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Sustainable Decisions Signal Sustainable Relationships: How Purchasing Decisions Affect Perceptions and Romantic Attraction

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ABSTRACT. In the pursuit of love, individuals strategically use luxury products to signal status and other attractive attributes. Might *eco-friendly* products also signal mate-relevant information? The current research examined inferences from eco-friendly purchases and how they predict perceived suitability for short- and long-term romantic relationships. Participants read descriptions of a stranger's eco-friendly or luxury purchase decisions, reported their perceptions of the purchaser, and indicated their potential romantic interest in the purchaser. The influence of the relative price of the chosen product was also investigated. Compared to luxury purchasers, eco-friendly purchasers were ascribed greater warmth, competence, and good partner traits, but less physical appeal, and they were preferred for long-term but not short-term relationships. The social costs and benefits of "going green" are discussed in light of their implications for environmental sustainability efforts.

Keywords: attraction, environment, evolutionary psychology, perceptions, pro-social behavior, sustainability

PEOPLE ARE MOTIVATED TO GAIN AN ACCURATE ASSESSMENT of potential romantic partners' dispositions, habits, and intentions, and they often use material purchases as clues for otherwise unobservable traits. Brand-named clothing is used as a sign for status and wealth (Nelissen & Meijers, 2011); pursuing extravagant material goods, like a new watch or ski jacket, is interpreted as a sign of selfishness or arrogance (Van Boven, Campbell, & Gilovich, 2010); and if men buy fancy cars, the women they flirt with assume they desire short-term relationships (Sundie et al., 2011).

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Luxury goods are not the only product choices that romantic partners may use to base impressions, however. The rising availability of a different class of products—resource-conserving, environmentally safe products—opens up the possibility that buyers of these goods are subject to spontaneous trait inferences as well (Yan & Yazdanifard, 2014). In a time when considerable attention is focused on global environmental problems like climate change, loss of natural resources, and pollution (e.g., Refsgaard et al., 2014), understanding perceptions of individuals who opt for environmentally conscious products is critical. If eco-friendly purchasers are viewed positively, environmental advocates could use these impressions to promote eco-friendly decisions; if eco-friendly purchasers are viewed negatively, this outcome could motivate a targeted intervention to reduce the stigma of “going green.” The current study tackles this issue by asking: what trait inferences are associated with choosing sustainable goods over luxury options, and how do they influence short-term and long-term romantic attraction?

Conspicuous Consumption and Romantic Interest

Current research on product choices and romantic attraction focuses largely on conspicuous consumption, or the purchase of expensive, luxury goods. Accumulating evidence supports the hypothesis that conspicuous consumption may be an evolved adaptation to sex-specific problems in mating (Griskevicius et al., 2007; Sundie et al., 2011). According to sexual selection theory (Trivers, 1972), sex-based biological differences require a greater minimum parental investment by females (e.g., gestation, nursing) than by males (i.e., contributing viable sperm). Such differences may explain the tendency for women to be choosier than men in their romantic partners and to pursue long-term relationships over short-term (Buss & Schmitt, 1993). As the choosier partner, women tend to favor men who exude status, wealth, and social dominance (i.e., indicators of resources; Kenrick, Sadalla, Groth, & Trost, 1990), health and attractiveness (i.e., markers for “good genes”; Gangestad & Simpson, 2000), and warm qualities (i.e., signs of willingness to share resources and engage in co-parenting; Fletcher, Tither, O’Loughlin, Friesen, & Overall, 2004; Miller, 2007). Meanwhile, men tend to prioritize women’s physical attractiveness and youth (i.e., signs of fertility; Buss, 1989; Buss & Schmitt, 1993). A theory of sexual selection also includes motivated competition within one’s sex for dominance on a trait preferred by the opposite sex (Buss, 1988). For instance, because women prefer men high in wealth and status, men may compete against each other to showcase wealth and status.

One way to showcase wealth and status may be conspicuous consumption because presumably, over-the-top spending is only possible when one has the means to afford it; conspicuous consumption therefore may operate as a costly signal of desirable mate qualities (Griskevicius et al., 2007; Nelissen & Meijers, 2011; Sundie et al., 2011). Costly signals are by definition difficult to fake, making them potentially reliable cues for otherwise challenging qualities to observe, such as an ability to provide resources (Miller, 2000; Zahavi, 1975). Evidence supports the idea that conspicuous consumption is a form of costly signaling, specifically in the short-term context. Men primed with a desire for short-term relationships—who are therefore motivated to strategically attract mates—are more apt to engage in conspicuous consumption (Sundie et al., 2011). Further, women perceive men who decide to buy luxury over non-luxury goods as more desirable short-term partners and as more interested in short-term versus long-term relationships (Sundie et al., 2011). The link between conspicuous consumption and perceived mate quality is furthered strengthened by evidence showing that women at peak fertility are particularly oriented toward status-signaling products (Lens, Driesmans, Pandelaere, & Janssens, 2012). Whereas women’s short-term interest

is sensitive to men's conspicuous consumption, their long-term interest is unaffected (Sundie et al., 2011); moreover, men's interests are unchanged by women's conspicuous consumption, although tentative evidence suggests that women who drive fancy cars are seen as more sexually unrestricted (Sundie et al., 2011). It seems conspicuous consumption is primarily a male strategy for pursuing short-term relationships.

Eco-Friendly Purchases and Romantic Interest

At the heart of costly signaling theory is sacrifice, the ability to endure costs without adverse effects to the self (Miller 2000; 2007). Like conspicuous consumption, pro-social behaviors may function as costly signals of mate quality. Supporting this possibility, men make larger contributions to public causes in the presence of an opposite-sex audience, particularly when she is attractive (Van Vugt & Iredale, 2013). Further, when primed with a mating motive, men engage in more heroic helping, and women increase their public benevolence (Griskevicius et al., 2007). These patterns suggest that men and women may use pro-social sacrifice in specific contexts to convey favorable mate qualities.

One type of pro-social sacrifice, environmental conservation, has received attention recently for its potential link to social status (Griskevicius, Tyber, & Bergh, 2010), a quality that women in particular value in potential partners (Shackelford, Schmitt, & Buss, 2005). Building on the concept of competitive altruism, in which status is gained through generosity (Hardy & Van Vugt, 2006), Griskevicius and colleagues (2010) showed that activating status motives in a public context increases individuals' preferences for eco-friendly products over equally priced luxury options. When they also manipulated the price of the eco-friendly options, the affordable eco-friendly product was preferred, unless status motives were activated, in which case participants preferred the expensive eco-friendly product. In other words, if price (i.e., cheapness) undermines an eco-friendly product's suggestion of cost-incurring abilities, it may not appeal to status-motivated individuals. These findings are consistent with the idea of *conspicuous conservation*: Status is conferred to those who make environmentally sustainable choices because those choices imply an ability to incur costs.

From the actor's perspective, the link between eco-friendly purchasing decisions and a desire to communicate status seems well established (Griskevicius et al., 2010), but we do not yet know how eco-friendly decisions are perceived, nor do we know how they influence romantic attraction. There is reason to suspect that inferences based on conspicuous conservation are multi-dimensional, composed not only of status but other mate-relevant information as well.

Qualities prioritized for long-term relationships, for example, may be tied to eco-friendly choices. People who buy "green" products tend to be knowledgeable (Schlegelmilch, Bohlen, & Diamantopoulos, 1996), so perceivers may ascribe competence, a highly desirable long-term trait (Li, Bailey, Kenrick, & Linsenmeier, 2002) to eco-friendly purchasers. People who engage in environmental conservation also tend to be highly agreeable (Milfont & Sibley, 2012), suggesting observers may perceive warmth from others' pro-environmental decisions. A host of desirable mate qualities distinct from status may be linked to eco-friendly purchasing, because such choices reflect doing one's part and self-sacrificing, which are preferred qualities in long-term partners (e.g., Regan, Levin, Sprecher, Christopher, & Gate, 2000).

Eco-friendly decisions may also suggest *less* physical attractiveness, because environmental engagement predicts pro-sociality (Kaiser & Byrka, 2011) and pro-sociality is inversely related to attractiveness (Takahashi, Yamagishi, Tanida, Kiyonari, & Kanazawa, 2006). Prosociality may

have evolved as an alternative mating strategy for individuals unsuccessful at securing short-term relationships, wherein “good genes” are readily inferred through appearance (Takahashi et al., 2006). This explains Takahashi and colleagues’ finding that physical attractiveness inversely predicts cooperation and research showing that for men, more testosterone and facial symmetry (linked to attractiveness and genetic quality) are associated with less cooperation (Sanchez-Pages & Turiegano, 2010). Perhaps choosing eco-friendly over luxury options, though pro-social, conveys less physical attractiveness.

A unique contribution of the current research is to test which traits are ascribed to eco-friendly purchasers and how these judgments motivate romantic interest. Potential romantic interest likely varies by relationship type, as relationships can range from casual, short-term sexual affairs to long-term committed partnerships. When considering short-term partners, both men and women prioritize physical attractiveness at the expense of other characteristics (e.g., status, kindness; Li & Kenrick, 2006). This finding suggests that inferences of (less) attractiveness from eco-friendly purchases may predict (less) short-term romantic interest. For long-term partners, women value social status and resources, men prioritize physical attractiveness, and both men and women value warmth, kindness, and intelligence (Li et al., 2002; Shackelford et al., 2005). Indeed, both men and women rank the qualities of warmth and kindness above earning capacity when evaluating potential long-term partners (Buss & Barnes, 1986). These patterns suggest that in the long-term context, the extent to which eco-friendly decisions communicate competence, warmth, status (for women primarily), more physical attractiveness (especially for men), and favorable partner qualities, the more pro-environmental decisions may predict long-term interest.

Current Study

The current study (a) investigated the effect of choosing eco-friendly versus luxury options on mate-relevant dispositional inferences and (b) examined how these perceptions predicted short-term and long-term attraction. Drawing from costly signaling theory (Grafen, 1990; Zahavi, 1975) and building on conspicuous consumption and conspicuous conservation research (Griskevicius et al., 2010; Sundie et al., 2010), we predicted that choosing eco-friendly over luxury would convey not only status, but other qualities as well. More specifically, we expected that eco-friendly purchases would convey status and social dominance when the eco-friendly item was equally or more expensive than the luxury good, and that eco-friendly purchases at any price could convey additional qualities, including competence, warmth, and traits valued in a long-term partner (e.g., responsibility, generosity). Such predictions rest on the notion that equally or more expensive (but not less expensive) eco-friendly purchases serve as costly-signals for status, but that, regardless of their expense, sacrificing the convenience of a luxury item or prioritizing a product that benefits the environment may occur primarily when someone has specific favorable relationship qualities like warmth or competence. We further predicted that eco-friendly choices would stimulate long-term romantic interest to the extent that they communicate the above qualities.

For short-term relationships, both men and women prioritize physical attractiveness (Li & Kendrick, 2006), and pro-social behaviors have been associated with less physical attractiveness (Takahashi et al., 2006). Therefore, eco-friendly decisions may suggest less attractiveness than luxury purchases, and these eco-friendly decisions may predict less short-term interest for men and women. However, in addition to preferring attractive mates, women also prefer short-term

mates who are high status, so eco-friendly choices that are equally or more expensive than the luxury options may promote short-term attraction for women to the extent that they signal status.

The current study used a between-subjects experimental design to test the above predictions. Note that because the relative price of a purchase choice may influence the extent to which a behavior is really a “costly signal” (Griskevicius et al., 2010), we considered relative price as well. For instance, spending less could undermine the perceived sacrifice of purchasing an eco-friendly product, motivating our expectation that relative cost would influence the effect of purchase choice on perceived status and social dominance. In addition, conspicuous consumption is primarily a short-term mating strategy (Sundie et al., 2010), leading us to expect that spending more would predict more short-term interest. Because the ability to spend money (i.e., high social-economic status) is correlated with physical attractiveness (McClintock, 2014), we further hypothesized that spenders would be viewed as more attractive than savers. Finally, we predicted that saving money (i.e., choosing less expensive options) would produce perceptions of competence, warmth, and favorable internal long-term mate qualities.

METHODS

Participants

We restricted our original sample of 813 participants to those who correctly answered the straightforward attention check question (i.e., “If you are reading this question, choose number 7”; $n = 633$) and then to those who correctly identified basic features of the target’s purchase (i.e., product and relative cost) in a set of simple recall questions ($n = 582$). Because the study required attraction judgments about an opposite-sex target, we further limited our analyses to include only heterosexual participants, resulting in a final sample of 531 participants (336 female; $M_{\text{age}} = 33.21$, $SD = 12.89$). Most of our sample (87.40%) was recruited through Mechanical Turk (MTurk), an online labor market place hosted by Amazon.com, and were compensated with a nominal fee (\$0.25). The remainder of our sample completed the study for course credit at a Mid-Atlantic Jesuit university.

Participants were native English speakers (97.70%), most of whom either completed high school (17.89%), some college/university education (31.64%), or had an Associate’s or Bachelor’s degree (36.70%). Income varied, with 47.60% indicating an expected salary of less than 25K, 16.80% between 25K and 40K, 10.40% between 40K and 50K, and 12.80% between 50K and 75K. The majority of our sample identified as White/Caucasian (78.00%) or Black/African-American (8.90%). Most participants were married (31.60%), single (30.70%), or dating (26.40%). To control for pre-existing habits of environmental conservatism while limiting participant awareness of the study’s goals, we included a general item gauging personal conservation behavior drawn from the brief Environmental Attitudes Inventory (Milfont & Duckitt, 2010): “Whenever possible, I try to save natural resources.” This item is the only positively-worded statement used by Milfont and Duckitt to capture the core dimension of environmentalism linked to conservation in everyday behavior. Participants were generally oriented towards resource conservation ($M = 5.23$, $SD = 1.36$), and reported taking the survey seriously (1–7 scale; $M = 6.50$, $SD = 0.74$).

Materials

This study used a 2 (gender: male or female) \times 2 (choice: eco-friendly or luxury) \times 3 (price: relatively less, equal to, or relatively more expensive than the alternative) between-subjects experimental design to investigate the effect of sustainable decision-making on person perception. The experimental stimuli consisted of descriptions of two purchasing decisions (for a car and a dishwasher) made by an available, opposite-sex target. All other details about the target (e.g., dress, physical characteristics, non-verbal behaviors) were intentionally omitted. In each case, the target decided between two options: an eco-friendly (sustainable) option or a luxury (non-sustainable) option, and participants were shown the monetary cost of each option. The options and their descriptions were consistent with those used by Griskevicius and colleagues (2010). Options were manufactured by the same company, with the eco-friendly items described as energy conserving and made of environmentally friendly materials; the luxury options were lavish and high-performing with extravagant, rather than green, features. For each participant, the target made the same choices (eco-friendly or luxury; relatively more, same, or less expensive) for both the car and dishwasher decisions. Participants were randomly assigned to the eco-friendly choice that was less ($n = 89$), equally as ($n = 80$), or more expensive ($n = 90$) than the luxury option, or the luxury choice that less ($n = 90$), equally as ($n = 94$), or more expensive ($n = 98$) than the eco-friendly option.

Measures

Personality. Participants rated the target's competence, warmth, and status on a scale of 1 (not at all) to 7 (extremely) using Cuddy and colleagues (2009) 10-item measure. We computed separate total scores for competence ($M = 5.30$, $SD = 0.96$, $\alpha = .86$), warmth ($M = 4.83$, $SD = 1.20$, $\alpha = .94$), and status ($M = 5.46$, $SD = 1.196$, $\alpha = .73$).

Desirable mate characteristics. The Mate Value Inventory (MVI; Kirsner, Figueredo, & Jacobs, 2003) is generally used to measure how individuals perceive their own mate value, but in the current study, participants judged the mate value of the target. They indicated the extent to which 17 attributes (e.g., ambitious, desires children) apply to the target, using a scale from 1 (extremely low on this trait) to 7 (extremely high on this trait). Targets were perceived as having desirable mate characteristics ($M = 4.96$, $SD = 0.75$, $\alpha = .94$). Edlund and Sagarin (2010) emphasized the potential for a composite MVI score to obscure the underlying dimensionality of perceived mate value. We therefore used factor analysis with varimax rotation to reveal three factors, which we labeled *good partner traits* (8 items; e.g., faithful to partner, responsible, generous; $\alpha = .90$), *social dominance* (4 items; i.e., ambitious, financially secure, independent, intelligent; $\alpha = .74$), and *physical appeal* (3 items; i.e., attractive body, attractive face, enthusiastic about sex; $\alpha = .82$). These three factors were retained because they had eigenvalues of greater than 1, and together they accounted for 63.7% of the variance. Two items, "healthy" and "sociable," did not load clearly on one factor and were excluded from analysis. The final subscales are theoretically consistent with the idea that there are differentiable components of mate value including sociality, good parenting traits, and physical attractiveness (Fisher, Cox, Bennet, & Gavric, 2008).

Relationship potential. Participants were asked to indicate their interest on a scale of 1 (*not at all interested*) to 7 (*extremely interested*) in a short-term sexual relationship ($M = 3.72$, $SD = 1.97$), and long-term relationship ($M = 4.07$, $SD = 1.72$) with the target. This one-item approach has been used successfully in past research to capture short-term and long-term attraction (DiDonato, McIlwee, & Carlucci, 2014).

Procedure

Volunteers visited the study on Qualtrics. After providing their informed consent, participants were told they would learn about a target's recent purchase and would be asked to accurately guess aspects of that target's personality and provide their impressions. Approximately half of the participants first read about the car decision, then completed the relationship potential and personality measures in random order (26.18%) or the MVI (21.66%), then read the dishwasher decision, and then completed their remaining measures. The other half of the sample began with the dishwasher decision, completed the MVI (25.99%) or both the relationship potential and personality measures (47.83%), viewed the car decision and then completed their remaining measures. All participants were presented with demographic questions at the survey's conclusion, were thanked, debriefed, and compensated.

RESULTS

The current study examined the effect of eco-friendly versus luxury purchasing decisions on perceptions and romantic interest. Missing values were scarce (0.25%), judged as random, and managed using listwise deletion. Visual inspection showed that the primary dependent variables were sufficiently normal.

To test our primary predictions, we conducted a series of 2 (gender: male or female) \times 2 (choice: eco-friendly or luxury) \times 3 (relative price: less than, equal to, or more than) \times 2 (order: after the car or after the dishwasher) ANCOVAs, with personal conservation behavior as the covariate.¹ Order was included to control for the potential salience of the car decision over the dishwasher decision.² Correlations between the primary dependent measures are presented in Table 1, $M_r = .29$, and the primary ANCOVA results are presented in Table 2. Because relationship status can affect evaluations of alternative relationship partners (Lydon, Fitzsimmons, & Naidoo, 2003; Lydon, Meana, Sepinwall, Richards, & Mayman, 1999), analyses were repeated limiting the sample to single, heterosexual participants ($n = 191$, 75 male, 116 female). Results were largely consistent with those for the complete sample, supporting our use of the complete sample.³

Competence, Warmth, Status

Competence. Results of our factorial ANCOVAs are presented in Table 2. We hypothesized a main effect of purchase decision on competence, and consistent with this expectation, we observed that participants judged eco-friendly purchasers ($M = 5.45$, $SD = 0.86$) as more competent than luxury purchasers, ($M = 5.30$, $SD = 0.96$). We expected that savers would be seen as more competent, but a gender-price interaction on competence revealed a more refined pattern.

TABLE 1
Correlations Among Constructs

	1	2	3	4	5	6	7	8
Attraction								
1. Short-term								
2. Long-term	.37**							
Personality								
3. Competence	.08	.37**						
4. Warmth	.20**	.59**	.59**					
5. Status	.10*	.34**	.59**	.45**				
Mate Value								
6. Good partner traits	.16**	.57**	.47**	.71**	.43**			
7. Social dominance	.04	.22**	.54**	.36**	.55**	.50**		
8. Physical appeal	.19**	.15**	.29**	.18**	.20**	.24**	.45**	
Conservation behavior	-.10*	.09*	.20*	.11*	-.01	.07	.11*	.09*

Note. * $p < .05$, ** $p < .001$.

Women did not use price as a competence cue ($M_{\text{savers}} = 5.29$, $SD = 1.08$; $M_{\text{spenders}} = 5.37$, $SD = 0.95$), $F(2, 499) = .13$, $p = .875$, whereas men inferred greater competence from savers ($M = 5.46$, $SD = 0.76$) versus spenders ($M = 5.00$, $SD = 1.13$), $F(2, 499) = 5.08$, $p = .007$, $\eta^2 = .02$.

Warmth. Like competence, we expected and observed that participants would attribute more warmth to the eco-friendly purchaser ($M = 5.25$, $SD = 1.06$) than the luxury purchaser ($M = 4.42$, $SD = 1.19$). A gender-choice interaction on warmth showed that both men and women attributed more warmth to the eco-friendly purchaser than the luxury purchaser, but the effect was stronger for women ($M_{\text{eco}} = 5.44$, $SD = 1.07$; $M_{\text{lux}} = 4.32$, $SD = 1.18$), $F(1, 496) = 71.20$, $p < .001$, $\eta^2 = .13$, than for men ($M_{\text{eco}} = 5.24$, $SD = 1.04$; $M_{\text{lux}} = 4.61$, $SD = 1.18$), $F(1, 496) = 10.13$, $p < .001$, $\eta^2 = .02$. Looking at relative cost, as anticipated, participants viewed targets who chose the more affordable options as warmer ($M = 5.15$, $SD = 1.06$) than those who chose the more expensive options ($M = 4.68$, $SD = 1.25$).

Status. Following conspicuous conservation, we predicted that eco-friendly purchasers would be perceived as having higher status than luxury purchasers when eco-friendly goods were equally or more expensive, and that participants would view spenders as having higher status than savers. Although we observed a main effect for purchase decisions wherein eco-friendly purchasers ($M = 5.82$, $SD = 0.97$) generated stronger inferences of status than luxury purchasers ($M = 5.12$, $SD = 1.22$), the predicted interaction did not emerge. In addition, participants trended toward but did not infer more status from the decision to purchase expensive options ($M = 5.62$, $SD = 1.17$) compared to inexpensive options ($M = 5.31$, $SD = 1.22$).

Desirable Mate Characteristics

Good partner traits. Evidence supported our hypothesis that participants would judge eco-friendly purchasers as having more good partner traits ($M = 5.07$, $SD = 0.79$) than luxury purchasers ($M = 4.25$, $SD = 0.95$). We also observed the expected main effect of price such that targets who chose affordable options ($M = 4.84$, $SD = 0.86$) were perceived as having more good partner traits than targets who chose more expensive items ($M = 4.54$, $SD = 0.98$).

TABLE 2
ANCOVA Results

	(df)	Personality characteristics			Mate value			Attraction	
		Competence	Warmth	Status	Good partner	Social dominance	Physical appeal	Short-term attraction	Long-term attraction
Choice	1	12.28** (.02)	58.6** (.11)	47.28* (.09)	97.66** (.16)	4.69* (.01)	11.17* (.02)	0.66 (.00)	45.49** (.08)
Price	2	2.51+ (.01)	10.45** (.04)	2.31+ (.01)	6.25* (.02)	6.69* (.03)	2.12 (.01)	0.87 (.00)	12.87** (.05)
Gender	1	3.02+ (.01)	3.40+ (.01)	0.67 (.00)	0.02 (.00)	3.56+ (.01)	0.89 (.00)	96.87** (.16)	12.29** (.02)
Choice*Price	1	0.25 (.00)	0.75 (.00)	1.20 (.01)	0.16 (.00)	2.94+ (.01)	4.95* (.02)	3.83* (.02)	0.12 (.00)
Choice*Gender	1	2.47 (.01)	6.74* (.01)	0.13 (.00)	3.43+ (.01)	0.01 (.00)	0.00 (.00)	2.12 (.00)	2.24 (.00)
Choice*Order	1	0.06 (.00)	5.68* (.01)	1.25 (.00)	1.24 (.00)	0.41 (.00)	3.27+ (.01)	3.84+ (.01)	5.87* (.01)
Price*Gender	2	3.76* (.02)	2.46+ (.01)	0.38 (.00)	1.80 (.01)	1.84 (.01)	0.86 (.00)	1.88 (.01)	1.81 (.01)
Choice*Price*Gender	2	1.20 (.01)	0.86 (.00)	0.13 (.00)	0.42 (.00)	0.09 (.00)	0.29 (.00)	0.88 (.00)	1.38 (.01)
Conservation	1	5.32* (.01)	8.51* (.02)	0.45 (.00)	4.38* (.01)	7.99* (.02)	4.47* (.01)	1.02 (.00)	7.29* (.01)
(Error df)		499	496	502	503	503	503	501	502

Note. *F*-statistics reported. η_p^2 presented in parentheses. + indicates $p < .10$, * $p < .05$, ** $p < .001$.

Social dominance. Contrary to predictions but consistent with the observed effects for status, we found a main effect of choice rather than an interaction between choice and relative cost on social dominance: eco-friendly purchasers ($M = 5.46$, $SD = 0.83$) were viewed as more socially dominant than luxury purchasers ($M = 5.31$, $SD = 0.94$). As hypothesized, targets who spent more money ($M = 5.54$, $SD = 0.92$) were perceived to have greater social dominance than targets who spent less ($M = 5.19$, $SD = 0.90$).

Physical appeal. We anticipated that luxury purchasers would be perceived as more physically appealing than eco-friendly purchasers; this anticipated effect was qualified by a choice-price interaction. When the chosen product was more expensive, buying the luxury product ($M = 5.35$, $SD = 0.91$) suggested greater physical appeal than buying the eco-friendly product ($M = 4.96$, $SD = 0.89$), $F(1, 503) = 6.56$, $p = .011$, $\eta^2 = .01$. Similarly, luxury purchasers ($M = 5.29$, $SD = 0.91$) were perceived as more physically appealing than eco-friendly purchasers ($M = 4.68$, $SD = 1.05$) when their options cost the same, $F(1, 503) = 13.31$, $p < .001$, $\eta^2 = .001$. Whether targets chose the eco-friendly ($M = 4.98$, $SD = 1.04$) or luxury item ($M = 4.96$, $SD = 0.93$) when it cost less than the alternative had no effect on perceived physical attractiveness $F(1, 503) = 0.29$, $p = .59$.

Romantic Interest

Results only partially supported our expectation that participants' short-term romantic interest would favor targets whose decisions communicated physical attractiveness (i.e., luxury choices) and status (i.e., spending money). We did not observe the expected main effects for choice or price, as shown in Table 2, but we did observe a choice-price interaction on short-term interest. When the chosen product was relatively more expensive ($M_{\text{eco}} = 4.04$, $SD = 2.00$; $M_{\text{lux}} = 4.05$, $SD = 2.26$), monetary cost appeared to be prioritized and product type did not influence short-term attraction, $F(1, 501) = 0.74$, $p = .389$. However, when the chosen product cost less than the alternative, cheapness may have undermined the potential effect of choosing a luxury purchase: luxury purchasers ($M = 3.61$, $SD = 2.01$) were viewed as less attractive for short-term relationships than eco-friendly purchasers ($M = 4.13$, $SD = 1.91$), $F(1, 501) = 7.60$, $p = .006$, $\eta^2 = .02$. Additionally, men ($M = 4.81$, $SD = 1.85$) reported greater interest in targets for short-term relationships than women ($M = 3.10$, $SD = 1.76$).

For long-term relationships, we expected participants to judge eco-friendly purchasers and savers as more viable partners than luxury purchasers and spenders. Supporting our prediction, eco-friendly purchasers ($M = 4.63$, $SD = 1.57$) were evaluated as more attractive long-term partners than luxury purchasers ($M = 3.58$, $SD = 1.72$). In addition, participants judged savers ($M = 4.57$, $SD = 1.63$) as more desirable long-term partners than spenders ($M = 3.72$, $SD = 1.73$). Finally, we observed an unanticipated effect of gender such that men ($M = 4.41$, $SD = 1.70$) reported more long-term interest than women ($M = 3.90$, $SD = 1.72$).

Exploring the Mediating Role of Perceptions

We then examined the extent to which person perceptions mediated the relation between purchase choice and attraction, separately for men and women. Following Preacher and Hayes (2008), we tested for mediation using bias-corrected and accelerated bootstrapping analysis using their SPSS macro. This approach has a number of advantages over alternative methods of testing for

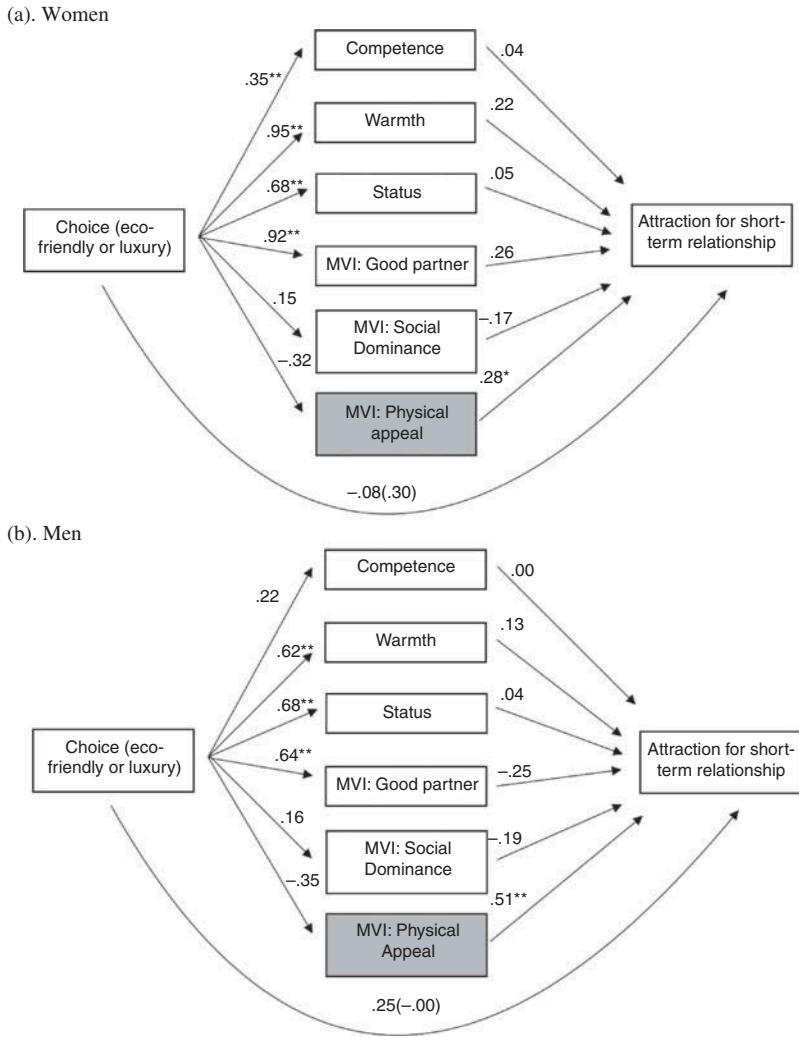


FIGURE 1 Testing personality and mate value mediators for short-term relationships. *Note.* Eco-friendly coded as 1, luxury as 0. Unstandardized coefficients presented. ** indicates $p < .001$, * indicates $p < .05$.

mediation: it allows for testing of multiple mediators simultaneously, makes no assumptions of normality, and reduces the problem of inflated Type 1 error (Preacher & Hayes, 2008).

We tested the models presented in Figure 1 and Figure 2, predicting short-term and long-term interest from eco-friendly (coded as 1) or luxury choices (coded as 0) using the proposed mediators of personality (competence, warmth, and status) and desirable mate characteristics (good partner traits, social dominance, and physical appeal). Results are shown in Table 3.

For women, the overall model predicting short-term attraction from choice was significant, $F(7, 320) = 5.47, p < .001, R^2 = .11$. The total effect of choice on short-term attraction was not

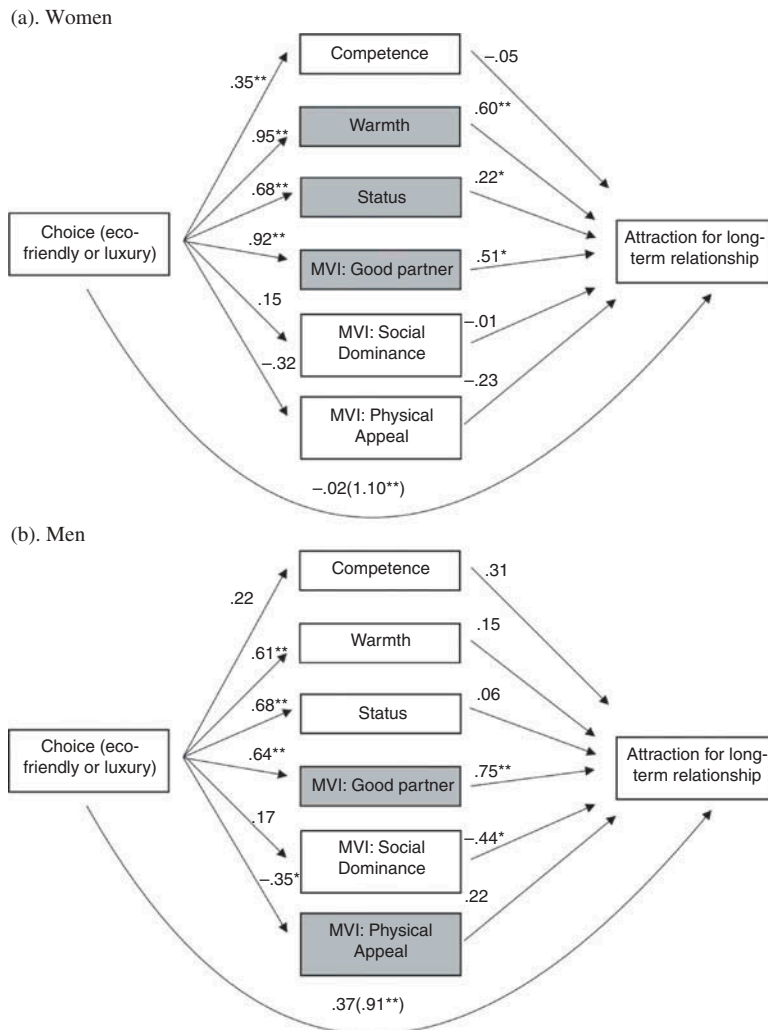


FIGURE 2 Testing personality and mate value mediators for long-term relationships. *Note.* Eco-friendly coded as 1, luxury as 0. Unstandardized coefficients presented. ** indicates $p < .001$, * indicates $p < .05$.

significant, $b = 0.29$ ($SE = 0.19$), $t = 1.53$, $p = .128$ (which is not a pre-requisite for mediation analysis; Hayes, 2009), nor was the direct effect, $b = -0.09$, ($SE = 0.22$), $t = -0.39$, $p = .698$. Bootstrapping analysis, however, revealed significant mediation through physical appeal. Eco-friendly choices were associated with less physical appeal, which in turn predicted less short-term attraction.

Men's short-term interest was not predicted by purchase choice, $b = -0.01$ ($SE = 0.27$), $t = -0.02$, $p = .981$, and the direct effect accounting for the mediators was likewise not significant, $b = 0.26$ ($SE = 0.31$), $t = 0.83$, $p = .410$. Indeed, the overall model which included the mediators

TABLE 3
Bootstrapping Results for Indirect Effects (Normal Theory Test Included)

	Women (n = 328)							
	Short-term relationship				Long-term relationship			
	Effect	SE	Z	CI	Effect	SE	Z	CI
Total indirect effect	0.38	0.14	2.79*	0.10–0.67	1.13	0.13	7.65**	0.88–1.39
Competence	0.02	0.05	0.31	–0.08–0.13	–0.02	0.04	–0.54	–0.11–0.05
Warmth	0.21	0.12	1.78	–.001–0.46	0.57	0.12	4.94**	0.35–0.84
Status	0.04	0.08	0.47	–0.12–0.19	0.15	0.07	2.36*	0.04–0.30
Good partner traits	0.24	0.14	1.68	–0.02–0.52	0.47	0.11	3.97**	0.27–0.69
Social dominance	–0.03	0.03	–0.89	–0.13–0.01	–0.03	0.03	–1.20	–0.13–.003
Physical appeal	–0.09	0.04	–1.96	–0.21– –0.02	0.002	0.03	0.08	–0.06–0.07

	Men (n = 192)							
	Short-term relationship				Long-term relationship			
	Effect	SE	Z	CI	Effect	SE	Z	CI
Total indirect effect	–0.67	0.20	–1.47	–0.67–.12	0.54	0.20	2.90*	0.13–0.92
Competence	0.00	0.06	0.003	–0.14–0.12	0.07	0.06	1.26	–0.01–0.28
Warmth	0.08	0.14	0.71	–0.16–0.42	0.10	0.12	1.11	–0.10–0.36
Status	0.03	0.11	0.24	–0.18–0.27	0.04	0.08	1.11	–0.13–0.26
Good partner traits	–0.16	0.19	–1.08	–0.58–0.17	0.48	0.15	3.30**	0.24–0.84
Social dominance	–0.03	0.05	–0.78	–0.19–0.23	–0.08	0.07	–1.20	–0.25–0.02
Physical appeal	–0.18	0.10	–1.95	–0.42– –0.03	–0.08	0.06	–1.53	–0.24– –.001

Note. Effects, standard errors (SE), and confidence intervals (CI) were produced using bootstrapping. Significant mediators (CI excludes zero) are italicized. The normal theory test (Z) is included. * $p < .05$, ** $p < .001$.

did not account for a significant portion of variance in short-term interest, $F(7, 184) = 1.71$, $p = .11$, $R^2 = .06$. This was supported by a non-significant total indirect effect of eco-friendly decisions on short-term interest revealed via bootstrapping analysis. Perceived physical appeal, however, did serve as an independent mediator. Eco-friendly decisions prompted judgments of less physical appeal which corresponded with less short-term attraction.

Predicting long-term attraction, the overall model for women was significant, $F(7, 320) = 39.86$, $p < .001$, $R^2 = .47$. The initial path from choice to long-term interest, $b = 1.10$ ($SE = 0.18$), $t = 6.13$, $p < .001$, was no longer significant when the mediators were included, $b = -0.02$ ($SE = 0.17$), $t = -0.14$, $p = .888$. Bootstrapping analysis revealed a significant total indirect effect of eco-friendly decisions on long-term attraction, with warmth, status, and good partner traits as significant mediators. Choosing eco-friendly predicted greater perceived warmth, status, and more good partner traits, which then predicted greater long-term interest.

For men, the overall model depicted in Figure 2 was significant, $F(7, 184) = 15.72$, $p < .001$, accounting for 37% of the variance in long-term interest. Inclusion of the mediators reduced the initial path, $b = 0.91$ ($SE = 0.23$), $t = 3.82$, $p < .001$, to non-significance, $b = 0.37$ ($SE = 0.24$), $t = 1.58$, $p = .117$. Bootstrapping showed a significant joint indirect effect of the mediators, with

good partner traits and physical appeal both serving as partial mediators. Eco-friendly decisions were perceived as having more good partner traits, which predicted greater long-term interest; however, such decisions also predicted less physical appeal which inversely predicted long-term interest.

To evaluate the proposed models (which suggest dispositional inferences mediate the path from purchase decision to romantic interest), we tested alternative, reverse models for men and women. Specifically, we considered the possibility that romantic interest (i.e., long-term and short-term interest) could mediate the path from purchase decision (eco-friendly = 1; luxury = 0) to person judgments (e.g., competence, warmth, status). Separate models were used to test each person judgment as an outcome. This sequence has less theoretical support from a decision-making perspective (Sritharan, Heilpern, Wilbur, & Gawronski, 2010) but offers a plausible path for social judgments following purchase choices. Bootstrapping analysis revealed that the alternative overall models, for both men and women, were each significant, $ps < .05$. Short-term interest did not mediate the association between choice and any of the inferred characteristics for either women or men (indirect effect $ps > .10$); however, long-term interest mediated the path from choice to each of the inferred characteristics (indirect $ps < .05$). Despite its weaker theoretical grounding, based on this supplementary analysis, we cannot rule out the possibility that eco-friendly purchases trigger long-term interest which then facilitates favorable impressions of the target.

DISCUSSION

When evaluating a stranger, perhaps not only eyes but also “buys” are windows to the soul. Public purchasing decisions, from solar powered ovens to Lamborghinis, are used by motivated individuals to convey specific impressions (e.g., Griskevicius et al., 2007; 2010; Sundie, et al., 2011). The current experiment investigated strangers’ perceptions of and attraction to individuals who purchased eco-friendly versus luxury products, and did so while controlling for relative cost. Previous research has shown that both conspicuous consumption and conspicuous conservation can result from status seeking (Griskevicius et al., 2007; 2010); the present study demonstrates that observers attribute status, as well as other positive characteristics, to eco-friendly purchasers and that pro-environmentalists are preferred for long-term, but not short-term, romantic relationships.

Consistent with research showing that status motivation begets conspicuous conservation (Griskevicius et al., 2010), participants perceived eco-friendly purchasers as having higher status and greater social dominance than luxury purchasers. This effect extends Griskevicius and colleagues’ (2010) within-buyer link to suggest that *observers* equate “going green” with status, and they seem to do so independently of the relative cost of purchasing options. The self-sacrifice inherent in eco-friendly choices may convey more social collateral than choosing convenient, luxury products, regardless of their relative monetary expense. Indeed, while browsers often say they value a product’s instrumentality over the impressions it might convey, actual intention to buy is linked to a product’s status and positive identity signals more strongly than its functionality (Noppers, Keizer, Bolderdijk, & Steg, 2014). In other words, buyers sacrifice function for perceived status and social dominance, and our study reveals that observers are sensitive to

this trade, inferring more status and social dominance from those who chose lower quality, but environmentally friendly, products.

The findings also revealed the expected costly-signaling benefits of lavish spending for status and social dominance. Buying the more expensive choice (i.e., conspicuous consumption) led to greater attributions of social dominance and marginally higher attributions of status than choosing the less expensive option. These results correspond to previous work linking status motives to eco-friendly decisions (Griskevicius et al., 2010), but suggest observers view price independently from product choice when inferring status and social dominance.

In addition to extending the link between eco-friendly purchases and status, this study revealed a connection between eco-friendly buying and a myriad of other positive mate-relevant traits. As predicted, eco-friendly purchasers were viewed as more competent, reflecting a generally accepted idea that it is a responsible choice to conserve resources. The attribution of competence was especially evident when individuals made eco-friendly car purchases (versus dishwasher), and when the buyers were men (judged by women). Perhaps buying an eco-friendly car versus a dishwasher signaled more competence because of cars' relatively larger environmental impact or because of the substantially reduced future costs (e.g., gas money) of owning a hybrid model. While we controlled for initial expense, we did not control for perceived long-term cost, which future research might consider.

Eco-friendly purchasers were also evaluated as warmer than luxury buyers, which is consistent with evidence showing that eco-friendly purchasers are viewed as more cooperative, altruistic, and ethical (Mazar & Zhong, 2010). Eco-friendly product choices can be seen as pro-social, and thus, individuals who "go green" may be expected to be warm, generous, and trustworthy across contexts, including in romantic contexts. Given the observed link between eco-friendly choices and warmth, it makes sense that we also observed judgments of more good partner traits for the eco-friendly purchasers relative to the luxury purchasers. Good partner traits correlated strongly with perceptions of warmth and competence, reflecting a tendency for people to prefer kind and responsible partners.

Perceptions of warmth, competence, and good partner traits were also predicted by the relative price of the chosen product. Individuals who chose to spend less were viewed as warmer, more competent, and as possessing more good partner traits. At first blush, this finding appears contrary to ideas of conspicuous consumption, which purport that showy spending, not saving, would predict attraction (Miller, 2000). Individuals, however, tend to pair off with partners who have opposing spending habits (Rick, Small, & Finkel, 2011). Perhaps good partner traits are inferred from fiscal conservation because one partner's saving enables the other partner's spending. Such an arrangement would be possible in a long-term partnership, the same context that values warmth, competence, and good partner traits.

Despite general positivity, not all traits inferred from eco-friendly purchasing were positive: eco-friendly purchasers were viewed as less physically appealing than luxury purchasers. This result corresponds well with evidence showing that pro-sociality is correlated with less physical attraction (Sanchez-Pages & Turiegano, 2010). Perhaps those who choose to incur the costs associated with eco-friendly goods may inadvertently suggest that they need to take this approach because they cannot rely on their physical attractiveness to attract a partner (Takahashi et al., 2006). The idea that eco-friendly decisions can be interpreted as evidence for both positive (e.g., warmth, status) and negative (i.e., less physical appeal) characteristics underscores the

sophistication of person perception and the trade-offs that individuals might make in the eyes of the beholder when they choose environmentally sustainable products.

One of the study's primary contributions is the connection it documented between individuals' eco-friendly choices and observers' preferences for short- and long-term relationships. Within the short-term context, our predictions received mixed support: luxury purchasers were not universally favored, and relative price did not directly influence short-term interest. Contrary to expectations, when targets chose the cheaper product, the eco-friendly purchaser was viewed as more viable for a short-term relationship than the luxury purchaser. Perhaps in the other price contexts, choosing luxury or eco-friendly was equally demonstrative of costly signaling. In the former case (luxury choice), the choice could be an instance of conspicuous consumption, whereas in the latter case (eco-friendly choice), the choice could be an instance of conspicuous conservation. Both of these choices involve sacrifice and can be considered costly signaling (Griskevicius et al., 2010). Perhaps choosing luxury when it is the cheapest option predicted less short-term interest than "going green," because of concerns that the target was attempting to "fake" wealth. Such presumptions would undermine the costly signaling benefits of luxury purchases.

We expected any effect of purchase choice on short-term attraction to be mediated by attributions of physical appeal because physical attractiveness is important in casual relationships (e.g., Buss, 1988). Indeed, when testing our proposed model for men and women, physical appeal was a significant independent mediator: eco-friendly buyers were attributed less physical appeal than luxury buyers, and thus, the eco-friendly buyers were less desired for short-term relationships. This finding illuminates one reason why it may be difficult to encourage individuals to switch to eco-friendly products. Individuals seeking short-term mating opportunities may be unwilling to opt for a pro-social choice that could undermine their physical appeal. The data are consistent with the idea that judgments of romantic interest may build on other judgments (e.g., physical appeal) formed from behaviors; the alternative model, suggesting interest precedes person judgments, did not receive support.

Our study revealed that both men and women were more interested in pursuing long-term relationships with eco-friendly purchasers than luxury purchasers. Results suggest that sustainable purchasing decisions were interpreted as indicative of qualities beneficial to a sustainable partnership. In our proposed mediation models, for women, long-term interest was partially explained by attributions of warmth, status, and good partner traits. For men, the effect was mediated solely by good partner traits. These models correspond with current knowledge of person perception, which emphasizes the speed of dispositional judgments (Willis & Todorov, 2006) and the complexity of higher-level judgments, such as assessing romantic interest. Complex decision making, such as judging romantic potential, generally requires information integration and a deliberate consideration of one's choices against one's subjective interests (Sritharan et al., 2010). Therefore, although the alternative models offered support for the possibility that romantic interest mediates the association between product choices and personality judgments, the proposed model better reflects current knowledge of spontaneous trait influence. Nonetheless, inherent in both models is a critical point: choosing a long-term partner is a high-stakes game for both men and women, and both pro-environmentalism and choosing affordable options may contribute to perceptions that matter in relationship formation.

Indeed, the observed link between eco-friendly choices and long-term interest suggests that a prospect's "green" habits may be of more interest to potential partners than generally believed. Further, the current study would suggest that suitors seeking a long-term partner might

strategically showcase their eco-friendly orientation, or at minimum, should be aware that how they interact with the environment may be interpreted through a broader lens by potential partners. The cluster of traits linked to habits of conservation, both environmental and financial, may communicate not only the ability to provide resources, but favorable child-rearing and co-parenting qualities as well, which are highly valued in long-term partners (e.g., Li et al., 2002).

Choosing an eco-friendly alternative, when one is available and affordable, is a practical way to protect the environment. Other authors have speculated on why individuals do not make eco-friendly choices (e.g., people are selfish, now-focused, not motivated towards sacrifice without external rewards; Griskevicius, Cantu, & van Vugt, 2012). In the current article, we have demonstrated that eco-friendly purchasers are ascribed primarily positive traits and are preferred for long-term romantic relationships compared to luxury purchasers. These positive attributions and the related romantic interest may provide sufficient external rewards to motivate eco-friendly purchase choices for individuals unmotivated by environmental reasons.

Several limitations about this study should be noted. First, this study's cross-sectional design required participants to report their impressions of the target and their romantic interest at the same time. Therefore, although we assumed that dispositional attributions of the target predicted relationship preferences, an alternative model for long-term attraction was supported, if theoretically less likely. We might note that a bi-directional influence of person judgments and romantic interest is also possible. Longitudinal research would clarify these relations. Second, we used one-item measures for both short-term and long-term attraction following previous research (DiDonato et al., 2014), but future research might consider a multi-item measure to improve measure sensitivity and reliability. Third, we did not manipulate the public-ness of the purchase. Perhaps whether the buyer knew the purchase could be observed (or not) affects the strength of attributes inferred (i.e., was the decision authentic or self-serving?). We also did not manipulate mating motive, but relationship status did not influence judgments, suggesting mating motivation may be relevant only for actors, not observers. Finally, we focused on two types of eco-friendly choices and assessed one set of dispositional traits. Future research should investigate whether other eco-friendly choices (e.g., recycling, growing produce) predict similar attributions and whether eco-friendly choices lead to other important attributions (e.g., Big 5 personality traits, parenting quality).

In sum, this study provides evidence that, with the exception of physical attractiveness, strangers spontaneously ascribe positive traits to eco-friendly purchasers, consistent with the idea of conspicuous conservation. In turn, inferences of not only status, but also warmth, competence, and good partner traits may predict long-term relationship interest, underscoring the potential romantic benefits of "going green."

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NOTES

1. The covariate of resource conservation significantly predicted all outcomes except status and short-term attraction.

2. Order (i.e., car or dishwasher purchase) interacted with eco-friendly or luxury choice to predict both warmth and long-term attraction. In both cases, the hypothesized effect of choice was maintained but accentuated for car decisions. Specifically, eco-friendly car decisions led to greater perceptions of warmth and long-term attraction than eco-friendly dishwasher decisions.
3. Consistent with the full sample, eco-friendly purchasers were preferred for long-term relationships and were attributed greater competence, warmth, status, and good partner traits compared to luxury purchasers, while luxury purchasers were attributed greater physical attractiveness than eco-friendly purchasers. Likewise, eco-friendly purchasers were still preferred for short-term relationships when the chosen product cost less. A variant of our finding for the full sample (wherein we observed two main effects), for the sample of single individuals, eco-friendly purchasers were perceived as more socially-dominant than luxury purchasers only when the chosen product was cheaper than the alternative. Other minor differences included a main effect of gender on warmth perception (single men inferred greater warmth than single women), no price \times gender interaction for competence, and when the chosen product was more expensive, single participants preferred luxury purchasers over eco-friendly purchasers for short-term relationships.

AUTHOR NOTES

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REFERENCES

- Buss, D. M. (1988). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology*, 54, 616–628. doi:10.1037/0022-3514.54.4.616
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12, 1–14. doi:10.1017/S0140525X00023992
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100, 204–232. doi:10.1037/0033-295X.100.2.204
- Cuddy, A. J., Fiske, S. T., Kwan, V. S., Glick, P., Demoulin, S., Leyens, J. P., . . . Ziegler, R. (2009). Stereotype content model across cultures: Towards universal similarities and some differences. *British Journal of Social Psychology*, 48(1), 1–33. doi:10.1348/014466608X314935
- DiDonato, T. E., McIlwee, L. J., & Carlucci, M. E. (2014). The fallout of forgiveness: How forgiveness predicts third-party perceptions of the forgiver and the forgiver's relationships. *Journal of Social and Personal Relationships*. Advance online publication. doi:10.1177/0265407514536291.
- Edlund, J. E., & Sagarin, B. J. (2010). Mate value and mate preferences: An investigation into decisions made with and without constraints. *Personality and Individual Differences*, 49, 835–839. doi:10.1016/j.paid.2010.07.004
- Fisher, M., Cox, A., Bennett, S., & Gavric, D. (2008). Components of self-perceived mate value. *Journal of Social, Environmental, and Cultural Psychology*, 2, 156–168. doi:10.1037/h0099347
- Fletcher, G. J., Tither, J. M., O'Loughlin, C., Friesen, M., & Overall, N. (2004). Warm and homely or cold and beautiful? Sex differences in trading off traits in mate selection. *Personality and Social Psychology Bulletin*, 30, 659–672. doi:10.1177/0146167203262847
- Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences*, 23, 573–587. doi:10.1017/S0140525X0000337X
- Grafen, A. (1990). Biological signals as handicaps. *Journal of Theoretical Biology*, 144, 517–546. doi:10.1016/S0022-5193(05)80088-8
- Griskevicius, V., Cantú, S. M., & van Vugt, M. (2012). The evolutionary bases for sustainable behavior: Implications for marketing, policy, and social entrepreneurship. *Journal of Public Policy and Marketing*, 31, 115–128. doi:10.1509/jppm.11.040
- Griskevicius, V., Tybur, J. M., Sundie, J. M., Cialdini, R. B., Miller, G. F., & Kenrick, D. T. (2007). Blatant benevolence and conspicuous consumption: When romantic motives elicit strategic costly signals. *Journal of Personality and Social Psychology*, 93, 85–102. doi:10.1037/0022-3514.93.1.85

- Griskevicius, V., Tybur, J. M., & Van den Bergh, B. (2010). Going green to be seen: Status, reputation, and conspicuous conservation. *Journal of Personality and Social Psychology*, 98(3), 392–404. doi:10.1037/a0017346
- Hardy, C. L., & Van Vugt, M. (2006). Nice guys finish first: The competitive altruism hypothesis. *Personality and Social Psychology Bulletin*, 32, 1402–1413. doi:10.1177/0146167206291006
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408–420. doi:10.1080/03637750903310360
- Kaiser, F. G., & Byrka, K. (2011). Environmentalism as a trait: Gauging people's pro-social personality in terms of environmental engagement. *International Journal of Psychology*, 46(1), 71–79. doi:10.1080/00207594.2010.516830
- Kenrick, D. T., Sadalla, E. K., Groth, G., & Trost, M. R. (1990). Evolution, traits, and the stages of human courtship: Qualifying the parental investment model. *Journal of Personality*, 58, 97–116. doi:10.1111/j.1467-6494.1990.tb00909.x
- Kirchner, B. R., Figueredo, A. J., & Jacobs, W. J. (2003). Self, friends, and lovers: Structural relations among Beck Depression Inventory scores and perceived mate values. *Journal of Affective Disorders*, 75, 131–148. doi:10.1016/S0165-0327(02)00048-4
- Lens, I., Driesmans, K., Pandelaere, M., & Janssens, K. (2012). Would male conspicuous consumption capture the female eye? Menstrual cycle effects on women's attention to status products. *Journal of Experimental Social Psychology*, 48, 346–349. doi:10.1016/j.jesp.2011.06.004
- Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeier, J. A. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology*, 82, 947–955. doi:10.1037//0022-3514.82.6.947
- Li, N. P., & Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social Psychology*, 90, 468–489. doi:10.1037/0022-3514.90.3.468
- Lydon, J. E., Fitzsimmons, G. M., & Naidoo, L. (2003). Devaluation versus enhancement of attractive alternatives: A critical test using the calibration paradigm. *Personality and Social Psychology Bulletin*, 29, 349–359. doi:10.1177/0146167202250202
- Lydon, J. E., Meana, M., Sepinwall, D., Richards, N., & Mayman, S. (1999). The commitment calibration hypothesis: When do people devalue attractive alternatives. *Personality and Social Psychology Bulletin*, 25, 152–161. doi:10.1177/0146167299025992002
- Mazar, N., & Zhong, C. B. (2010). Do green products make up better people? *Psychological Science*, 21, 494–498. doi:10.1177/0956797610363538
- McClintock, E. A. (2014). Beauty and status: The illusion of exchange in partner selection? *American Sociological Review*, 79, 575–604. doi:10.1177/0003122414536391
- Milfont, T. L., & Duckitt, J. (2010). The Environmental Attitudes Inventory: A valid and reliable measure to assess the structure of environmental attitudes. *Journal of Environmental Psychology*, 30, 80–94. doi:10.1016/j.jenvp.2009.09.001
- Milfont, T. L., & Sibley, C. G. (2012). The Big Five personality traits and environmental engagement: Associations at the individual and societal level. *Journal of Environmental Psychology*, 32(2), 187–195. doi:10.1016/j.jenvp.2011.12.006
- Miller, G. (2000). Mental traits as fitness indicators: Expanding evolutionary psychology's adaptationism. *Annals of the New York Academy of Sciences*, 907, 62–74. doi:10.1111/j.1749-6632.2000.tb06616.x
- Miller, G. F. (2007). Sexual selection for moral virtues. *The Quarterly Review of Biology*, 82, 97–125. doi:10.1086/517857
- Nelissen, R., & Meijers, M. H. (2011). Social benefits of luxury brands as costly signals of wealth and status. *Evolution and Human Behavior*, 32, 343–355. doi:10.1016/j.evolhumbehav.2010.12.002
- Noppers, E. H., Keizer, K., Bolderdijk, J. W., & Steg, L. (2014). The adoption of sustainable innovations: Driven by symbolic and environmental motives. *Global Environmental Change*, 25, 52–62. doi:10.1016/j.gloenvcha.2014.01.012
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879–891. doi:10.3758/BRM.40.3.879
- Refsgaard, J. C., Madsen, H., Andréassian, V., Arnbjerg-Nielsen, K., Davison, T. A., Drews, M., . . . Christensen, J. H. (2014). A framework for testing the ability of models to project climate change and its impacts. *Climatic Change*, 122, 271–282. doi:10.1007/s10584-013-0990-2
- Regan, P. C., Levin, L., Sprecher, S., Christopher, F. S., & Gate, R. (2000). Partner preferences: What characteristics do men and women desire in their short-term sexual and long-term romantic partners? *Journal of Psychology & Human Sexuality*, 12, 1–21. doi:10.1300/J056v12n03_01
- Rick, S. I., Small, D. A., & Finkel, E. J. (2011). Fatal (fiscal) attraction: Spendthrifts and tightwads in marriage. *Journal of Marketing Research*, 48, 228–237. doi:10.1509/jmkr.48.2.228

- Sanchez-Pages, S., & Turiegano, E. (2010). Testosterone, facial symmetry and cooperation in the prisoners' dilemma. *Physiology & Behavior*, 99, 355–361. doi:10.1016/j.physbeh.2009.11.013
- Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30, 35–55. doi:10.1108/03090569610118740
- Shackelford, T. K., Schmitt, D. P., & Buss, D. M. (2005). Universal dimensions of human mate preferences. *Personality and Individual Differences*, 39, 447–458. doi:10.1016/j.paid.2005.01.023
- Sritharan, R., Heilpern, K., Wilbur, C. J., & Gawronski, B. (2010). I think I like you: Spontaneous and deliberate evaluations of potential romantic partners in an online dating context. *European Journal of Social Psychology*, 40, 1062–1077. doi:10.1002/ejsp.703
- Sundie, J. M., Kenrick, D. T., Griskevicius, V., Tybur, J. M., Vohs, K. D., & Beal, D. J. (2011). Peacocks, porsches, and Thorstein Veblen: Conspicuous consumption as a sexual signaling system. *Journal of Personality and Social Psychology*, 100, 664–680. doi:10.1037/a0021669
- Takahashi, C., Yamagishi, T., Tanida, S., Kiyonari, T., & Kanazawa, S. (2006). Attractiveness and cooperation in social exchange. *Evolutionary Psychology*, 4, 315–329.
- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.) *Sexual selection and the descent of man: 1871–1971* (pp. 136–179). Chicago, IL: Aldine.
- Van Boven, L., Campbell, M. C., & Gilovich, T. (2010). Stigmatizing materialism: On stereotypes and impressions of materialistic and experiential pursuits. *Personality and Social Psychology Bulletin*, 36, 551–563. doi:10.1177/0146167210362790
- Van Vugt, M., & Iredale, W. (2013). Men behaving nicely: Public goods as peacock tails. *British Journal of Psychology*, 104, 3–13. doi:10.1111/j.2044-8295.2011.02093.x
- Willis, J., & Todorov, A. (2006). First impressions: Making up your mind after a 100-ms exposure to a face. *Psychological Science*, 17, 592–598. doi:10.1111/j.1467-9280.2006.01750.x
- Yan, Y. K., & Yazdanifard, R. (2014). The concept of green marketing and green product development on consumer buying approach. *Global Journal of Commerce and Management Perspective*, 3, 33–38.
- Zahavi, A. (1975). Mate selection: A selection for handicap. *Journal of Theoretical Biology*, 53, 205–214. doi:10.1016/0022-5193(75)90111-3

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