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**Article**

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# SUSTAINABLE BEHAVIORS AND PERSONALITY MODERATING THE STATUS GOAL AND PURCHASE INTENTION RELATIONSHIP OF LUXURY BRANDS

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**Abstract.** Luxury brands are related to two major mechanisms of social adaptation: value-expressive and social-adjustive. Researchers have established that these two functions are likely to influence customer purchase intention. Additionally, evidence suggests an interaction between sustainability beliefs and personality traits. Traditional, luxury brand purchasers are considered carefree of sustainability considerations. Therefore, a research gap exists regarding sustainable behaviors and personality issues in relation to luxury brands. Thus, building on a model of the effects of the value-expressive and social-adjustive functions of luxury brands on purchase intention, this study analyzes the effects of two types of moderating variables, namely, sustainable consumption (anthropocentrism, perceived self-efficacy, ecological behavior, conservatism, and egoism) and personality traits (conscientiousness, extraversion, openness, and neuroticism). Results of a structural equation modeling analysis with nested models, using a sample of 299 U.S. luxury car consumers, reveal that for the value-expressive and purchase intention relationship, only perceived self-efficacy shows a negative moderating effect. Meanwhile, for the relationship between social-adjustive and purchase intention, anthropocentrism, egoism, extraversion, and neuroticism demonstrate moderating effects. Thus, the variables here proposed primarily moderate the social-adjustive and purchase intention relationship. Therefore, luxury product firms pursuing a long-term sustainability agenda may benefit from strategies based on social-adjustive needs.

**Keywords:** luxury brands, brand social functions, social-adjustive, value-expressive, sustainable luxury, sustainable behavior, personality traits.

**JEL Classification:** M14, M30, M31, M39, D91.

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## 1. Introduction

The literature on luxury marketing has addressed the conflicts regarding sustainable luxury, by exploring avenues to narrow down an attitude–behavior gap, which can be observed by consumers showing favorable attitudes toward sustainable luxuries. However, purchase intention (PI) for sustainable luxuries is expected to be relatively low (Park et al., 2022). Furthermore, the current literature focuses on specific consumption categories, such as sustainable fashion or eco-tourism (Kunz et al., 2020), where sustainable attributes (e.g., sustainable materials or resource-efficiency) may improve product performance by increasing, for example, the per-

ceived integrity of the brand (Amatulli et al., 2021b). However, recent studies have considered conditions in which sustainability may lead to perceived product performance (Talukdar & Yu, 2020). For example, sustainable advertising appeal may increase the perceived atypicality of a product (Amatulli et al., 2021a) and the perceived product novelty of upcycled luxuries (Adıgüzel & Donato, 2021).

Researchers have been paying attention to the interplay of two opposing arguments: consumers seeking to experience feelings of uniqueness and disassociation from the majority (Eastman et al., 2021) and consumers seeking luxury brands with ethical appeal to gain a good reputation (Leban et al., 2020), resulting in acceptance or recognition by others (Islam et al., 2022). Perceived brand environmental ethics may result in cues of perceived value for luxury consumers (Vanhamme et al., 2023). As a result, some consumers are increasingly desiring sustainable approaches from luxury brands (Kim et al., 2022). Unfortunately, in the luxury markets, customers regard green consumption as more of a social adaptation mechanism for individual purposes, rather than a consumption tendency based on environmental consciousness (Griskevicius et al., 2012). Luxury brands may help consumers in achieving social fitness by assisting them in understanding and managing their social context (Fuentes et al., 2023). Therefore, luxury brands may serve two functions (Ngo et al., 2020; Wilcox et al., 2009): (1) the value-expressive (VE) function, which refers to a consumer's need for self-expression, status enhancement, individuality, and differentiation from the group; and (2) the social-adjustive (SA) function, which refers to a consumer's need for affiliation to the group (status affirmation). Theoretically speaking, the signaling status theories posit that these brand functions are not conflicting; instead, they are parallel efforts to achieve status and adaptation (Dubois et al., 2021; Fuentes et al., 2023). Thus, previous research assesses sustainability within luxury branding from the perspective of these two mechanisms (Eastman et al., 2021). Additionally, literature explores the personality traits of consumers as antecedents of sustainable consumption (Duong, 2022), which differs from the functions of luxury brands (Barrera & Ponce, 2021). Therefore, the present study addresses, in a unified manner, the research gap regarding the effect of the interactions of two groups of variables, sustainable behaviors and personality traits, on the relationships of the VE and SA functions with the PI toward luxury brands. Hence, this study retakes/confirms the effect of the two luxury functions, namely, VE and SA, on PI and proposes the moderating effects of variables related to a consumer's position toward the environment (anthropocentrism, perceived self-efficacy, ecological behavior, and social values) and consumer personality traits (conscientiousness, extraversion, openness, and neuroticism) to shed some light on consumer goals related to green luxury purchases to favor a responsible consumption (see Figure 1).

In the next section, the conceptual framework presents the key constructs assessed in this study and the hypotheses' development. Subsequently, the methodology and measurements for each of the variables under investigation are highlighted. Next, the results displaying the interplay between the variables are assessed. Finally, a discussion and conclusions about of the findings are presented.

## 2. Conceptual framework

### 2.1. The value-expressive and social-adjustive luxury functions

Early advances in conspicuous consumption argued that luxuries are desired by people who have the need to signal their status (Veblen, 1973). According to the "Veblen" effect, when demanding a luxury, consumers are purchasing the status that comes with it rather than the

product itself (Bagwell & Bernheim, 1996; Eastman et al., 1999). Hence, this type of consumption involves a social adaptation goal. The functional attitude theory explains the relationship between status consumption and consumer attitudes (Katz, 1960; Ledgerwood et al., 2018). Accordingly, consumers develop attitudes that are useful for an adaptation process toward their world and for understanding their context; thus, consequently adopting certain attitudes may exert a functionality. Toward this end, consumers may hold two fundamental attitudes toward signaling status through luxury brands (Ngo et al., 2020; Wilcox et al., 2009), which establish the two luxury brand functions in this study as the independent variables. First, the VE function responds to attitudes related to self-expression. This function may help consumers differentiate themselves from a large group (Fuentes et al., 2023) by projecting an identity that is consistent or even enhanced by the brand (Bian & Forsythe, 2012). Conversely, the SA function responds to attitudes related to self-presentation, which may help consumers to *fit in* or obtain social approval (Ngo et al., 2020).

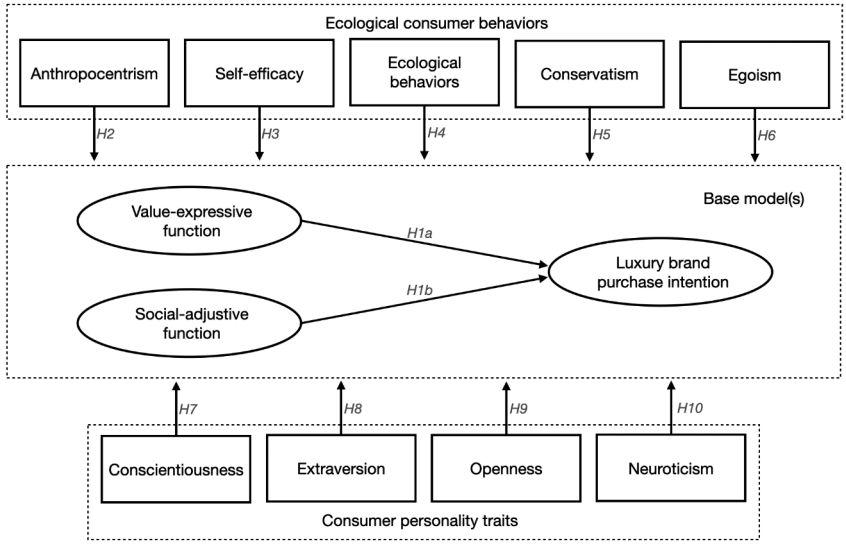


**Figure 1.** Conceptual framework

Hence, signaling status, a social adaptative process, may help-out consumers envision their social environment through luxury brands. The notion of consumer attitudes shaping the functions of luxury brands is consistent with other studies in consumer psychology that argue in favor of similar social needs (difference from a group vs. assimilation to a group), transforming into consumption goals behind luxury purchases (Dubois, 2020; Dubois et al., 2021). Based on these streams of literature within consumer psychology (and as presented in Figure 1), positive relationships between both luxury functions, that is, VE and SA, and consumer PI for a luxury good have previously been established (Amatulli et al., 2021b; Ngo et al., 2020; Schade et al., 2016). Accordingly, the following hypotheses are retaken:

*H1a. There is a positive relationship between the VE function and PI toward a luxury good.*

*H1b. There is a positive relationship between the SA function and PI toward a luxury good.*

## 2.2. Sustainable consumer behaviors

Anthropocentrism is the belief that all other beings are means to human ends (Coren, 2015). This ecological paradigm suggests that environmental problems can be solved through human ingenuity and mastery over nature (Dunlap et al., 2000). This viewpoint contrasts with biospherism (Gilg et al., 2005), which regards the balance between man and nature as fragile. A biocentric or anti-anthropocentric viewpoint holds that the world is a delicate network of beings, and that humanity should not be prioritized among them (Dunlap et al., 2000). These two dimensions of the environmental paradigm may be held simultaneously by consumers (Coren, 2015). A completely anti-anthropocentric viewpoint may not be widely expressed because it may imply adopting behaviors that do not prioritize the survival of our own species. Consumers who adopt an anthropocentric ecological paradigm may feel more comfortable engaging in wasteful/excessive (Mazac & Tuomisto, 2020) or leisure/hedonic (Dashper, 2019) forms of consumption. Consequently, we proposed the following:

*H2a. Anthropocentrism has a positive moderating effect on the VE–PI relationship.*

*H2b. Anthropocentrism has a negative moderating effect on the SA–PI relationship.*

Consumer perceived self-efficacy is defined as the belief that individual efforts can have a meaningful impact on the resolution of a problem (Straughan et al., 1999). That is, consumers believe that their individual actions can help to conserve the environment. Perceived self-efficacy has been shown to be a variable explaining consumer behavior for sustainable tourism (Han, 2021); for example, to a certain degree, consumers may seek out a luxury experience, such as tourism, for expressing themselves or for social status, just like they would seek a luxury brand experience. Perhaps, when consumers believe their purchases will have negative consequences, a sense of responsibility may diminish some of the VE and SA appeals. For example, consumer guilt has been inversely linked to word of mouth (Amatulli et al., 2020). Accordingly, we propose the following:

*H3a. Consumer perceived self-efficacy has a positive moderating effect on the VE–PI relationship.*

*H3b. Consumer perceived self-efficacy has a positive moderating effect on the SA–PI relationship.*

Ecological behavior refers to environmentally friendly actions that consumers may practice, such as reduction, reuse, recycling, and green product purchasing (González et al., 2015). When consumers engage in environmentally responsible behavior, they may be aware of the consequences of their actions. Such consciousness may result in pro-environmental behavior conduct, the same way with perceived self-efficacy (Choi & Johnson, 2019). Furthermore, consumers who lack public consciousness may not see the need to use their luxury brands for green signaling (Talukdar & Yu, 2020). Therefore, we proposed the following:

*H4a. Ecological behavior has a negative moderating effect on the VE–PI relationship.*

*H4b. Ecological behavior has a positive moderating effect on the SA–PI relationship.*

The proclivity of consumers to engage in pro-environmental behaviors based on their social values has been explored in the context of luxury experiences (Fauzi et al., 2022). Research suggests that not all values are equally relevant when explaining different pro-environmental consumer behavior. Social values are concerned with the well-being of others

(González et al., 2015). To this end, the current work assesses egoism (vs. altruism) and conservatism (vs. openness-to-change) as values assessed in the current work that may reflect self-enhancement (vs. self-transcendence) (González et al., 2015). Arguably, conservatism may positively affect consumers with SA goals (vs. VE, where consumers may show openness traits). If consumers purchase luxury brands for their SA function, they may be looking for status affirmation. Therefore, they may wish to preserve their status comfort. Accordingly, we propose the following hypotheses:

*H5a. Conservatism has a negative moderating effect on the VE–PI relationship.*

*H5b. Conservatism has a positive moderating effect on the SA–PI relationship.*

In terms of egoism, when consumers purchase luxury based on "selfish" self-expression concerns, they may seek VE brands (Wang et al., 2021). Consumers' egoism may be strongly expressed when luxury purchases are based on self-representation concerns (Choi et al., 2020). This means that consumers pursue a brand for its SA function while holding a self-serving agency (other than belonging to a group based on authentic identification and feelings of care or concern for its members). Consumers seeking recognition or acceptance from a group can have a self-oriented goal that responds to consumers' concerns about their self-presentation. Thus, the following hypotheses are proposed:

*H6a. Egoism has a positive moderating effect on the VE–PI relationship.*

*H6b. Egoism has a positive moderating effect on the SA–PI relationship.*

## 2.3. Consumer personality traits

Personality traits are retaken from the model proposed by John and Srivastava (1999, p. 158). According to this model, conscientiousness is a personality trait that distinguishes responsible and self-disciplined individuals. This personality trait may trigger consumers' awareness of the negative consequences of their actions, which contrasts with the hedonistic dimension frequently associated with conspicuous consumption (Kvasova, 2015). Conscientiousness tends to be negatively related to externalized motivations for luxury consumption (Guido et al., 2020). These motivations may be related to SA motivations in that they both involve a self-presentational concern involving others. However, conscientiousness has also been positively linked to need for learning and competitiveness, which may directly and positively affect bandwagon or snob luxury consumption (Barrera & Ponce, 2021). SA consumers who want to emulate others may experience bandwagon effects in luxury consumption. Nonetheless, no link has been established between conscientiousness and the need for status (Greenberg et al., 2020). Therefore, a conscientious consumer, who feels competitive (rather than collaborative) and needs to learn to make a consumption choice, may experience a diminished PI for luxury regardless of the signaling function. Concerning the environment, consumers with conscientiousness tend to follow the norms and exhibit genuine humility, demonstrating a strong concern for the results of their actions (Duong, 2022). Even though a positive relationship between conscientiousness and pro-environmental attitudes has been evidenced in some studies (Milfont & Sibley, 2012), other research has found no evidence of such influence (Duong, 2022; Markowitz et al., 2012). Conscientiousness may explain pro-environmental consumption only when certain social factors (e.g., rule compliance, attention to future outcomes, and perceived responsibility) are considered. Therefore, such a level of responsibility, may conflict with conspicuous consumption.

*H7a. Conscientiousness has a negative moderating effect on VE–PI relationship.*

*H7b. Conscientiousness has a negative moderating effect on the SA–PI relationship.*

Extraversion is defined as a trait of someone who enjoys being around people more than being alone and larger social gatherings, engaging in conversation (Milfont & Sibley, 2012). Extraversion denotes an energetic and enthusiastic approach to life; those who possess this trait may be more sociable and confident. Extraversion has been positively related to consumers' need for status as opposed to need for uniqueness (Greenberg et al., 2020). Nonetheless, extroverted consumers may naturally seek out friendships, cooperation, and various forms of social interaction; therefore, these consumers may not feel the need to use luxuries to signal their status in an SA fashion. Regarding the environment, previous research has found no evidence to support a link between extraversion and pro-environmental consumer behavior (Duong, 2022; Milfont & Sibley, 2012). Extraversion may thus have distinct moderating effects on the VE and SA functions:

*H8a. Extraversion has a positive moderating effect on the VE–PI relationship.*

*H8b. Extraversion has a negative moderating effect on the SA–PI relationship.*

Openness-to-experience refers to broadmindedness, flexibility, and involvement in activities revolving around ideas and aesthetics. This personality trait has been positively linked to a need for learning; in luxury consumption, consumers may need learning when they have an SA goal (Barrera & Ponce, 2021). Consumers may learn when they observe members of an aspirational group and understand what brands may increase their chances of assimilation into that group. Openness has also been positively related to consumers' need for uniqueness (Greenberg et al., 2020), a precedent for self-expression attitudes that may be addressed through the VE function of luxury brands. Regarding the environment, this personality trait has frequently been positively linked to pro-environmental consumption (Hirsh, 2010; Milfont & Sibley, 2012). Thus, the following hypotheses can be proposed:

*H9a. Openness has a positive moderating effect on the VE–PI relationship.*

*H9b. Openness has a positive moderating effect on the SA–PI relationship.*

Neuroticism is related to emotional instability, entails a lack of ability to cope with emotions, and can encompass a tendency toward a negative anxious emotional state. Consumers with higher levels of neuroticism tend to show greater competitiveness (Barrera & Ponce, 2021). Simultaneously, competitive behavior tends to correspond with snob or bandwagon luxury consumption behavior to compete with other group members. This may suggest that neuroticism is related to the SA function of adaptation (thus, not with a VE mechanism). Consumers featuring this trait may refuse novelty seeking, which may harm the demand toward new sustainable products (Duong, 2022). However, researchers have found evidence that neurotic individuals exhibit a substantially high degree of concern for the environment (Milfont & Sibley, 2012). This trait, for example, may be positively associated with the tourist's pro-environmental behavior (Kvasova, 2015). A successful SA function entails a careful examination of the social environment and may necessitate a greater allocation of cognitive resources from consumers (Garcia et al., 2019), which is consistent with a neurotic trait.

*H10a. Neuroticism has a negative moderating effect on the VE–PI relationship.*

*H10b. Neuroticism has a positive moderating effect on the SA–PI relationship.*

## 3. Methodology

The study tested the hypotheses using a non-experimental covariant design on consumers of luxury car brands. The hypotheses address the moderating effect of sustainable behaviors and psychological traits on the covariant relationships of the two social functions of luxury products in relation to PI. Thus, the methodological design needed to enable the testing of these types of moderating effects. Data were collected to facilitate the elaboration of structural equations for statistical models in which robust multigroup (moderating) tests can be performed on covariant relationships using a structured questionnaire. Eberl (2009) described this type of procedure in detail, which was demonstrated in the context of consumer marketing research by Vera (2015). The following text describes the multigroup formation of the moderating variables. To be eligible for the survey, all participants must have purchased and remembered the brand and model of their most recent luxury car acquired (e.g., BMW 8 Series). Data from a total of 299 consumers were analyzed. Participants are U.S. residents who were recruited through a professional pollster service's consumer panel. The gender distribution in this sample is as follows: male 56%, female 42%, and other/unidentified 2%. The respondents were given an online self-administered structured questionnaire. First, they were asked to annotate the model and brand of their most recent luxury car purchase. The platform containing the questionnaire was programmed to incorporate this input into the initial questions measuring the luxury functions (e.g., *"My BMW 8 Series helps me express myself"*). The luxury brand functions (VE and SA) were evaluated using the items from the scale developed by Wilcox et al. (2009). The participants' PI for a luxury car was assessed using a previously tested scale (Bian & Forsythe, 2012). The respondents were then instructed to answer items of scales related to the moderating variables. The items related to ecological behavior were taken from a tested scale (González et al., 2015), and the personality trait items were adapted from the Big Five scale (Duong, 2022). In all cases, items were associated with seven-point attitudinal scales.

## 4. Results

### 4.1. Measurement assessment

Four items were used for each construct/dimension to assess luxury brands' VE and SA functions (items are shown in Appendix). Confirmatory factorial analyzes and reliability coefficients were used for the measurement assessment. The study extracted the Kaiser–Meyer–Olkin (KMO) coefficient to measure sampling adequacy. The results demonstrated that the KMO values for all constructs is superior to the cut-off of 0.50. Moreover, Bartlett's test of sphericity confirmed substantial variance in the properties of correlation and identity matrices due to $p \leq .001$ (Leech et al., 2011, p. 65). The evaluation of the reliabilities in the measurement model displayed excellent ($\alpha \geq 0.90$) and good ($\alpha \geq 0.80$) values (Leech et al., 2011, p. 52). Table 1 reports the results of these assessments, which suggest the internal consistency of the items and their convergence validity (Hooper et al., 2008; Tavakol & Dennick, 2011). Furthermore, the average variance extracted (AVE) values (Table 1) are consistent with the Fornell–Larcker criterion for discriminant validity: in each latent variable, AVE values are > 0.5 and AVE root squares are greater than the correlations between the latent variables (Tables 2 and 3; Ab Hamid et al., 2017).

**Table 1.** Measurement assessment

| Latent variables and items | FL | KMO | AVE | α | λ4 | CR |
|---|---|---|---|---|---|---|
| Value-expressive | | | | | | |
| VE1: My ___ help me express myself | .87 | .83*** | .75 | .89 | .87 | .92 |
| VE2: My ___ help me define myself | .86 | | | | | |
| VE3: My ___ is consistent with the characteristics with which I describe myself | .86 | | | | | |
| VE4: My ___ match what and who I really am | .88 | | | | | |
| Social-adjustive | | | | | | |
| SA1: A ___ is a symbol of social status | .78 | .82*** | .63 | .85 | .73 | .90 |
| SA2: My ___ helps me fit into important social situations | .77 | | | | | |
| SA3: I like to be seen diving my ___ | .83 | | | | | |
| SA4: I enjoy it when people know that I own a ___ | .84 | | | | | |
| SA5: My ___ make good impressions on others | .75 | | | | | |
| PI | | | | | | |
| PI1: If I were going to purchase a luxury car, I would consider buying this brand | .93 | .93*** | .86 | .97 | .94 | .98 |
| PI2: If I were shopping for a luxury car brand, the likelihood I would purchase this brand is high | .91 | | | | | |
| PI3: My willingness to buy this brand would be high if I were shopping for a luxury car | .93 | | | | | |
| PI4: The probability I would consider buying this luxury brand is high | .93 | | | | | |
| PI5: I have a strong possibility to purchase a car from this brand | .92 | | | | | |
| PI6: I am likely to purchase a car from this brand | .94 | | | | | |
| PI7: I have a high intention to purchase a car from this brand | .93 | | | | | |

FL: Factorial loads; α: Cronbach's alpha; Guttman's lambda λ4; CR: composite reliability (omega coefficient); KMO: Kaiser–Meyer–Olkin coefficient with the p-value of the bartlett´s test (*** p ≤ .001); AVE: average variance extracted

Although the VE and SA scales have been used in numerous studies, the structural equation modeling (SEM) analyzes in this work showed high co-linearity between them as independent variables of PI for a luxury car brand. Therefore, two base SEMs were developed by retaking variables and measurements (Bian & Forsythe, 2012; Ngo et al., 2020). Each model tests each luxury brand function independently.

## 4.2. Direct and moderating effects

The direct effects retaken for H1a and H1b, as established in the literature, are confirmed for all cases. Hence, to test the moderating effects outlined in H2–H10, the study created nested models using groups formed through latent class analyses using the clustering k-means method with items/measurements for each moderating variable (ecobehaviors and personal-

ity traits). Vermunt and Magidson (2002) described this type of statistical procedure in detail. Hence, two groups (high and low) were obtained for each moderating variable (e.g., high and low-anthropocentrism; high and low extraversion, etc.). Amos 24 software was used to test these hypotheses using maximum likelihood–SEM nested (multigroup) models. To confirm the differences between the two groups (high versus low), the study used the pairwise comparison test (PCT) for each moderating variable. Tables 2 and 3 show the results of these analyzes. Each of the nested models (nested groups of the moderating variables) produced acceptable baseline and absolute statistical fit coefficients in the SEM models (according to Wheaton et al. (1977), and Hooper et al. (2008)). Two conditions had to be achieved to accept a hypothesis stating a moderating effect: the moderating effect had to be statistically significant (using the PCT for structural weights), and the direction stated in each hypothesis had to be confirmed. For example, suppose a hypothesis states a positive moderating effect. In that case, this means that the nested group corresponding to the high level of the moderating variable (e.g., high anthropocentrism) should show a higher regression-standardized coefficient than the nested group of the low level of the moderating variable (e.g., low-anthropocentrism).

**Table 2.** Moderating effects on the value-expressive (VE) and purchase intention (PI) relationship

| Moderator | Model fit | | | PCT | Level | n = | SRW | PI´s $r^2$ |
|---|---|---|---|---|---|---|---|---|
| | CFI | IFI | CMIN/DF | | | | VE → PI | |
| Anthropocentrism (H2a) | 0.90 | 0.91 | 5.29 | −1.46 | High | 195 | 0.48*** | 0.17 |
| | | | | | Low | 104 | 0.41*** | 0.23 |
| Self-efficacy (H3a) | 0.91 | 0.91 | 4.94 | −2.97** | High | 95 | 0.59*** | 0.35 |
| | | | | | Low | 205 | 0.40*** | 0.16 |
| Eco-behavior (H4a) | 0.90 | 0.91 | 5.20 | −1.83 | High | 208 | 0.48*** | 0.23 |
| | | | | | Low | 91 | 0.25 | 0.06 |
| Conservatism (H5a) | 0.90 | 0.91 | 5.22 | −0.79 | High | 148 | 0.47*** | 0.22 |
| | | | | | Low | 151 | 0.39*** | 0.15 |
| Egoism (H6a) | 0.92 | 0.92 | 4.63 | −1.82 | High | 175 | 0.51*** | 0.26 |
| | | | | | Low | 124 | 0.33*** | 0.11 |
| Conscientiousness (H7a) | 0.91 | 0.91 | 4.95k | 1.47 | High | 209 | 0.42*** | 0.18 |
| | | | | | Low | 90 | 0.46*** | 0.21 |
| Extraversion (H8a) | 0.92 | 0.92 | 4.71 | 1.15 | High | 170 | 0.37*** | 0.14 |
| | | | | | Low | 129 | 0.47*** | 0.22 |
| Openness (H9a) | 0.91 | 0.91 | 4.96 | 0.02 | High | 206 | 0.43*** | 0.18 |
| | | | | | Low | 93 | 0.40*** | 0.16 |
| Neuroticism (H10a) | 0.91 | 0.91 | 5.03 | −1.74 | High | 106 | 0.45*** | 0.20 |
| | | | | | Low | 193 | 0.39*** | 0.15 |

CFI: Comparative fit index. NFI: Normed fit index. CMIN/DF: chi-square divided between degrees of freedom fit index. PCT: Pairwise comparison test for structural weights: absolute values above ± 1.96 imply a significant statistical difference at $p \leq 0.05$, above ± 2.57 at $p \leq 0.01$, and above ± 3.29 at $p \leq 0.001$. SRW: Standardized regression weight. VE: Value-expressive function of luxury brands. PI: Purchase intention. $R^2$: Determination coefficient for the dependent variable. *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

In the models for assessing the VE–PI relationship for a luxury car brand (Table 2), only perceived self-efficacy displays a statistically significant result, which suggests that nearly none of the ecological behavioral variables and none of the consumer personality traits are relevant for consumers when using the VE mechanism. Thus, perceived self-efficacy toward the environment demonstrates a positive moderating effect, which supports H3a. In other words, when perceived self-efficacy is high, the VE–PI relationship tends to be stronger, and vice versa.

**Table 3.** Moderating effects on the social-adjustive (SA) and purchase intention (PI) relationship

| Moderator | Model fit | | | PCT | Level | n = | SRW | PI's $r^2$ |
|---|---|---|---|---|---|---|---|---|
| | CFI | IFI | CMIN/DF | | | | SA–> PI | |
| Anthropocentrism (H2b) | 0.90 | 0.91 | 4.42 | −2.23* | High | 195 | 0.35*** | 0.12 |
| | | | | | Low | 104 | 0.53*** | 0.28 |
| Self-efficacy (H3b) | 0.90 | 0.91 | 4.30 | −2.48* | High | 95 | 0.54*** | 0.29 |
| | | | | | Low | 205 | 0.36*** | 0.12 |
| Eco-behavior (H4b) | 0.90 | 0.90 | 4.66 | −0.02 | High | 208 | 0.41*** | 0.17 |
| | | | | | Low | 91 | 0.37*** | 0.14 |
| Conservatism (H5b) | 0.91 | 0.91 | 4.25 | −0.11 | High | 148 | 0.38*** | 0.15 |
| | | | | | Low | 151 | 0.40*** | 0.16 |
| Egoism (H6b) | 0.92 | 0.92 | 3.83 | −2.01* | High | 175 | 0.51*** | 0.26 |
| | | | | | Low | 124 | 0.28 | 0.08 |
| Conscientiousness (H7b) | 0.91 | 0.91 | 4.45 | 1.57 | High | 209 | 0.37*** | 0.14 |
| | | | | | Low | 90 | 0.48*** | 0.23 |
| Extraversion (H8b) | 0.90 | 0.91 | 4.49 | 2.34* | High | 170 | 0.31*** | 0.09 |
| | | | | | Low | 129 | 0.49*** | 0.24 |
| Openness (H9b) | 0.91 | 0.91 | 4.25 | 1.28 | High | 206 | 0.38*** | 0.15 |
| | | | | | Low | 93 | 0.44*** | 0.20 |
| Neuroticism (H10b) | 0.90 | 0.91 | 4.26 | −2.36* | High | 106 | 0.49*** | 0.24 |
| | | | | | Low | 193 | 0.35*** | 0.12 |

CFI: Comparative fit index. NFI: Normed fit index. CMIN/DF: chi-square divided between degrees of freedom fit index. PCT: Pairwise comparison test for structural weights: absolute values above ± 1.96 imply a significant statistical difference at $p \leq 0.05$, above ± 2.57 at $p \leq 0.01$, and above ± 3.29 at $p \leq 0.001$. SRW: Standardized regression weight. VE: Value-expressive function of luxury brands. PI: Purchase intention. $R^2$: Determination coefficient for the dependent variable. *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

Alternatively, consistent with a few of the hypotheses, the study found several moderating effects when assessing the SA–PI relationship (Table 3). Apparently, the SA–PI relationship becomes weaker (and vice versa) with high anthropocentrism, which supports H2b. Thus, if a high perceived self-efficacy exists, the SA–PI relationship becomes stronger (and *vice versa*), which supports H3b. Moreover, when egoism is high, the SA–PI relationship displays a higher coefficient than when egoism is in the low condition, which confirms H6b. Consis-

tent with H8b, in the case of high extraversion, the SA–PI relationship becomes weaker (and vice versa). Finally, high neuroticism seemingly corresponds to a strong SA–PI relationship (and vice versa), which affirms H10b. The PCT did not generate statistically significant values for the four other moderating variables (i.e., eco-behavior, conservatism, conscientiousness, and openness). In other words, they do not moderate the SA–PI relationship. Notably, high self-efficacy stands out as the moderating condition that helps to generate the higher determination coefficients (r-squares) for PI in the VE and SA models (0.35 and 0.29, respectively).

## 4.3. Summary of results

Table 4 presents conclusions regarding the hypotheses. Results indicate that the data supported eight out of the 20 hypotheses. Interestingly, majority of the hypotheses on the moderating effects that can be supported are those associated with the relationship between SA and PI of a luxury car brand.

**Table 4.** Summary of hypothesis test results

| Hypothesis | Note | Decision |
|---|---|---|
| H1a. VE → PI<br>H1b. SA → PI | p-value ≤ 0.05, direction confirmed | Confirmed |
| H2a. Anthropocentrism positive moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H2b. Anthropocentrism negative moderating effect on SA → PI | p-value ≤ 0.05, direction confirmed | Supported |
| H3a. Self-efficacy positive moderating effect on VE → PI | p-value ≤ 0.05, direction confirmed | Supported |
| H3b. Self-efficacy positive moderating effect on SA→ PI | p-value ≤ 0.05, direction confirmed | Supported |
| H4a. Ecological behavior negative moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H4b. Ecological behavior positive moderating effect on SA → PI | p-value > 0.05 | Rejected |
| H5a. Conservatism negative moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H5b. Conservatism positive moderating effect on SA → PI | p-value > 0.05 | Rejected |
| H6a. Egoism positive moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H6b. Egoism positive moderating effect on SA → PI | p-value ≤ 0.05, direction confirmed | Supported |
| H7a. Conscientiousness negative moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H7b. Conscientiousness negative moderating effect on SA → PI | p-value > 0.05 | Rejected |
| H8a. Extraversion positive moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H8b. Extraversion negative moderating effect on SA → PI | p-value ≤ 0.05, direction confirmed | Supported |
| H9a. Openness positive moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H9b. Openness positive moderating effect on the SA → PI | p-value > 0.05 | Rejected |
| H10a. Neuroticism negative moderating effect on VE → PI | p-value > 0.05 | Rejected |
| H10b. Neuroticism positive moderating effect on SA → PI | p-value ≤ 0.05, direction confirmed | Supported |

## 5. Discussion

The previous literature that explores luxury product categories demonstrate the VE function as a frequently better predictor of brand choice (Bian & Forsythe, 2012; Eastman et al., 2021; Ngo et al., 2020). However, in the current context, SA demonstrates a more relevant role as a predictor of PI due to its interaction with a few ecological behaviors and personality traits. For example, the results suggest that the higher the level of anthropocentrism of the individual, the weaker the relationship between the SA function and PI for luxury goods (in this case, a luxury car). According to the human-centered dimension in anthropocentrism (Kopnina et al., 2018): consumers who consider the preservation of human life on par with other living beings (low-anthropocentrism) may find less value in achieving social adaptation through brands claiming an SA function; Furthermore, even when combining anthropocentric ecological parading and sustainable/ethical activism, consumers may opt for other human-centered causes (e.g., aid for the poor or ill). The lack of moderating effects in the VE–PI model may suggest that once consumers form a *mental link* between a specific brand and the VE function (prioritizing the status enhancement goal), other pressing issues, such as ethics or sustainability, may become less relevant. Additionally, the compatibility of the VE function may only exist in conditions in which sustainability constitutes a deviant value from those of the members of the group. For example, previous research demonstrates that consumers seek luxury goods for their novelty (Eastman et al., 2021) and uniqueness (Amatulli et al., 2021a). These characteristics allow differentiation (vs. assimilation), resulting in a VE function. In summary, the results point to one general finding: in the context of luxury brands, sustainable behaviors and personality traits may be more important for the SA function. Lastly, regarding the two functions of luxury goods (i.e., SA and VE) and their effect on purchase intention, the current findings are consistent with notions that argue that consumers need to simultaneously address the two major goals of social adaptation, namely, assimilation versus differentiation (Dubois, 2020; Dubois et al., 2021), self-presentation versus self-expression (Eastman et al., 2021; Ngo et al., 2020; Wilcox et al., 2009), and affiliation versus individualization (Goenka & Thomas, 2019). In this sense and in contrast with the previous literature (e.g., Eastman et al., 2021; Bian & Forsythe, 2012), the current empirical findings related to the high collinearity between the two brand luxury functions (i.e., SA and VE) empirically confirms that the two mechanisms can work in parallel (as conceptually suggested by Dubois et al. (2021), and Fuentes et al. (2023)). In other words, consumer simultaneously can seek (need) both forms of social adaptation through the consumption of luxury goods. Thus, consumers may seek to concurrently reconcile needs when selecting a luxury brand.

## 6. Conclusions

As shown above, only one of the variables appears to have a moderating effect on the VE model in terms of the moderating effect of sustainable consumer behaviors. The negative moderating effect of consumer perceived self-efficacy suggests that sustainability may reduce luxury value (H3a). This result also suggests that when consumers are aware of the impact of their consumption choices, it reduces their enjoyment of luxury purchases with a VE function. The same variable had a comparable effect on the SA model (H3b). Other variables also moderated the SA model; thus, anthropocentrism showed a negative moderating effect in the SA model (H2b). Egoism (as a social value) was also found to moderate the SA model (H6b). High levels of egoism (vs. altruism) have a negative effect on consumers' PIs for SA luxuries. Arguably, when it comes to purchasing "luxury for others", consumers' egoism may

cause a conflict. Meanwhile, neither of the consumer personality traits seemed to influence the VE model. However, only two of these traits showed a moderating effect on the SA–PI model. Lower levels of extraversion appear to negatively moderate the SA–PI model (H8b). Consumers with low extraversion may be among those who value SA brands more. Meanwhile, neuroticism appears to positively moderate the SA model (H10b). This personality trait refers to individuals' ability to deal with strong emotions (especially negative ones). When consumers pursue an SA goal, they may experience negative emotions associated with social anxiety. This type of anxiety may prompt motivation to adopt green luxuries.

Regarding green luxury branding, sustainability in luxury may introduce a hue of differentiation within brands, activating the VE function. Luxury brands promote their products as timeless and classic. Because some of these products are considered durable, new purchases should be encouraged. Claims of greater status than previous buyers may encourage new purchases; these "greater status" claims may come from a sustainable attribute. The motivation toward this kind of status-signaling stems perhaps from arrogance, pride, or other VE attitudes, which may not find a socially acceptable outlet. Furthermore, because luxury brands encourage self-expression and individualism, they may be able to place certain pro-social, ethical, or environmental issues on the social agenda. Presumably, consumers with VE needs may embrace them if a reputable luxury brand sponsors such issues.

The study's sample consisted solely of consumers residing in the U.S. However. Furthermore, the study only used one product category (i.e., luxury car brands). Future research may seek to overcome these limitations to increase the generalizability of these findings. Thus, the increasing demand for green luxuries could be explored further from adaptive consumption perspectives, such as signaling status. As mentioned above, the personality trait variables correspond to the Big Five personality trait model. The sample, however, only produced useful clusters for four of the five traits, leaving agreeableness out of the model. Future research may be able to overcome these limitations to determine whether self-transcendence constructs influence luxury functions. This was the case for several variables related to sustainable behavior; thus, their potential effects could not be tested (e.g., biospherism and altruism).

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## Author contributions

The three authors involved contributed to the development of this research work in all its areas and to the elaboration of the article in all its sections.

## Disclosure statement

There is no funding or conflict of interest to be disclosed. This research work follows Tecnológico de Monterrey's Ethics Committee guidelines. Ethical guidelines of research with human beings have been considered and adhered to throughout the execution of this study. Proper consent was verified when human subjects were invited to participate. All participants are above legal age of adulthood according to Mexican and U.S. law.

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# APPENDIX

## Scales and items

| Construct/ dimension | Item | Source |
|---|---|---|
| Luxury function<br><br>Value-expressive | My ___ reflect the kind of person I see myself to be<br>My ___ help me communicate my self-identity<br>My ___ help me express myself<br>My ___ help me define myself<br>My ___ is consistent with the characteristics with which I describe myself<br>My ___ match what and who I really am | Adapted from Grewal et al. (2004) and Wilcox et al. (2009) |
| Social-adjustive | A ___ is a symbol of social status<br>My ___ helps me fit into important social situations<br>I like to be seen diving my ___<br>I enjoy it when people know I own a ___<br>My ___ makes good impressions on others<br>Watching the luxury car brands others buy helped me select my ___ | |
| Ecological behavior<br><br>Reduce<br><br>Reuse<br><br><br>Recycling<br><br><br>Green purchase behavior | I have reduced the use of electrical appliances.<br>I have tried very hard to reduce the amount of electricity I use.<br>I have reduced my water consumption.<br>I repair something instead of throwing it away.<br>I reuse products instead of throwing them away.<br>I donate items or products that I do not want.<br>I separate recyclable materials from other waste.<br>I take outdated/broken electronic appliances useful for recycling to collection centers.<br>I buy organic food.<br>I try to buy energy-efficient household appliances.<br>I choose an environmentally sustainable alternative for products regardless of their price.<br>I try to discover the environmental effects of environmentally sustainable products prior to purchase.<br>I bring my own shopping bag to stores to reduce the use of plastic bags.<br>If I understand the potential damage to the environment that some products can cause, I do not purchase these products. | Adapted from Roberts (1996); Perez-Castillo and Vera-Martinez (2021) |
| Perceived self-efficacy | It is worthless for the individual consumer to do anything about pollution.<br>When I buy products, I try to consider how my use of them will affect the environment and other consumers.<br>Since one person cannot have any effect upon pollution and natural resource problems, it does not make any difference what I do.<br>Each consumer's behavior can have a positive effect on society by purchasing products sold by socially responsible companies. | Adapted from Roberts (1996); Straughan et al. (1999) |

| Construct/ dimension | Item | Source |
|---|---|---|
| Environmental values<br><br>Anthropo-centrism<br><br><br><br><br><br>Biospherism | Humans have the right to modify the natural environment to suit their needs.<br>Human ingenuity will ensure that we do NOT make the earth unlivable.<br>The so-called "ecological crisis" facing humankind has been greatly exaggerated.<br>Humans will eventually learn enough about how nature works to be able to control it.<br>Humans were meant to rule over the rest of nature.<br>The balance of nature is strong enough to cope with the impacts of modern industrial nations.<br>The earth has plenty of natural resources if we just learn how to develop them.<br>Plants and animals have as much right as humans to exist.<br>We are approaching the limit of the number of people the earth can support.<br>Despite our special abilities humans are still subject to the laws of nature.<br>Humans are severely abusing the environment.<br>When humans interfere with nature it often produces disastrous consequences.<br>The earth is like a spaceship with very limited room and resources.<br>The balance of nature is very delicate and easily upset.<br>If things continue their present course, we will soon experience a major ecological catastrophe. | Adapted from Dunlap et al. (2000) |
| Social values<br><br>Altruism<br><br><br>Openness-to-change<br><br><br>Conservatism<br><br><br>Egoism | Loyalty<br>Respect<br>Equality<br>Social justice<br>Helpfulness<br>Diversity in life<br>Exciting life<br>Curiosity<br>Obedience<br>Authority<br>Unity<br>Wealth<br>Social power<br>Influential | Adapted from Gilg et al. (2005) |

| Construct/ dimension | Item | Source |
|---|---|---|
| Personality traits<br><br>Agreeableness | I am compassionate for others.<br>I sympathize with others' emotion.<br>I have a soft heart. | Adapted from Duong (2022) |
| Conscientious-ness | I will try to my best to complete my job.<br>I will carry out my promise when I make one.<br>Sometimes I cannot be reliable or trusted. | |
| Extraversion<br><br>Openness-to-experience | It is comfortable when I am around people.<br>I start conversation in most situations.<br>I am willingness to take to numbers of different people at parties. | |
| | I feel amazing and exciting with the form of nature and art.<br>I am willing to try the new food or foreigner food.<br>I am open to new experience. | |
| Neuroticism | I have frequent mood swings.<br>I am relaxed most of the time.<br>I get upset easily.<br>I seldom feel blue. | |
| Purchase intention | If I were going to purchase a luxury car, I would consider buying this brand.<br>If I were shopping for a luxury car brand, the likelihood I would purchase this brand is high.<br>My willingness to buy this brand would be high if I were shopping for a luxury car.<br>The probability I would consider buying this luxury brand is high.<br>I have strong possibility to purchase a car from this brand.<br>I am likely to purchase a car from this brand.<br>I have high intention to purchase a car from this brand. | Adapted from Bian and Forsythe (2012); Hung et al. (2011) |