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Abstract

Integrating the sustainable dimension into product innovation has become a major concern for luxury brand managers. Building on the consumer–brand relationship theoretical framework (Fournier, 1998) and on transgression acts (Aaker, Fournier, & Brasel, 2004), this research focuses on substitution innovations in the luxury sector. An experimental study (N = 536) with two brands (luxury vs. non-luxury) and four types of substitution innovation (recycling, upcycling, sustainable alternative, and process) shows that product demand and brand relationships vary according to those two factors. Impacts are less favorable for luxury brands (vs. non-luxury brands). In addition, demand for innovations using materials with past identity is less favorable for the luxury brand than for the non-luxury brand. Conversely, demand for innovations using materials without past identity is not less favorable for the luxury brand than for the non-luxury brand, thus luxury brands are not more incompatible with sustainable innovation than non-luxury ones.

Keywords: luxury brand, product innovation, sustainability, consumer–brand relationships

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1. Introduction

Sustainable development now forms part of luxury customers' expectations (Murat & Lochard, 2011) and has a positive impact on the value of luxury goods (Steinhart, Ayalon, & Puterman, 2013). The sustainable dimension has thus become a key factor in product innovation (Katsikeas, Leonidou, & Zeriti, 2016; Nidumolu, Prahalad, & Rangaswami, 2009).

In the luxury sector, more and more brands are integrating sustainable development into their innovation strategies (Kapferer, 2010). For example, the Kering Group has developed the Materials Innovation Lab to design more sustainable fabrics and to help the group's houses to make more sustainable choices in their new product developments. The main objective of LVMH's "LIFE 360" program is to eliminate their use of plastic by 2026 and propose 100% eco-designed new products by 2030. Through its CEDRE platform, LVMH seeks to reuse old materials to design new products[1].

The growth of such practices highlights the importance of both understanding how to integrate environmental concerns into new product development (NPD) processes and examining the implications for the company of launching sustainable products. While several studies have investigated the influence of such innovations on consumers for non-luxury brands (Griskevicius et al., 2010; Shrum, McCarty, & Lowrey, 1995; Van Doorn & Verhoef, 2011) and for luxury brands (Achabou & Dekhili, 2013; Janssen, Vanhamme, & Leblanc, 2017), the effect on business performance is less clear (Olsen et al., 2014). In particular, the implications for marketing effectiveness and the effects on the brand itself remain little understood (Bstieler et al., 2018; Varadarajan, 2017). This research seeks to investigate how substitution product innovation (SPI) affects brands. SPI is defined as "innovations that lower

[1] https://r.lvmh-static.com/uploads/2020/02/2020_environnement-et-durabilite_vf.pdf

the environmental impact of a product by substituting a resource used as an input with another resource" (Varadarajan, 2017, p.20). More precisely, we have two objectives in this paper. The first is to compare the impact of SPI on luxury and non-luxury brands in terms of product demand and the consumer–brand relationship: notably, consumers' advocacy behavior, their willingness to pay a price premium for the brand, and their brand purchase intention. Past research shows that product demand is a relevant outcome variable for observing the success of new products that use repurposed materials (Kamleitner, Thürridl, & Martin, 2019). To our knowledge, the impact of SPI has never been studied at the brand level. In branding literature, consumers' advocacy behavior, willingness to pay a price premium, and brand purchase intention are well-known outcome variables for examining behaviors that build relationships with brands. In our study, we examine the repercussions for both the SPI itself and the brand. We note here the interest of luxury brand managers in knowing whether they can engage in sustainable innovations as non-luxury brands do, given that luxury and sustainable development are a priori contradictory (Achabou & Dekhili, 2013).

The second objective is to see what kind of substitution innovation is more consistent with a luxury brand and, more specifically, which of the following four types of substitution innovation is the most appropriate: recycling, upcycling, process, or sustainable alternative.

The theoretical framework of consumer–brand relationships provided by Fournier (1998) is used to examine SPI with a view to complementing and extending the existing literature on both sustainable innovation and luxury branding. By viewing the brand as an active partner with which the consumer maintains a loyal relationship, the relational approach to brands offers interesting opportunities for this study (Blackston, 1995, 2000; Fournier, 1998). Previous research has shown only that this framework can be mobilized to explain how new products launched by brands, such as brand and line extensions, influence the consumer–brand relationship (Magnoni, 2016). In this paper, we argue that SPI may influence both product demand and the consumer–brand relationship. It seems essential to analyze how the

consumer–brand relationship might change due to SPI and to understand the reasons that underlie such changes with a view to preserving the quality of the relationship.

Therefore, this paper contributes to the literature on branding and innovation by showing not only the conditions under which SPI is a strategic tool for luxury brands but also how it can affect the consumer–luxury brand relationship. More precisely, it focuses on identifying when an SPI can have positive or negative effects on product demand and the consumer–brand relationship in the luxury sector. In doing so, this paper answers managerial questions such as: What SPIs should be promoted (or avoided) for luxury brands? How can luxury brands strengthen the consumer–brand relationship through an SPI strategy? How can demand for SPIs in the luxury sector be increased?

After outlining the conceptual framework and research hypotheses, we present the methodology of the experimental study conducted on 536 women exposed to SPIs launched by luxury and non-luxury brands. The results are then discussed. Finally, we assess the implications of our results, acknowledge the limitations of this study, and suggest directions for future research.

2. Conceptual framework

2.1. Substitution innovation

Varadarajan's (2017) seminal article identifies three types of sustainable product innovation: efficiency innovation, elimination innovation, and substitution innovation. Efficiency innovation is about reducing the environmental impact of business activities through the better use of resources. Elimination innovation involves the removal of a resource, such as an ingredient potentially harmful to health. In substitution innovation, unsustainable, nonrenewable energies or materials are replaced with sustainable, renewable sources that are less ecologically harmful, with the intention of lowering the environmental impact of a firm's activities. That implies replacing a less abundant resource with a more

abundant one or reusing resources or materials extracted during the upstream stage of production.

One type of substitution innovation, recycling, is already common practice (Winterich, Nenkov, & Gonzales, 2019). A new type of substitution innovation, upcycling, has recently emerged in the literature and is gaining popularity (Adıgüzel & Donato, 2021; Kamleitner, Thürridl, & Martin, 2019; Park & Lin, 2018). Upcycling is defined as the reuse of discarded objects or materials in such a way as to create a product of higher quality or value than the original (Bridgens et al., 2018). It is a sustainable production mode that prolongs the life of old objects by creatively reusing and reshaping them into new products (Bridgens et al., 2018; Wilson, 2016) and by drawing attention to the specialness of the original materials (Kamleitner et al., 2019). Upcycling is thus similar to recycling, wherein the value is in old materials being transformed by breaking them down into raw materials before turning them into new products (Trudel & Argo, 2013). Both approaches entail a genuine and substantive transformation in which the nature of the outcome product differs from that of its discarded source product. Yet, in the case of upcycling, the value of the final object is higher than the discarded original material, whereas it remains similar in the case of recycling (Bridgens et al., 2018). For example, the transformation of old tires into high-end fashion bags for the brand Cyclus[2] is considered upcycling. Transformation of old plastic material into new plastic bags or of hemp fibers for use in recycled denim, as with the Levi's[3] WellThread collection, is classed as recycling.

Besides distinguishing between energy and materials (Varadarajan, 2017), a further distinction can be made within the substitution innovation category based on the newness of the renewable resources: that is, between substitution innovation based on old materials that values past identity (recycling or upcycling) and substitution innovation based on new

[2] https://www.cyclus.com.co/
[3] https://www.levi.com/FR/en/features/wellthread

materials or energy[4] that does not value past identity (see Table 1). According to this categorization, we now investigate the impact of SPI (with new or old sources) on the consumer–brand relationship.

[TABLE 1 ABOUT HERE]

2.2. Brand transgression

Based on the principle of the reciprocity of relations, the quality of the consumer–brand relationship can be enhanced or impaired by the actions of either the consumer or the brand (Fournier, 1998). The relationship's strength can be especially affected by acts of "transgression" by one of the parties. That refers to the violation of the rules that govern the relationship (Aaker, Fournier, & Brasel, 2004). The general view is that transgressions are inherently damaging, as they precipitate a string of negative inferences that threaten the relationship core (Buysse et al., 2000). The brand's intentions may run counter to the rules of the relationship, thus leading to an impairment of the quality of the partner's perceptions and a weakening of the relationship (Ahluwalia, Burnkrant, & Unnava, 2000; Trump, 2014).

In this perspective, for luxury brands, sustainable product innovation may be considered a form of deviant behavior apparent in an unjustified or even irresponsible "act committed" by the brand (Park & Kim, 2001). Luxury brands rely on excellence, prestige, uniqueness, and scarcity linked to an almost sacred dimension (Belk, Wallendorf, & Sherry, 1989; Kessous & Valette-Florence, 2019). When based on old sources, sustainable innovation, on the other hand, implies the reuse of exhausted or outdated material. Although based on human, collective, and societal values, it may thus be perceived as an act of transgression. In the case of substitution innovation valuing past identity of the materials, luxury brands might thus be perceived as more deviant than non-luxury brands. The resulting damage should be greater for luxury brands than for non-luxury brands, as attachment and

[4] Energy also refers to the adoption of a more environmentally friendly manufacturing process. For this reason, "energy" and "process" are considered synonymous in this paper.

relationship strength are stronger with luxury sincere brands than with other brands. As a result, luxury brands suffer more from transgressions (Aaker et al., 2004).

3. Hypotheses

3.1. Luxury and sustainable development

Several studies show commonalities between the notions of luxury and sustainable development, such as quality, sustainability, and scarcity, that might give luxury goods a socially responsible dimension (Hennigs, Wiedmann, Klarmann, & Behrens, 2013; Kapferer, 2010). Luxury is historically aligned with sustainability ideals, by its association with rare products of ultra-high quality, made by hand and with respect for tradition (De Barnier, Falcy, & Valette-Florence, 2012; Kapferer, 2010). Indeed, luxury is by definition very close to the concerns of sustainable development, because its reliance on scarcity and beauty means it has an interest in preserving them; luxury thus cannot contribute to the spoiling of the planet (Bastien & Kapferer, 2012).

Yet the combination of luxury and sustainable development seems paradoxical. While luxury is often associated with waste, ostentation, and superficial values, sustainable development is associated with the pursuit of sobriety, based on responsible consumption, which may be far from luxury (Achabou & Dekhili, 2013; Janssen et al., 2017). The mobilization of the sustainable development argument by luxury brands can disrupt consumers' perceptions, with consumers perceiving a divergence between luxury and sustainable development, especially with regard to the latter's social and economic harmony aspect (Kapferer & Michaut-Denizeau, 2014). Consequently, the use of recycled materials may have a negative effect on consumer preferences (Achabou & Dekhili, 2013). Furthermore, due to the contradictory dimensions of sustainable development and luxury brands, and when referring to consumer–brand relationship theory (Fournier, 1998), the sustainable innovations introduced by luxury brands may be perceived as more transgressive

than those introduced by non-luxury brands (Aaker et al., 2004). With our focus on SPIs, we therefore posit:

H1: In the case of substitution innovation, (a) the demand for product innovation and the relationship with the brand in terms of (b) consumers' advocacy behavior, (c) their willingness to pay a price premium for the brand, and (d) their brand purchase intentions are lower for luxury brands than for non-luxury brands.

3.2. Nature of the substitution innovation

Substitution innovation activity expresses a commitment by the brand to limit its impact on the environment (Varadarajan, 2017). As environmental concerns grow among consumers (Winterich et al., 2019), it can be argued that the effect of substitution innovation on product demand and the relationship with the brand should be stronger for a brand perceived as committed to sustainable development than for a brand that is not perceived as so committed (i.e., having a low sustainable innovation orientation).

However, that relationship may fluctuate not only according to the character of the brand (luxury vs. non-luxury) but also with the nature of the substitution innovation (recycling, upcycling, sustainable alternative, or process). Substitution innovation may be seen as committing a transgression which violates the explicit rules guiding relationship evaluation (Aaker et al, 2004). More precisely, in the specific case of substitution innovation based on old materials, while brands may emphasize a product's benefits and focus on its present identity, they can also highlight the product's dysfunctional past and draw consumers' attention to the old or waste materials used (Kamleitner et al., 2019). Furthermore, just as the inclusion of recycled materials in luxury clothing negatively influences consumer preference (Achabou & Dekhili, 2013), consumers may also have negative reactions to luxury goods that incorporate a durable attribute. Therefore, one can expect that substitution innovation using

materials that have already been used for other products, such as plastic bottles or fabric scraps, will produce negative reactions toward the brands. It may consequently appear more deviant and transgressive for luxury brands than for non-luxury ones, thus impacting negatively on demand for the product and on the brand relationship. We thus posit:

H2: For substitution innovation using materials that value past identity, (a) the demand for product innovation and the relationship with the brand in terms of (b) consumers' advocacy behavior, (c) their willingness to pay a price premium for the brand, and (d) their brand purchase intentions are lower for luxury brands than for non-luxury brands.

In contrast, for substitution innovation based on new materials or processes, the perception of transgression for luxury brands should be lower than in the case of substitution innovation based on old materials. Even if substitution innovations based on new materials or processes are still perceived as deviant behavior for luxury brands, as identified in the conceptual framework, that should be perceived as a softer transgression. Consequently, it may not induce lower product demand nor a lower brand relationship for luxury brands than for non-luxury brands. We thus posit:

H3: For substitution innovation using materials that do not value past identity, (a) the demand for product innovation and the relationship with the brand in terms of (b) consumers' advocacy behavior, (c) their willingness to pay a price premium for the brand, and (d) their brand purchase intentions are not lower for luxury brands than for non-luxury brands.

3.3. Feelings of specialness and environmental friendliness

In our research, we argue that luxury brands are not as good candidates as non-luxury brands when launching substitution innovations. Consequently, for luxury brands, it seems

important to us to identify variables that could have a positive influence on demand for product innovation and the relationship with the brand, with a view to making recommendations that could guide luxury brand managers. The feelings of specialness and perceived environmental friendliness are the two variables selected in this paper. Kamleitner et al. (2019) have demonstrated that those two variables are relevant to understand how past identity salience influences demand for repurposed products. As in our research, we also investigate the role of past identity salience on demand for substitution product innovation, those two variables are also considered.

First, past research shows that objects that promise feelings of specialness are known for being high in demand (Bellezza, Gino, & Keinan, 2014; Han, Nunes, & Drèze, 2010). Recycled products in particular enable consumers to feel special with the product, thus inducing demand (Kamleitner et al., 2019). The feeling of specialness should be seen as a mechanism. Products that hold a story cause higher demand because they imbue customers with felt specialness—that is, the belief that they will feel more special as a result of acquiring and utilizing a product that holds a story. We suggest extending this mechanism to all type of substitution innovations launched by luxury brands, even for those that does not value past identity. Indeed, since luxury brands are strongly associated with uniqueness, distinctiveness, and exclusivity, we can propose that substitution innovations (that values past identity or not) launched by luxury brands are highly able to generate such feelings.

Moreover, social identity theory identifies three underlying individual motives for buying a brand or a product: self-enhancement, self-consistency, and self-differentiation (Bhattacharya & Sen, 2003; Wolter, Brach, Cronin, & Bonn, 2016). Self-enhancement is driven by individuals seeking to gain prestige. Self-consistency is driven by the congruity between the consumer's self-image and the product image (Sirgy, 1985). Self-differentiation is driven by the need to be distinctive from others. Much research on branding attests to the driving role of self-enhancement and self-definition in consumer–brand identification

(Escalas & Bettman, 2003; Stokburger-Sauer, Ratneshwar, & Sen, 2012). In the case of substitution innovation, the new product might express something special about the consumer, thus making them distinct and even self-consistent if they have a strong environmental concern. Substitution innovation can thus shape consumers' self-definition and reinforce their identification with the brand and the self–brand connection, with the brand the consumer is connected with becoming a part of the self (Belk, 1988; Fournier, 1998; Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010; Trump, 2014). Furthermore, consumers who buy substitution innovations are more prone to feel special since they are acquiring and using a product that already holds a story (Kamleitner et al., 2019). The products then benefit from a new meaning. As the products' meanings transfer to individuals and help shape their identities, those individuals are more likely to acquire the products (Ahuvia, 2005; Belk, 1988). We thus posit:

H4: For luxury brands, a feeling of specialness positively influences (a) the demand for substitution product innovation and the relationship with the brand in terms of (b) consumers' advocacy behavior, (c) their willingness to pay a price premium for the brand, and (d) their brand purchase intentions.

Second, perceived environmental friendliness should be considered as an alternative explanation (Kamleitner et al., 2019). In our research, the launching of a substitution innovation by a luxury brand is a pro-environmental practice, and consumers may purchase the new product for sustainable motives. From a managerial perspective, it is important to determine whether the demand for substitution innovation in the luxury sector is driven by an enhancement of felt environmental friendliness on top of specialness. We thus posit:

H5: For luxury brands, environmental friendliness positively influences (a) the demand for substitution product innovation and the relationship with the brand in terms of (b) consumers' advocacy behavior, (c) their willingness to pay a

price premium for the brand, and (d) their brand purchase intentions.

4. Methodological framework of the study

4.1. Field of application, brands, and substitution innovations

This study examines the role of the character of the brand (luxury brand vs. non-luxury brand) and the nature of the substitution innovation (recycling, upcycling, sustainable alternative, or process). We chose the fashion sector as the field of application for several reasons. First, brands are an important choice criterion in this category. Second, the fashion industry is highly polluting, second only to the oil industry, and is responsible for 2% of global carbon emissions (Business Insider, 2019). Third, sustainable initiatives are prevalent in this industry for both luxury and non-luxury brands: eco-designed product recycling, upcycling, second-hand outlets (e.g., Panoply, Vestiaire Collective), support for young designers, etc.

After discussions with five researchers specializing in brand management, two well-known and well-appreciated brands, Chanel and Zara, were selected (Chanel as the luxury brand and Zara as the non-luxury brand). In addition, following the work of Kamleitner et al. (2019), we distinguish between two types of innovations: "with past identity" vs. "without past identity." "Innovations without past identity" are substitution innovations using materials that have never been used for other products, whereas "innovations with past identity" are substitution innovations using materials that have already been used for other products. For each type of innovation ("with past identity" vs. "without past identity"), we consider two fictitious SPIs (see Table 2). Therefore, four fictitious scenarios ("recycling product," "upcycling product," "sustainable alternative," and "process") were created based on an actual Chanel handbag and real product innovations, thus presenting respondents with plausible situations (see Appendix 1).

[TABLE 2 ABOUT HERE]

Like Han, Nunes, and Drèze (2010), we focused on handbags. This product was chosen in part because handbags drive luxury brands today (Thomas, 2007) and do not require sizing, which means that women have far more choice than in the case of clothing. Four short scenarios were formulated, and a mock-up photo of the handbag was added to expose the respondents to approximate market conditions. Two researchers in innovation marketing validated these scenarios (see Appendix 1). The two brands (Chanel and Zara) were then combined to create eight experimental treatments (see Appendix 1). We took care to make the eight experimental treatments as similar as possible to isolate the effect of the luxurious character of the brand concept and the substitution innovation type.

4.2. Sample and data collection procedure

The questionnaires were administered online via social networks. To ensure that our sample included the most knowledgeable informants, we used a "snowballing" technique. We asked initial respondents to recommend others who could offer further insight.

Filtered questions enabled us to retain solely (1) women and (2) respondents who already knew the brands (subjective familiarity with the brand). The final study sample consisted of 536 women (249 Chanel respondents and 287 Zara respondents), who were divided among 10 experimental conditions (the eight experimental treatments and two control groups) with at least 20 observations per experimental cell (Hair et al., 1998). The number of respondents for each treatment of the experiment is indicated in Appendix 1. The respondents were mostly working women (53%). The "with control groups" quasi-experimental method was used to observe variations between one experimental group and another. Therefore, two control treatments (one for each brand), inspired by Winterich et al. (2019) and Kamleitner et al. (2019), were created to check the success of the manipulations (product innovation salience). Each respondent was exposed to only one treatment. Respondents were invited to participate in a study on eco-designed products. The questionnaire was divided into two parts.

The first part was dedicated to general questions regarding such aspects as brand familiarity, product category, and respondents' environmental behaviors. The scenario was then announced by a short sentence ("*We present to you the brand's new handbag. Please read the description and look at the photo carefully, as the rest of the questionnaire will deal with these elements*") and presented to the respondent before they were asked questions about the brand and the eco-designed product.

4.3. Measurement scales

We decided to use only 7-point Likert scales and measurements whose reliability and validity had already been established by previous studies (see Appendix 2). Product demand was measured by three items proposed by Kamleitner et al. (2019) to capture the substitution innovations' appeal and respondents' purchase intentions. As proxies for the consumer–brand relationship, we first assessed consumers' advocacy behavior by three items from Gebauer, Füller, and Pezzei (2013). We then evaluated willingness to pay a price premium for the brand using four items developed by Netemeyer et al. (2004). Finally, brand purchase intention was operationalized by one item adapted from Rangaswamy, Burke, and Oliva (1993) expressing the likelihood to buy the brand. Three items adapted from McFerran and Argo (2014) and used by Kamleitner et al. (2019) were used to operationalize felt specialness. Three similar items were used to measure felt environmentalism (Kamleitner et al., 2019).

Regarding the evaluation of the manipulation success, the luxury character of the brand concept was measured through two items pertaining to the importance attached to the characteristics "luxury" and "social status" in the brand purchase decision (Park, McCarthy, & Milberg, 1993). We assessed the perceived originality of the product through three items adapted from Koslow, Sasser, and Riordan (2003) and the eco-designed character of the product by one item in the manner of Bezançon, Guiot, and Le Nagard (2019). Finally, we measured the respondents' environmental behaviors using the Kilbourne and Pickett (2008)

scale, which captures both direct and indirect behaviors. The respondents' environmental behaviors could however influence the effects of substitution innovations on product demand and the consumer–brand relationship. As a precaution, environmental behavior was therefore treated as an external variable to be controlled. To do so, we ensured the homogeneity of the sample on this variable.

Exploratory factor analyses under SPSS (subsample of 134 respondents—25% of the total sample) followed by confirmatory factor analyses under XLSTAT-PLSPM (subsample of 402 respondents—75% of the total sample) were performed to verify the reliability and convergent validity of the measuring instruments. The reliability and convergent validity of the measurement instruments was first verified. The results were satisfactory, with indicators of reliability greater than 0.7 and convergent validity greater than 0.5 in all cases (see Appendix 3). The discriminant validity between all the constructs in accordance with Fornell and Larcker (1981) was also established, as each latent variable shares more variance with its respective indicators than with the other latent variables.

5. Results

Manipulations of the luxurious character of the brand concept were first verified before the hypotheses were tested. A comparison of means test between the perceived luxury of the Chanel and Zara brands shows a significant difference ($M_{Chanel} = 5.71$; $M_{Zara} = 2.83$; $t_{534} = 23.706$; $p = 0.00$). As expected, Chanel is perceived as more luxurious than Zara. As also expected, the eight substitution innovations are perceived as innovative, since the perceived originality of the product is quite high (M = 4.99). In addition, a comparison of means test between perceived originality for the experimental treatments and for the control groups indicates a significant difference ($M_{Experimental\_treatments} = 4.99$; $M_{control\_groups} = 3.94$; $t_{534} = 5.465$; $p = 0.00$). The eight substitution innovations are also perceived as eco-designed (M = 5.45), with a comparison of means test between the eco-designed character of the product for the

experimental treatments and for the control groups showing a significant difference ($M_{Experimental\_treatments}$ = 5.45; $M_{control\_groups}$ = 4.31; t_{534} = 5.987; p = 0.00). These results indicate the success of the manipulation checks.

Next, the homogeneity of the sub-samples was controlled on environmental behaviors and sociodemographic variables (age, average budget for purchase of a handbag) through comparison of means tests and Chi-square tests. On those variables, no significant difference emerged between the groups, which are therefore comparable.

Traditional methods of analyzing variance were used to test our hypotheses (see conceptual model in Appendix 4). The results are reported below.

5.1. Influence of the luxury character of the brand concept (luxury brand vs. non-luxury brand)

To test the first set of hypotheses (H1), we conducted a multivariate analysis of variance (MANOVA) between the dependent variables (product demand, consumers' advocacy behavior, willingness to pay a price premium, and brand purchase intention) and the two factors (brand concept, substitution innovation nature). Therefore, the analysis is a between-subjects 2 (brand concept: luxury vs. non-luxury) x 5 (substitution innovation nature: recycling, process, sustainable alternative, upcycling, and control) MANOVA.

In addition to the effect of the nature of the substitution innovation, we predict that for luxury brands (N = 249), demand for SPI and relationship with the brand are less strong than for non-luxury brands (N = 287).

Multivariate test results confirm a significant main effect of substitution innovation nature ($F(16, 2104) = 2.967$, $p < .001$) . Simple contrasts were specified for this factor to test differences between the different levels of the factor and the control group.

As expected, a similar pattern arises for the brand concept. A significant main effect of the brand concept is observed ($F(4, 523) = 26.750$, $p < .001$). The results regarding the effect

of the luxury character of the brand concept on the four dependent variables are illustrated in Table 3.

[TABLE 3 ABOUT HERE]

Overall, estimated marginal means show that demand for SPI (M_{Chanel} = 3.853; M_{Zara} = 4.145), consumers' advocacy behavior (M_{Chanel} = 4.031; M_{Zara} = 4.491), and brand purchase intention (M_{Chanel} = 3.224; M_{Zara} = 4.020) are less favorable for luxury brands than for non-luxury brands. Conversely, willingness to pay a price premium is higher for luxury brands than for non-luxury brands (M_{Chanel} = 3.037; M_{Zara} = 2.472). **Hypotheses H1 (a), H1 (b), and H1 (d) are thus confirmed, but H1 (c) is not confirmed.**

5.2. Influence of valuing past identity through the substitution innovation nature according to the brand concept

To test hypotheses H2 and H3, we created a new variable with two modalities: 1) "innovations with past identity," corresponding to innovations using materials that have already been used for other products ("upcycling" and "recycling"; N = 218), and 2) "innovations without past identity," referring to innovations using materials that have never been used before ("sustainable alternative" and "process"; N = 253). Variance analyses were then run on each of the two modalities.

First, we hypothesized that "innovations with past identity" induce a weaker demand for sustainable product innovation and a weaker relationship with the brand for luxury brands than for non-luxury brands. In other words, we postulate that a main effect of the brand concept should appear for this type of innovation. Therefore, the analysis is a between-subjects 2 (brand concept: luxury vs. non-luxury) x 3 (substitution innovation nature: recycling, upcycling, and control) MANOVA.

Multivariate test results indicate a significant main effect of the substitution innovation

nature ($F(8, 550) = 2.327$, $p < .05$) and the brand concept ($F(4, 274) = 15.035$, $p < .001$). Results regarding the effect of the brand concept on the four dependent variables are illustrated in Table 4a.

Estimated marginal means generate, except for willingness to pay a price premium ($M_{Chanel} = 2.955$; $M_{Zara} = 2.395$), scores that are less favorable for the luxury brand than for the non-luxury brand for the demand for SPI ($M_{Chanel} = 3.757$; $M_{Zara} = 4.112$), consumers' advocacy behavior ($M_{Chanel} = 3.976$; $M_{Zara} = 4.539$), and brand purchase intention ($M_{Chanel} = 3.086$; $M_{Zara} = 3.872$). **Thus, hypotheses H2 (a), H2 (b), and H2 (d) are supported. Hypothesis H2 (c) is, however, not validated.**

[TABLE 4a ABOUT HERE]

Second, we also proposed that "innovations without past identity" do not induce a weaker demand for sustainable product innovation nor a weaker relationship with the brand for luxury brands than for non-luxury brands. In other words, we postulate no main effect of the brand concept for this type of innovation. The analysis is a between-subjects 2 (brand concept: luxury vs. non-luxury) x 3 (substitution innovation nature: sustainable alternative, process, and control) MANOVA.

Multivariate test results indicate a significant main effect of the substitution innovation nature ($F(8, 620) = 4.296$, $p < .001$) and the brand concept ($F(4, 309) = 13.413$, $p < .001$). The results for the impact of the brand concept on the four dependent variables are presented in Table 4b. Estimated marginal means show a significant main effect of the luxury character of the brand concept (luxury vs. non-luxury) on consumers' advocacy behavior ($M_{Chanel} = 4.112$; $M_{Zara} = 4.537$), willingness to pay a price premium ($M_{Chanel} = 3.170$; $M_{Zara} = 2.684$), and brand purchase intention ($M_{Chanel} = 3.371$; $M_{Zara} = 4.152$). No significant effect is found for product demand ($M_{Chanel} = 3.910$; $M_{Zara} = 4.133$).

Innovations without past identity do not induce a lower demand for sustainable

product innovation for luxury brands than for non-luxury brands: **H3 (a) is thus confirmed. H3 (b), H3 (c), and H3 (d) are, however, not supported**, since consumers' advocacy behavior and brand purchase intention are weaker for the luxury brand than for the non-luxury brand. In addition, willingness to pay a price premium is higher for the luxury brand (vs. non-luxury brand).

[TABLE 4b ABOUT HERE]

5.3. Influence of feelings of specialness and environmentalism

Finally, the influence of feelings of specialness and the perceived environmental friendliness for luxury brands was verified through a MANCOVA between the dependent variables (product demand, consumers' advocacy behavior, willingness to pay a price premium, and brand purchase intention), one factor (substitution innovation nature), and the two covariables (felt specialness, felt environmentalism) on luxury brands only (N = 249).

A positive influence of feelings of specialness and environmentalism is expected on demand for sustainable product innovation and relationship with the brand.

As expected, multivariate test results indicate a significant main effect of the substitution innovation nature ($F(16, 968) = 1.908$, $p < .05$), feeling of specialness ($F(4, 239) = 11.825$, $p < .001$), and feeling of environmentalism ($F(4, 239) = 10.851$, $p < .001$).

More precisely, for luxury brands, the feeling of specialness has a significant positive influence on the four dependent variables: product demand ($\beta = 0.252$), consumers' advocacy behavior ($\beta = 0.314$), willingness to pay a price premium ($\beta = 0.389$), and brand purchase intention ($\beta = 0.333$) (see Table 5). Hypotheses **H4 (a), H4 (b), H4 (c), and H4 (d) are thus confirmed.**

[TABLE 5 ABOUT HERE]

Results regarding the feeling of environmentalism are illustrated in Table 6. This

variable also has a positive influence on product demand (β = 0.343), consumers' advocacy behavior (β = 0.186), and brand purchase intention (β = 0.240). Hypotheses **H5 (a), H5 (b), and H5 (d) are thus supported. However, H5 (c) is not supported:** the effect on willingness to pay a price premium is not significant. That result has strong managerial implications: feeling special is a more effective argument than feeling pro-environmental in inducing willingness to pay a price premium for luxury brands.

[TABLE 6 ABOUT HERE]

A summary of the results is presented in Table 7.

[TABLE 7 ABOUT HERE]

6. Discussion and conclusions

6.1. Discussion

The aim of this paper was to understand the effect of SPI on the demand for luxury products and, more broadly, on the relationship between the consumer and a luxury brand. Therefore, a quantitative survey was conducted on 536 women (249 Chanel respondents and 287 Zara respondents) in order to measure their reactions to four SPIs: (1) a recycled product, (2) an upcycled product, (3) a sustainable alternative, and (4) a process innovation.

The results show that demand for SPI is less strong for luxury brands than for non-luxury brands. That outcome can be interpreted in terms of the principle of the reciprocity of relationships, thus confirming the relevance of the use of the brand transgression construct. In this context, sustainable product innovation may be conceptualized as a deviant and transgressive act committed by the brand, and it may therefore negatively impact the consumer–brand relationship. SPIs driven by luxury brands can be perceived as more transgressive than sustainable product innovations driven by non-luxury brands due to the opposing luxury vs. environmental sustainability values. This perception of transgressive behavior may negatively affect the consumer purchase intention vis-à-vis the luxury brand,

thus resulting in a less favorable brand purchase intention for luxury brands than for non-luxury brands.

In our research, we decided to distinguish between SPIs according to the salience of their past identity ("with past identity" or without). We consider "innovations without past identity" to be those incorporating materials that have not previously been used (sustainable alternative and new process) and "innovations with past identity" to incorporate materials that have been used before (upcycling and recycling).

In the case of innovations without past identity, it is interesting to note that they do not have a stronger negative impact on the demand for luxury brands than non-luxury brands (demand for sustainable product innovation for luxury brands is not lower than for non-luxury brands). Here, the luxury character of the brand concept (luxury vs. non-luxury) does not seem to influence consumers' perceptions. This result is important because it shows that luxury and sustainable development are not incompatible for consumers (whereas the values of altruism and sharing specific to sustainable development do not necessarily coincide with those of luxury). Once again, Fournier's (1998) theoretical framework on the relational approach to the brand can be mobilized: the launch of an innovation "without past identity" by a luxury brand does not seem to be perceived by consumers as transgressive behavior.

Surprisingly, for "innovations with past identity," willingness to pay a price premium is greater for luxury brands than non-luxury brands. One could have thought that innovations with past identity should have a more damaging effect on luxury brands than on non-luxury brands: a luxury brand must be perfect and not have to use old components. In addition, luxury uses scarce resources that are not available in large quantities (which is not the case for plastic bottles or scraps of leather). Based on previous literature, one could have expected that repurposed products or recycled products made from old materials may be a barrier to paying a higher price due to potential disgust and a perceived contamination risk. Indeed, consumers may perceive products with past identity as previously used or contaminated by other people

(Adıgüzel & Donato, 2021; Argo, Dahl, & Morales, 2006; Meng & Leary, 2021). Two potential explanations can be proposed. The first is theoretical. Kamleitner et al. (2019) show that making a product's past identity salient boosts demand across repurposed products. Past identity salience involves narrative thoughts about these products' stories, thus allowing consumers to feel special. That is even more relevant for the case of repurposed products that have not been owned and used by someone else (as in the case of secondhand products).[5] The second potential explanation is more managerial in nature and linked to luxury brands' price positioning, which by nature is very high. Therefore, "innovations with past identity" should not be affected by the price positioning of luxury brands.

Finally, our paper shows that feelings of specialness and environmentalism are two psychological antecedents of the demand for SPI and the relationship with the brand. This result confirms the findings of Kamleitner et al. (2019) showing that consumers who buy substitution innovation products are more prone to feel special through acquiring and using a product that already holds a story. More precisely, our research contributes to identifying individual drivers of substitution innovation demand in the luxury sector.

6.2. Theoretical implications

This research has several theoretical implications. First, it applies the theoretical framework of consumer–brand relationships devised by Fournier (1998) to understand the impact of SPI on the relationship between consumers and luxury brands. In doing so, it enlarges the existing literature on both sustainable innovation and luxury branding.

Second, this paper shows that the consumer–brand relationship changes according to the nature of the SPI (recycling, upcycling, sustainable alternative, or process) and, more precisely, the use of materials with or without past identity. The demand for SPI is weaker for luxury brands than for non-luxury brands for innovations with past identity but not for innovations without past identity. Nevertheless, it is interesting to note that, regardless of the

[5] We thank the reviewer for raising this point.

nature of the substitution innovation ("with past identity" or "without past identity"), the price positioning of the luxury brand is not affected. If we examine the variable "willingness to pay a price premium," its score is higher for luxury brands than for non-luxury brands for innovations with past identity and innovations without past identity.

Third, this research extends the work of Kamleitner et al. (2019) to show that the salience of past identity of the used materials may soften the negative reactions toward luxury substitution innovations.

Finally, this study brings a new perspective to the literature on luxury and sustainable development. While past studies have revealed that sustainable innovations by luxury brands negatively impact on consumers' preferences (Achabou & Dekhili, 2013; Janssen et al., 2017), our research confirms that to be the case for substitution innovation using materials "with past identity" but not for the other type of substitution innovation; in which luxury brands are not more incompatible with sustainable innovation than non-luxury brands. This research thus contributes to dispelling the perceived paradox between luxury and sustainable development.

6.3. Managerial implications

We found that willingness to pay a price premium is never weaker for luxury brands than for non-luxury brands: it is superior in both cases (for innovations using materials with past identity and for those without past identity). A possible explanation may be related to luxury brands' price positioning, which is generally higher than for non-luxury brands, so that, whatever the nature of substitution innovation, luxury brands will be able to command higher selling prices. Nevertheless, the focus should be on product demand. If the consumer is willing to pay a price premium but product demand does not follow, luxury brands will not be able to sell their products.

For innovations using materials without past identity, product demand is not weaker for luxury brands than for non-luxury brands. Yet, for innovations using materials with past

identity, demand for sustainable innovation and brand purchase intention are lower for luxury brands than for non-luxury brands. Thus, to avoid damaging the luxury brand using materials with past identity, luxury brand managers might consider focusing their communications on the symbolic benefits of sustainable development rather than on the tangible attributes of the product innovation. For example, luxury brands should draw consumer attention to the symbolic dimension of their purchase, by making them consider the public (environmental) consequences of their private consumption and by insisting that they will feel more "environmentally friendly" and "special" with this product. Nevertheless, our results indicate that if those two arguments can drive demand for substitution innovations in the luxury sector, the emphasis should be placed on the feeling of specialness rather than the perceived environmental friendliness with a view to increasing the willingness to pay a price premium. However, communications on the tangible attributes of product innovations must be done carefully. If luxury brands wish to communicate on innovations with past identity, which are perceived by consumers as transgressive, it would be in their interests to highlight the ecological materials used or the transformation processes they undergo that make them rare and appreciable. Indeed, Kamleitner et al. (2019) suggest that the past identities of repurposed products may be not visually discernible. Therefore, companies should not only stress their environmental friendliness but also highlight the specific source material used in their products to boost demand.

That recommendation is based on the work of Belk et al. (1989) on the sacralization of the profane. Individuals have an emotional attachment to and stronger involvement in what they consider sacred (Mol, 1976). Incorporating substances with a first life into the composition of a new product can confer a sacred dimension upon the product and increase its monetary value. Pieces of leather from a manufacturer of leather goods can be perceived as sacred to the extent that the workshop in which they were collected, namely Chanel, is itself considered sacred. That is what Belk et al. (1989) call "tangibilized contamination."

Similarly, extracting plastic bottles from oceans, thereby protecting the ecosystem, could be seen as a sacred gesture. According to Kopytoff (1986), the integration of used components that have already had a first life and are associated with the field of the sacred corresponds to a process of "singling out" the new object. In that way, components with past identity belonging to the secular world could contribute to the sanctification of luxury brands' products, thus enabling brands to succeed in sacralizing their recycling activity.

6.4. Limitations and further research

Four main limitations of this research should be noted. The first concerns the sample, which was restricted to women in a French context. Non-western cultures, for example, may be more reluctant to adopt used goods (Xu, Chen, Burman, & Zhao, 2014). The authors already plan to test these results against other types of respondents and in other cultural settings to enhance their generalizability through the Prolific survey website. Prolific has recently become an increasingly popular medium for researchers collecting data (Winterich et al., 2019).

Second, only one product category (handbags) and only two brands (Chanel and Zara) were selected in this study. Future research should analyze other product categories and other non-sustainable luxury brands.

The third limitation is related to the decision to focus exclusively on substitution innovation. Two other types of innovation exist: efficiency innovation and elimination innovation (Varadarajan, 2017). Future research should include those innovations to obtain a more comprehensive understanding of sustainable product innovation and its influence on consumer–brand relationships.

The final limitation is the lack of variety in terms of antecedents (feelings of specialness and environmentalism). Integrating more explanatory variables into future research would afford a better understanding of the changing nature of the consumer–brand

relationship based on both the luxury character of the brand concept (luxury vs. non-luxury) and the type of innovation (using materials with or without past identity).

Finally, it would be beneficial to design and test a research model including all these variables to deepen the analysis of the effects of the launch of sustainable product innovations on the consumer–luxury brand relationship.

Table 1. Examples of different types of substitution product innovations in luxury

Types of substitution innovation	Examples
Innovations based on old materials or energy	
Recycling	**Hermès**, Petit h
Upcycling	**Prada**, Re-Nylon collection, (regenerated fishing net)
Innovations based on new materials or energy	
Process	**Bulgari,** gemstone setting process replacing a hazardous chemical substance with a non-hazardous one
Sustainable alternative	**Stella McCartney**, Falabella bag made from Mylo leather (mushroom-based leather)

Table 2. Classification innovations with or witout past identity

Type of innovation	Substitution innovation	Explanations
Innovations with past identity	Recycling	Handbag 100% made from leather scraps from the manufacture of the brand's leather goods.
	Upcycling	Handbag 100% made from recycled plastic bottles.
Innovations without past identity	Process	Handbag 100% made from pieces of leather-based dyeing process based on 100% natural products.
	Sustainable alternative	Handbag 100% made from pieces of vegetable leather produced from vine residues.

Table 3. Effect of the luxurious character of the brand concept

Dependent variables	Brand	Means	F	*p*	Partial Eta^2	Observed power
Product demand	Chanel (N=249) Zara (N=287)	3.853 4.145	**5.616**	**.018***	.011	.657
Consumers' advocacy behavior	Chanel (N=249) Zara (N=287)	4.031 4.491	**11.824**	**.001***	.022	.930
Willingness to pay a price premium	Chanel (N=249) Zara (N=287)	3.037 2.472	**16.990**	**.000***	.031	.984
Brand purchase intention	Chanel (N=249) Zara (N=287)	3.224 4.020	**22.288**	**.000***	.041	.997

Note: *significant ($p<0.05$)

Table 4a. Effect of luxurious character of the brand concept for "upcycling" and "recycled products" innovations

Dependent variables	Brand	Means	F	*p*	Partial Eta^2	Observed power
Product demand	Chanel (N=130) Zara (N=153)	3.757 4.112	**4.144**	**.043***	.015	.527
Consumers' advocacy behavior	Chanel (N=130) Zara (N=153)	3.976 4.539	**8.633**	**.004***	.030	.833
Willingness to pay a price premium	Chanel (N=130) Zara (N=153)	2.955 2.395	**8.739**	**.003***	.031	.838
Brand purchase intention	Chanel (N=130) Zara (N=153)	3.086 3.872	**11.204**	**.001***	.039	.916

Note: *significant (p<0.05)

Table 4b. Effect of luxurious character of the brand concept for "process" and "sustainable alternative" innovations

Dependent variables	Brand	Means	F	*p*	Partial Eta^2	Observed power
Product demand	Chanel (N=147) Zara (N=171)	3.910 4.133	2.034	.155	.006	.296
Consumers' advocacy behavior	Chanel (N=147) Zara (N=171)	4.112 4.537	**6.691**	**.010***	.021	.732
Willingness to pay a price premium	Chanel (N=147) Zara (N=171)	3.170 2.684	**7.215**	**.008***	.023	.764
Brand purchase intention	Chanel (N=147) Zara (N=171)	3.371 4.152	**12.925**	**.000***	.040	.948

Note: *significant (p<0.05)

Table 5. Effect of the feeling of specialness on luxury brands (N = 249)

Dependent variables	Beta	F	*p*	Partial Eta^2	Observed power
Product demand	0.252	24.458	.000*	.092	0.998
Consumers' advocacy behavior	0.314	25.731	.000*	.096	.999
Willingness to pay a price premium	0.389	30.965	.000*	.113	1.000
Brand purchase intention	0.333	17.200	.000*	.066	.985

Note: *significant (p<0.05)

Table 6. Effect of the feeling of environmental friendliness on luxury brands (N = 249)

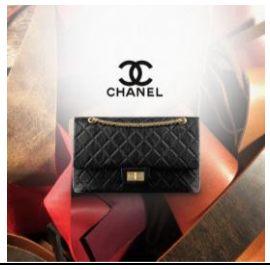
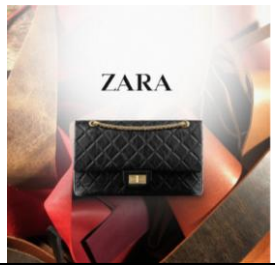
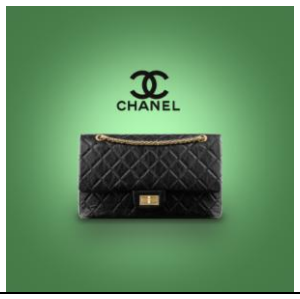
Dependent variables	Beta	F	*p*	Partial Eta^2	Observed power
Product demand	0.343	**41.046**	**.000***	.145	1.000
Consumers' advocacy behavior	0.186	**8.200**	**.005***	.033	.814
Willingness to pay a price premium	0.094	1.646	.201	.007	.248
Brand purchase intention	0.240	**8.099**	**.005***	.032	.809

Note: *significant (p<0.05)

Table 7. Synthesis of the findings

Hypothesis	Supported?
Hypothesis H1 (a)	Yes
Hypothesis H1 (b)	Yes
Hypothesis H1 (c)	No
Hypothesis H1 (d)	Yes
Hypothesis H2 (a)	Yes
Hypothesis H2 (b)	Yes
Hypothesis H2 (c)	No
Hypothesis H2 (d)	Yes
Hypothesis H3 (a)	Yes
Hypothesis H3 (b)	No
Hypothesis H3 (c)	No
Hypothesis H3 (d)	No
Hypothesis H4 (a)	Yes
Hypothesis H4 (b)	Yes
Hypothesis H4 (c)	Yes
Hypothesis H4 (d)	Yes
Hypothesis H5 (a)	Yes
Hypothesis H5 (b)	Yes
Hypothesis H5 (c)	No
Hypothesis H5 (d)	Yes

Appendix 1. Experimental treatments

Brand/ Substitution innovation	**Luxury brand (N = 249)**	**Non-luxury brand (N = 287)**
Recycling (N = 81)	**Treatment 1 (N= 40).** The Chanel brand launches its new eco-designed handbag. This is the first 100% handbag designed from leather scraps from the manufacture of the brand's leather goods. 	**Treatment 2 (N=41).** The Zara brand launches its new eco-designed handbag. This is the first 100% handbag designed from the leather scraps from the manufacture of the brand's leather goods. 
Process (N = 121)	**Treatment 3 (N= 42).** Chanel launches its new eco-designed handbag. This is the first time the brand has used a new leather-based dyeing process based on 100% natural products. The brand has therefore removed from its manufacturing process, all chemicals that negatively impact the environment. 	**Treatment 4 (N= 79).** Zara launches its new eco-designed handbag. This is the first time the brand has used a new leather-based dyeing process based on 100% natural products. The brand has therefore removed from its manufacturing process, all chemicals that negatively impact the environment. 
Sustainable alternative (N = 132)	**Treatment 5 (N= 77).** The Chanel brand launches a new eco-designed leather handbag. This is the first time the brand has committed to its leather products and uses a 100% vegetable leather produced from vine residues.  	**Treatment 6 (N=55).** The Zara brand launches a new eco-designed leather handbag. This is the first time the brand has committed to its leather products and uses a 100% vegetable leather produced from vine residues.  
Upcycling (N = 137)	**Treatment 7 (N=62).** Chanel launches its new eco-designed handbag. This is the first 100% handbag made from recycled plastic bottles. This new material is intended to replace animal leather with a more ecological solution.	**Treatment 8 (N=75).** Zara launches its new eco-designed handbag. This is the first 100% handbag made from recycled plastic bottles. This new material is intended to replace animal leather with a more ecological solution.

		
Control (N = 65)	**Treatment 9 (N= 28).** Chanel launches its new eco-designed handbag. 	**Treatment 10 (N= 37).** Zara launches its new eco-designed handbag. 

Appendix 2. Measurement scales used

Construct	Authors	Operationalization
Product demand	Kamleitner et al. (2019)	I find this product very appealing I really like this product I will probably buy this product
Consumers' advocacy behavior	Gebauer et al. (2013)	*If you were to talk to other people about this brand, how much do you agree with the following statements?* I could say positive things about [brand] to other people I could recommend [brand] to someone looking for my advice I could recommend [brand] without any problem
Willingness to pay a price premium	Netemeyer et al. (2004)	I am willing to pay a higher price for a [brand] handbag than for other brands I am willing to pay a lot more for [Brand] than for other brands The price of the products [brand] should increase a little so that it makes me move to another brand* I am willing to pay more for the [Brand] than for other brands ** Deleted after exploratory factor analyzes*
Brand purchase intention	Rangaswami et al. (1993)	If I had to buy [product], I could buy the brand [brand]
Felt specialness	Kamleitner et al. (2019)	I would feel special with this product I would feel unique with this product I would feel recognized with this product
Felt environmentalism	Kamleitner et al. (2019)	I would feel "sustainable" with this product I would feel environmentally conscious with this product I would feel environmentally friendly with this product

Luxurious character of the brand concept	Park et al. (1991), Park et al. (1993)	Generally, the "luxury" criterion is important when someone decides to buy [Brand] Generally, the "social status" criterion is important when someone decides to buy [Brand]
Perceived originality of the product	Koslow et al. (2003)	This product is novel This product is original This product is different
Eco-designed character of the product	Bezançon et al. (2019)	I realize that this new product is eco-designed
Environmental behaviors	Kilbourne and Pickett (2008)	*Direct behavior* I buy ecological products wherever possible I reduce household waste as much as possible I use products made from recycled materials wherever possible I buy organic food whenever possible *Indirect behavior* I am a member of an environmental organization I give money to an environmental organization I subscribe to an environmental magazine I would contact my political representative about an environmental issue

Appendix 3. Reliability and convergent validity of the measurement instruments

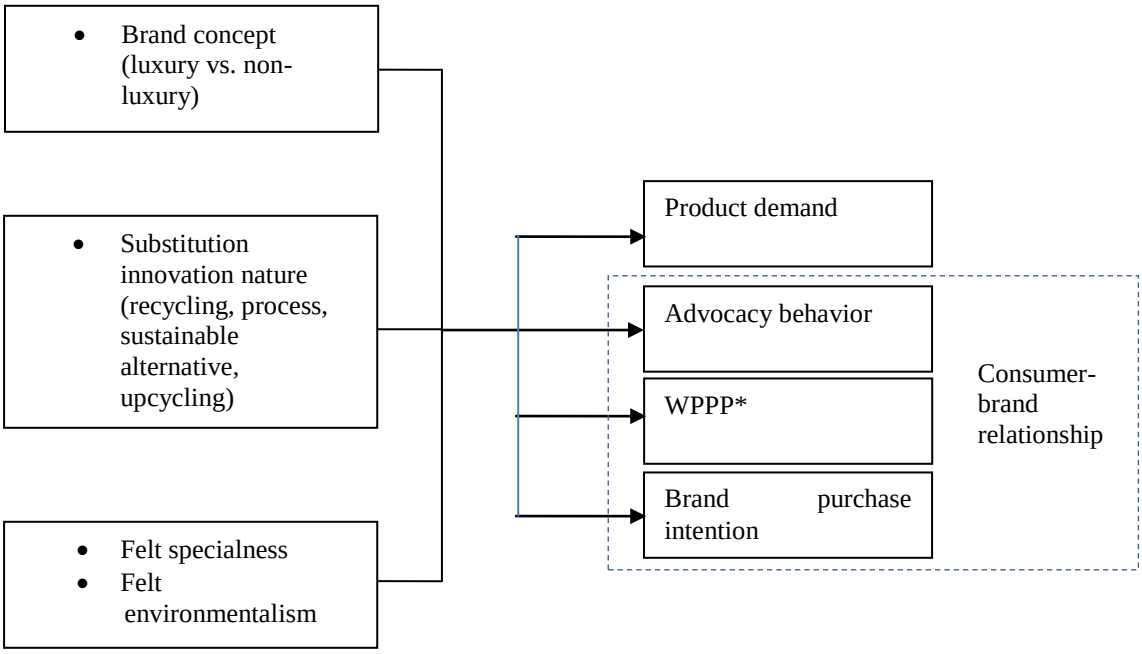
Exploratory factor analysis

Variable	Variance explained (%)	Communalities
Product demand	82.409	>0.721
Consumers' advocacy behavior	91.238	>0.873
Willingness to pay a price premium	85.935	>0.783
Brand purchase intention	-	-
Felt specialness	91.651	>0.906
Felt environmentalism	89.319	>0.835
Luxurious character of the brand concept	89.593	>0.896
Perceived originality of the product	79.330	>0.724
Eco-designed character of the product	-	-
Direct environmental behaviors	71.866	>0.588
Indirect environmental behaviors	70.114	>0.542

Confirmatory factor analysis

Variable	Reliability (Rhô) > 0.7	Convergent validity ρVC> 0.5
Product demand	0.918	0.789
Consumers' advocacy behavior	0.963	0.897
Willingness to pay a price premium	0.959	0.886
Brand purchase intention	-	-
Felt specialness	0.961	0.892
Felt environmentalism	0.963	0.896
Luxurious character of the brand concept	0.967	0.937
Perceived originality of the product	0.935	0.826
Eco-designed character of the product	-	-
Direct environmental behaviors	0.914	0.727
Indirect environmental behaviors	0.897	0.685

Appendix 4. Conceptual model



Note: *Willingness to pay a price premium

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