not harm the environment”; Haws, Winterich, & Naylor, 2014), the believability of the *Consumer Reports* review (“In your opinion, how believable is the review from *Consumer Reports*?” with answers ranging from 1–“Extremely unbelievable” to 7–“Extremely believable”), familiarity with *Consumer Reports* (“How familiar are you with *Consumer Reports*?” with answers ranging from 1–“Not familiar at all” to 7–“Extremely familiar”), and awareness of the brand Daylong (“Did you know Daylong brand before taking this survey?” with a dichotomous answer, yes or no).

## 4.2 | Results

### 4.2.1 | Manipulation checks confounds and brand awareness

A  $3 \times 2$  between-subjects ANOVA with product ratings and attribute type as fixed factors and perceived quality as the dependent variable revealed a main effect of product ratings on perceived quality ( $M_{Low} = 27.81$ ;  $SD = 27.61$ ;  $M_{Higher} = 64.62$ ;  $SD = 17.01$ ;  $F(1, 609) = 404.00$ ;  $p < .001$ ;  $\eta_p^2 = 0.399$ ), which supports our manipulation. There was no interaction ( $F(2, 609) = 2.437$ ;  $p > .05$ ), but a main effect of attribute type ( $M_{Ethical} = 48.26$ ;  $SD = 29.26$ ;

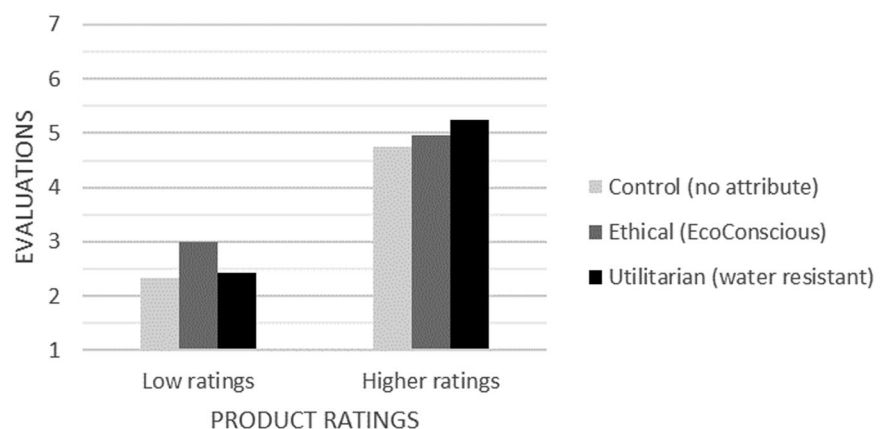
$M_{Utilitarian} = 47.49$ ;  $SD = 29.74$ ;  $M_{NoAttribute} = 43.16$ ;  $SD = 29.03$ ;  $F(2, 609) = 3.39$ ;  $p = .034$ ;  $\eta_p^2 = 0.011$ ), was also observed.

We observed no impact of the independent variables and their interaction on the believability of the *Consumer Reports* reviews (all  $p > .1$ ), meaning that the low and higher rating conditions generated the same level of believability (which could have been a potential confounding effect). Only six participants mentioned that they knew the brand Daylong before taking part in the study. Below, we present the analyses including those six participants. However, we ran the same analyses without them and found no difference in significance levels.

### 4.2.2 | Effect on evaluations

A  $2 \times 3$  between-subject ANOVA with product ratings and attribute type as fixed factors and product evaluations as the dependent variable revealed the main effects of product ratings ( $F(1, 609) = 359.85$ ;  $p < .001$ ;  $\eta_p^2 = 0.371$ ) and attribute ( $F(2, 609) = 4.15$ ;  $p = .016$ ;  $\eta_p^2 = 0.013$ ), as well as an interaction effect ( $F(2, 609) = 3.71$ ;  $p = .025$ ;  $\eta_p^2 = 0.012$ ; Figure 3). Planned contrasts revealed that, in the low ratings condition, the ethical attribute ( $M = 2.99$ ;  $SD = 1.90$ ) induced better evaluations than no attribute ( $M = 2.33$ ;  $SD = 1.74$ ;  $F(1, 609) = 8.02$ ;  $p = .005$ ;  $\eta_p^2 = 0.013$ ) and than the utilitarian attribute ( $M = 2.43$ ;  $SD = 1.73$ ;  $F(1, 609) = 5.23$ ;  $p = .023$ ;  $\eta_p^2 = 0.009$ ). In the higher ratings condition, there were no significant differences in evaluations between eco-conscious attribute, water-resistant attribute, and no attribute conditions (all  $p > .1$ ). These results support H1.

Adding green consumption values, believability of the *Consumer Reports* review and familiarity with *Consumer Reports* as covariates did not modify the significance of the results, in particular, the interaction effect of product ratings and attribute type on evaluations remains ( $F(2, 606) = 3.86$ ;  $p = .021$ ;  $\eta_p^2 = 0.013$ ). Green consumption values had a significant effect on product evaluations ( $F(1, 606) = 9.61$ ;  $p = .002$ ;  $\eta_p^2 = 0.016$ ), while believability of the *Consumer Reports* review ( $F < 1$ ) and familiarity with *Consumer Reports* ( $F(1, 606) = 1.39$ ;  $p > .1$ ) had not.



**FIGURE 3** Results of Study 2

### 4.2.3 | Effect on anticipated warm-glow feelings

A  $3 \times 2$  between-subjects ANOVA with product ratings and attribute type as fixed factors and anticipated warm-glow feelings as the dependent variable revealed main effects of product ratings ( $F(1, 609) = 106.96$ ;  $p < .001$ ;  $\eta_p^2 = 0.15$ ), and attribute type ( $F(2, 609) = 26.25$ ;  $p < .001$ ;  $\eta_p^2 = 0.08$ ). Also, and as expected, an interaction effect emerged ( $F(2, 609) = 3.60$ ;  $p = .028$ ;  $\eta_p^2 = 0.01$ ). In the low ratings condition, the ethical attribute ( $M = 4.58$ ;  $SD = 1.33$ ) generated more anticipated warm-glow feelings than no attribute ( $M = 3.58$ ;  $SD = 1.34$ ;  $F(1, 609) = 33.79$ ;  $p < .001$ ;  $\eta_p^2 = 0.053$ ) and than the utilitarian attribute ( $M = 3.56$ ;  $SD = 1.37$ ;  $F(1, 609) = 34.77$ ;  $p < .001$ ;  $\eta_p^2 = 0.054$ ). When product ratings were higher, smaller but significant differences also emerged between the ethical attribute ( $M = 5.24$ ;  $SD = 1.13$ ) and the no attribute ( $M = 4.68$ ;  $SD = 1.04$ ;  $F(1, 609) = 10.81$ ;  $p = .001$ ;  $\eta_p^2 = 0.017$ ) conditions, as well as between the ethical and the utilitarian ( $M = 4.84$ ;  $SD = 1.00$ ;  $F(1, 609) = 5.73$ ;  $p = .017$ ;  $\eta_p^2 = 0.009$ ) attribute conditions. Overall, these results support H2. Adding green consumption values, believability of the *Consumer Reports* review and familiarity with *Consumer Reports* as covariates did not modify the significance of the results: the interaction effect remained ( $F(2, 606) = 3.77$ ;  $p = .024$ ;  $\eta_p^2 = 0.012$ ). Green consumption values ( $F(1, 606) = 5.09$ ;  $p = .024$ ;  $\eta_p^2 = 0.008$ ) and believability of *Consumer Reports* review ( $F(1, 606) = 4.41$ ;  $p = .036$ ;  $\eta_p^2 = 0.007$ ) had a significant effect on anticipated warm-glow feelings, while familiarity with *Consumer Reports* had not ( $F < 1$ ).

### 4.2.4 | Mediation through warm-glow feelings

To test H3, we ran a moderated mediation analysis (Hayes, 2017; model 8; 5,000 bootstrap samples) with attribute type as the independent variable (0 = *Ethical attribute*, 1 = *Utilitarian attribute*, 2 = *No attribute*), warm-glow feelings as a mediator, product ratings (0 = *low ratings*, 1 = *higher ratings*) as a moderator, and product evaluations as the dependent variable. Supporting H3, we observed significant mediations of the effect of the ethical attribute versus utilitarian attribute ( $ab = -0.90$ ; 95% CI =  $-1.23$  to  $-0.58$ ) and versus no attribute ( $ab = -0.88$ ; 95% CI =  $-1.21$  to  $-0.57$ ) on product evaluations through warm-glow feelings in the condition of low-rated product. These mediating effects were also observed in the case of higher rated product (ethical attribute vs. utilitarian attribute:  $ab = -0.35$ ; 95% CI =  $-0.62$  to  $-0.09$ ; ethical attribute vs. no attribute:  $ab = -0.49$ ; 95% CI =  $-0.78$  to  $-0.23$ ). However, the index of the moderated mediation ( $Index = 0.55$ ; 95% CI =  $0.13$  to  $0.97$ ) indicated that the indirect effect of the ethical attribute (vs. utilitarian attribute) on product evaluations was significantly greater in the low rating condition than in the higher rating condition. The indirect effect of the ethical attribute (vs. no attribute) was marginally greater in the low rating condition than in the higher rating condition ( $Index = 0.39$ ; 90% CI =  $0.04$  to  $0.74$ ). Adding green consumer values, the believability of the *Consumer Reports* review, and familiarity with *Consumer Reports* as covariates rendered the results slightly nearer.

All significance levels stayed constant but for one exception: the index of the moderated mediation when the ethical attribute was compared to the no attribute condition (which was only marginally significant) became significant ( $Index = 0.42$ ; 95% CI =  $0.00$  to  $0.82$ ). Overall, these results support H3.

## 4.3 | Discussion

Using different samples, different products, as well as different manipulations of ratings and attribute type, Studies 1 and 2 provide evidence for the positive effect of an ethical attribute when product ratings are low. This effect of the ethical attribute on product evaluation is not observed when the ratings are higher. This effect is explained by the anticipated warm-glow feelings that are generated in the low rating condition. The mediating effect of anticipated warm-glow feelings for the ethical attribute is significantly weaker when ratings increase. In addition to Study 1, Study 2 controls for green consumption values, the believability of the ratings, familiarity with the rating agency, and brand awareness. Controlling for these variables yields similar results. Also, Study 2 provides an additional control condition (no attribute), which again yields similar results.

At first sight, a ceiling effect could be present and provide an alternative explanation to our effects (i.e., with higher ratings, product evaluations increase, providing limited margin for an ethical attribute to have a positive effect). However, this hypothesis is highly unlikely. We deliberately operationalized the higher rating conditions using average and not high scores (4 stars out of 5 in Study 1 and 55 out of 100 in Study 2). As a result, in the higher rating conditions, the evaluations are far from the end-point of the scale (4.84–5.27 in Study 1 and 4.75–5.25 in Study 2 with the end-point of the scale at 7). Overall, our two studies support our hypotheses.

## 5 | GENERAL DISCUSSION

The objective of this research was to test the prediction that ethical attributes have a stronger effect on product evaluations when product ratings are low. In this regard, we show in two studies that when a product receives low ratings, the effect of an ethical attribute on evaluations is positive and more specifically stronger than that of a utilitarian attribute. Also, we show that this positive effect of an ethical attribute weakens as product rating increase.

This research also documents the mechanism that explains the effects of ethical attributes according to product ratings. Specifically, we show that an ethical attribute fuels warm-glow feelings, making consumers anticipate to feel good about their purchase. Interestingly, we find that these warm-glow feelings are moderated by product ratings: when product ratings are low, an ethical attribute makes consumers feel better about their purchase, but this incremental feel-good effect of the ethical attribute decreases with higher ratings. Importantly, we find that these effects are consistent across different product categories, as well as different ethical attributes.



## 5.1 | Theoretical contributions

The current research provides some important theoretical contributions. The first relates to the stream of literature analyzing the impact of ethical attributes on consumer response. In line with cue consistency theory (Maheswaran & Chaiken, 1991) and the negativity bias (Skowronski & Carlston, 1989), this research brings further empirical support to the notion that when consumers face incongruent cues (for instance when product ratings are low and a utilitarian attribute is present), the negative cue gains importance, that is, consumers disregard utilitarian attributes and rely more strongly on the product ratings. On the contrary, when low product ratings are associated with an ethical attribute (i.e., the cues are not incongruent), consumers rely on the ethical attribute to form their evaluation of the product. Our results thus support the finding that ethical attributes do not affect consumer response uniformly, their effect being dependent on product ratings. This study extends previous literature showing that the effects of ethical attributes may vary according to different contexts or variables, including product category (Luchs et al., 2010), attribute type (Bodur et al., 2014), price discounts (Andrews et al., 2014), type of brand (Arora & Henderson, 2007), the need communicated with the ethical attribute and the justice restoration potential (White, MacDonnell, & Ellard, 2012) or the level of sophistication of the product (Herédia-Colaço & do Vale, 2018).

A second implication stems from the moderating effect of product ratings. Third-party ratings had already been identified as a moderating variable (Akdeniz et al., 2013), but the impact of ethical attributes in relation to such ratings—and the inferred perceived quality—had so far been the object of scarce attention, being investigated only in the single and specific context of private label brand evaluations (Bodur et al., 2016). These authors found that brand evaluations are more positive when an ethical attribute is coupled with external cues signaling high quality. Our research complements this finding in two ways. First, it shows an effect of ethical attributes on product-level evaluations (vs. brand level) and focuses on low-quality perceptions caused by product ratings (vs. other quality cues). Second, we included a utilitarian attribute as a control condition (vs. only the absence of ethical attribute), which improves our understanding of the effect of ethical attributes as opposed to that of other types of attributes.

Our results are also consistent with the proposition of Kirmani et al. (2017), who found that an underdog positioning can help a moral service provider overcome a deficit in competence (provided consumers associate less quality to underdogs than to leaders). Our framework extends this idea at the product level, whereby an ethical attribute helps overcome a deficit of product quality (operationalized with product ratings). Future research could further disentangle the effect of ethical attributes on product versus brand-related evaluations.

The third stream of contributions lies in the trade-off that consumers make related to ethical attributes. Luchs and Kumar (2017) show that consumers prefer to trade off hedonic (vs. utilitarian)

benefit for ethical benefit. Given the body of research that emphasizes the trade-off between ethical and utilitarian attributes, this research used utilitarian attributes for the control condition of the experiments, and thus focused more specifically on the utilitarian versus ethical attribute comparison to understand when ethical attributes are preferred. In this regard, previous research highlights functional precedence effects whereby functional performance is preferred over ethicality when both are valued (Luchs et al., 2012). We supplement such research by showing that when the performance of the attributes is not rated, and consumers infer it from product information and product ratings—which is a pervasive situation online—consumers will evaluate a product with ethical attributes more positively than similar products with utilitarian attributes when product ratings are low.

Finally, our results also contribute to the green marketing literature, and in particular the literature investigating the effect of ethical communication on evaluations (Parguel, Benoît-Moreau, & Larceneux, 2011; Torelli, Monga, & Kaikati, 2012). Specifically, we extend the research of Pelozo, White, and Jingzhi (2013) who found that people may prefer products with ethical attributes to avoid the pain of negative affect. In this research, our results show that such preference for ethical attributes may also exist as a response to the anticipation of positive affect associated with ethical attributes, here warm-glow feelings. Another contribution to the green marketing literature derives from our identification of the moderating effect of product ratings. In their research, Torelli et al. (2012) found that the communication of CSR actions have different results depending on brand concept. Specifically, they relied on fluency theory to show that ethical communication had negative evaluative effects for luxury brands—which promote dominance over people—while it had positive effects for brands that promote conservation or openness. Using another theoretical framework (cue consistency and negativity bias theories), our results extend these findings and show that consumer evaluations of brands that communicate CSR activities (ethical claims used in this research such as “Guaranteed child labour free” could be considered an instance of CSR communication) are not only dependent on the brand concept, but could also depend on the ratings and potentially more generally on product or brand perceived quality. It would be for low-quality brands that ethical attributes reveal the most effective.

## 5.2 | Practical and ethical implications

Our research also has managerial and ethical implications for marketers and policymakers. As could be expected, our results show that third-party ratings always have a main effect on consumer evaluations. For companies willing to improve evaluations, the first obvious step to consider is to improve the quality of their product and act on the issues that potential ratings pointed at. When quality improvement appears too costly or too complex, managers could consider an ethical positioning to increase consumer evaluations. Such consideration may intervene at the earlier stage of the product

development process in order for the product and the brand to be legitimate if the ethical positioning—and thus the use of ethical attributes—is actual. Managers who anticipate their products to be poorly rated may benefit from the adoption of such positioning as consumers may value the ethical attribute and eventually form positive evaluations of the products. An ethical positioning could occur at a further stage of the product life cycle. For instance, if a product or service received low ratings, marketers may reposition the product or service and highlight its actual ethical aspects to increase consumer evaluations. For example, a restaurant that received low ratings could promote, in its communications and marketing, its ethical labor practices and/or initiatives it is undertaking (or planning to undertake) to reduce its carbon footprint (e.g., sourcing sustainable products for its meals, reducing food waste, etc.). However, as stated earlier, the first and most obvious step is to fix the issues that led third parties to rate the product poorly.

Nevertheless, when a product receives poor ratings after its market launch, brands may be tempted to design and use unsubstantiated ethical attributes, a phenomenon termed greenwashing when applied to superficial environmental actions (W. S. Laufer, 2003). Given the deceptive nature of such techniques, policymakers may intervene and either support the use of authentic ethical attributes designed and attributed to the product by independent third parties, or consider increasing the regulation regarding the use of brand-designed ethical attributes that do not correspond to reality.

### 5.3 | Limitations and future research

As with every research, some limitations and subsequent avenues for further research may be highlighted. First, this research focused on product ratings coming from experts. Although our theoretical framework could also be applied to consumer ratings (such as *Trippadvisor* ratings), the effects could vary due to factors such as social influence. In addition, it is less clear whether consumer ratings account for the ethicality of the product, whereas in the expert ratings we used, we explicitly mentioned the underlying criteria of the ratings (which did not include ethicality). Nonetheless, further exploration of ethical attributes and consumer ratings provide interesting future research potential. Also, product ratings represent only one major cue of product quality. Future research could investigate other quality cues and test whether the interaction effect of quality and ethical attribute replicates.

Future research could also test whether the effect of ethical attributes for low-rated products differ based on whether consumers perceive the source of the ethical attribute as an independent third-party certification company or the brand. Previous research shows that consumers easily engage in attributional processes in response to product quality perceptions (D. Laufer & Gillespie, 2004; Lei, Dawar, & Gürhan-Canli, 2012). The increase in warm-glow feelings and evaluations shown in our studies might therefore vary when the ethical attribute is perceived to be designed by the brand itself.

Further, the two empirical studies presented in this research used quantitative product ratings. However, product quality may not only be assessed through ratings but also through reviews. To this regard, Archak, Ghose, and Ipeiritos (2011) suggest that the text provided in product reviews might represent an important determinant of consumers' evaluations. Hence, further research could investigate whether the current results replicate with poorly reviewed products instead of poorly rated products.

Finally, this research limits the outcome under study to product evaluations. Further research could examine whether a low-rated product with an ethical attribute also benefits from the “benevolent halo of corporate social responsibility,” whereby products associated with prosocial activities are perceived as performing better (Chernev & Blair, 2015). In that case, ethical attributes may contribute to the perceived overall performance of the product.

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### CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX A: STIMULI USED IN STUDY 1

Condition higher ratings, ethical attribute:



**Expert ratings**

★★★★★

Based on comfort, design features and how the fabric holds shape

<b>Brand</b>	Trevo - guaranteed child labour free
<b>Product description</b>	T-shirt, Regular fit, Crew neck, Short sleeve, Collarless, Unisex
<b>Sizes available</b>	XS S M L XL 2XL
<b>Colours available</b>	Black, Grey, Blue, White, Pink, Green
<b>Composition</b>	100% cotton
<b>Responsibility</b>	Guaranteed child labour free <input checked="" type="checkbox"/>
<b>Care</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Wash at 40°C delicate</li> <li><input checked="" type="checkbox"/> Do not bleach</li> <li><input type="checkbox"/> Tumble dry medium temperature</li> <li><input type="checkbox"/> Iron at low temperature</li> <li><input checked="" type="checkbox"/> Do not dry clean</li> </ul>

Condition low ratings, utilitarian attribute:



**Expert ratings**

★★★☆☆

Based on comfort, design features and how the fabric holds shape

<b>Brand</b>	Trevo - extra fade resistant fabric
<b>Product description</b>	T-shirt, Regular fit, Crew neck, Short sleeve, Collarless, Unisex
<b>Sizes available</b>	XS S M L XL 2XL
<b>Colours available</b>	Black, Grey, Blue, White, Pink, Green
<b>Composition</b>	100% cotton
<b>No fade</b>	Extra fade resistant fabric <input checked="" type="checkbox"/>
<b>Care</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Wash at 40°C delicate</li> <li><input checked="" type="checkbox"/> Do not bleach</li> <li><input type="checkbox"/> Tumble dry medium temperature</li> <li><input type="checkbox"/> Iron at low temperature</li> <li><input checked="" type="checkbox"/> Do not dry clean</li> </ul>

APPENDIX B: STIMULI USED IN STUDY 2

Page 1: Manipulation of the attribute condition through product packaging (attribute on the product), reinforced through an advertisement

Ethical attribute condition (EcoConscious):



Utilitarian attribute condition (Water resistant):




No attribute condition:



Page 2: Manipulation of product ratings through consumer reports.

Low product ratings (here with utilitarian attribute):



**Overall score**  
**5**

Daylong  
Ultra 30  
Sunscreen Lotion

5 | 95

Poor Fair Good Very Good Excellent

**Ratings**

UVA	5
SPF	5
Type	Lotion
Cost per oz. (\$)	3.20


**About**

The Daylong Ultra 30 is part of the Sunscreen test program at Consumer Reports. In our lab tests, Sunscreen models like the Daylong Ultra 30 are rated on multiple criteria, such as those listed below. The worst score of our Sunscreen test program was 5 and the best 95.

**UVA:** The level of protection against UVA radiation

**SPF:** Level of protection against UVB radiation. Score based on the product's measured SPF.

Higher product ratings (here with ethical attribute):



**Overall score**  
**55**

Daylong  
Ultra 30  
Sunscreen Lotion

5 | 95

Poor Fair Good Very Good Excellent

**Ratings**

UVA	55
SPF	55
Type	Lotion
Cost per oz. (\$)	3.20

**About**

The Daylong Ultra 30 is part of the Sunscreen test program at Consumer Reports. In our lab tests, Sunscreen models like the Daylong Ultra 30 are rated on multiple criteria, such as those listed below. The worst score of our Sunscreen test program was 5 and the best 95.

**UVA:** The level of protection against UVA radiation

**SPF:** Level of protection against UVB radiation. Score based on the product's measured SPF.