



## When symbolism overtakes quality: Materialists consumers disregard product quality when faced with luxury brands



Catherine Audrin<sup>a,b,c,d,\*</sup>, Tobias Brosch<sup>b,c</sup>, Julien Chanal<sup>a,b,d</sup>, David Sander<sup>b,c</sup>

<sup>a</sup>Methodology and Data Analysis Research Group, Faculty of Psychology and Educational Sciences (FPSE), University of Geneva, Geneva, Switzerland

<sup>b</sup>Department of Psychology, University of Geneva, Geneva, Switzerland

<sup>c</sup>Swiss Center for Affective Sciences, Geneva, Switzerland

<sup>d</sup>Distance Learning University Switzerland, Sierre, Switzerland

### ARTICLE INFO

#### Article history:

Received 21 March 2016

Received in revised form 24 March 2017

Accepted 4 April 2017

Available online 6 April 2017

#### Keywords:

Consumer psychology

Materialism

Luxury

Brand

Quality

### ABSTRACT

Consumers use extrinsic and intrinsic cues to set preferences and make purchase decisions. However, the extent to which luxury-related extrinsic cues determine consumer preferences and whether the relative weighting of extrinsic vs. intrinsic cues depends on consumers' values is still unclear. We investigated how luxury vs. non-luxury brands affect consumer preferences, and how this impact is moderated by consumers' materialistic values. Results from Experiment 1 showed that materialistic and non-materialistic participants similarly appreciated products with luxurious brands. However, compared with non-materialistic participants, materialistic participants devaluated products that were tagged as non-luxurious brands. In Experiment 2, we investigated how product quality interacts with brands and whether materialistic values moderated this interaction. Materialistic participants paid more attention to brand-related cues than to quality-related cues, whereas non-materialistic participants considered these cues similarly. Taken together, the results of these two studies suggest that materialism influences the way extrinsic (i.e., brand) and intrinsic (i.e., quality) information is combined during product evaluation. These results highlight the importance of materialism in consumer decision-making, especially in the context of luxury consumption.

© 2017 Elsevier B.V. All rights reserved.

## 1. Introduction

Research on consumer preferences has revealed the importance of both intrinsic and extrinsic cues when evaluating the quality of a product (Bredahl, 2004). Intrinsic cues refer to any product attribute that is inherent to the evaluated product, such as the material used to make a ready-to-wear clothing product (Veale & Quester, 2009). In contrast, extrinsic cues refer to any piece of information about the product that is not directly part of the product itself (Zeithaml, 1988), such as its price or the label displayed on it (e.g., brand).

When evaluating products that are intrinsically identical, consumers prefer high-priced products (Plassmann, O'Doherty, Shiv, & Rangel, 2008). Another set of studies tested the effect of brand on consumers' preferences. Results showed that consumers' expectancies affected experienced pleasantness during the consumption of the product (Allison & Uhl, 1964;

\* Corresponding author at: Department of Psychology, University of Geneva, Pont d'Arve 40, 1205 Geneva, Switzerland.

E-mail addresses: [catherine.audrin@unige.ch](mailto:catherine.audrin@unige.ch) (C. Audrin), [tobias.brosch@unige.ch](mailto:tobias.brosch@unige.ch) (T. Brosch), [julien.chanal@unige.ch](mailto:julien.chanal@unige.ch) (J. Chanal), [david.sander@unige.ch](mailto:david.sander@unige.ch) (D. Sander).

McClure et al., 2004). When participants drank Coke and Pepsi without knowing what they were drinking, experienced pleasantness was equal between drinks. However, when drinks were labelled with a brand (Coke or Pepsi), participants reported increased preferences toward Coke (McClure et al., 2004). This evidence reveals that consumers heavily rely on extrinsic cues (Kardes, Kim, & Lim, 2001; Kuusela, Spence, & Kanto, 1998; Veale & Quester, 2009).

Although the aforementioned studies focused on one cue at a time, products consist of multiple cues (Miyazaki, Grewal, & Goodstein, 2005), such as price and quality or brand and quality. When consumers face multiple congruent cues (e.g., high price and full warranty) displayed with a product, they consider these cues in an additive fashion and use them jointly for evaluating product quality (Anderson, 1981; Miyazaki et al., 2005). When cues are not congruent (e.g., high price and limited warranty), consumers try to reconcile them. The literature provides mixed evidence about how consumers reconcile such information. Some consumers consider non-congruent cues in an additive fashion. In this case, the resulting evaluation lies “somewhere between the contradictory poles of the two inconsistent subsets” (Slovic, 1966, p. 428). However, another consumer strategy for dealing with contradictory information is to put aside the non-congruent cue, thus keeping only one of the cues initially available as a way to evaluate the product (Slovic, 1966). Furthermore, when extrinsic pieces of information are non-congruent, consumers tend to disregard these cues, especially when intrinsic information is provided (Miyazaki et al., 2005). As stated by Loken (2006), in such situations, consumers get to process information selectively, leading to a biased method of evaluating the product.

The choice of information integration strategy is likely influenced by individuals' characteristics. For instance, Ahluwalia, Burnkrant, and Unnava (2000) studied how brand commitment moderates the way information related to the products is processed. Results showed that low-commitment consumers gave high importance to negative pieces of information, whereas highly committed consumers perceived positive information as being more diagnostic. The authors concluded that personality characteristics had an impact on the way consumers integrated information (i.e., knowledge about the brand) in their decisions. Interestingly, in the aforementioned studies, the experimental manipulation strictly focused on extrinsic cues such as country of origin, price, or warranty. Moreover, while these results were found for insurance policies and specific items such as athletic shoes or television, no such studies have been conducted in the context of luxury consumption.

Thus, we wanted to fill this gap by evaluating how information on brand and product quality is integrated when people evaluate luxury products. Luxury consumption is associated with strong psychological benefits, which can be divided into two aspects: personal and interpersonal (Nia & Zaichkowsky, 2000; Vigneron & Johnson, 1999; Vigneron & Johnson, 2004). Traditional research on luxury has mostly been focused on interpersonal benefits, showing that luxury is used conspicuously and provides owners with a way to display their wealth (Dubois & Duquesne, 1993; Veblen, 1899/2007). Other researchers revealed that consumers can buy luxury for themselves exclusively. In these studies, consumers reported that they considered luxury possessions to have personal meaning and importance for their identity construction (Bauer, Wilkie, Kim, & Bodenhausen, 2012) and self-esteem (Nia & Zaichkowsky, 2000). In this case, luxury consumption involves more personal interests (Dubois & Duquesne, 1993; Vickers & Renand, 2003). Therefore, in addition to the product itself, luxury conveys symbolic aspects that provide personal and interpersonal benefits to the consumer.

The extent to which these benefits will be decisive in consumption may depend on consumers' personal values. Materialism is a critical dimension of luxury consumers' values (e.g., Fournier & Richins, 1991). It is defined as the tendency to attribute significant importance to material possessions and renown (Kasser, 2003). Materialistic people, i.e., people who are high on materialism, are thus more likely to look for prestigious products reflecting a high social status (Fournier & Richins, 1991; Wang & Wallendorf, 2006). Specifically, materialism enhances interest in luxury brands (Gil, Kwon, Good, & Johnson, 2012) and a preference for luxury goods (Prendergast & Wong, 2003; Wong & Ahuvia, 1998). Therefore, we predicted that materialism influences the way intrinsic (quality) and extrinsic (brand) information is integrated during product evaluation.

Herein, we report our investigation of how the quality and brand of a product affect the evaluation of ready-to-wear products. Testing the impact of luxury brands on consumers' preferences seems to be particularly appropriate because brands are what consumers refer to in the first place when thinking about luxury (Aiello et al., 2009; Bastien & Kapferer, 2012). Specifically, we investigated whether ready-to-wear products (i.e., bags, scarves, belts, and purses) presented with a luxury brand were better evaluated than products presented with a non-luxury brand (Experiment 1). We hypothesized that products of the same quality presented with a luxury brand would be preferred to products with non-luxury brands. Additionally, we tested the extent to which materialism modulates this impact and hypothesized that the impact of brands may be stronger for materialistic participants than for non-materialistic participants.

Moreover, as every product entails both intrinsic (i.e., quality) and extrinsic (i.e., brand) cues, we further investigated how manipulating these two cues (i.e., high vs. low quality and luxury vs. non-luxury brand) could affect preferences (Experiment 2). More specifically, we created congruent ([non-] luxury brands with [low-] high-quality products) and non-congruent situations ([non-] luxury brands with [high-] low-quality products). We further tested the importance of materialism in this context. We hypothesized that materialistic and non-materialistic participants would consider congruent and non-congruent situations differently. Specifically, we hypothesized that materialistic participants would disregard quality cues in non-congruent situations, as they assign higher importance to the brand.

## 2. Experiment 1

### 2.1. Method

#### 2.1.1. Participants

A total of 196 female psychology students were recruited at a large public university. Because of the nature of our stimuli (i.e., products strictly designed to be worn by women), only female participants were recruited. All participants completed the full version of the Aspiration Index (Grouzet et al., 2005) in exchange for course credits. From the materialism scores assessed with this index (Grouzet et al., 2005), we selected the upper and lower quartiles of the initial sample of participants to classify the respondents and “achieve a clear separation” (Richins, 1994, p. 524). The selection consisted of 30 materialistic and 30 non-materialistic participants; mean age = 24.868 years, range = 19–49. Of these 60 participants, 10 did not show up (6 materialistic and 4 non-materialistic participants).

#### 2.1.2. Material

We first attempted to identify luxurious and non-luxurious brands adapted to our sample in a pre-study. One hundred sixty-five female students in the first year of a psychology degree at a large public university were asked to name as many luxury brands as they could. They were then presented with 106 brands of ready-to-wear products and asked whether they knew them. These brands were selected from advertisements seen in newspapers or on television. In addition, we selected brands mentioned in GenY Prestige Brand Ranking (L2 Think Tank & NYU Stren., 2010), which ranks the top luxurious brands for women. For each brand, a label was presented and participants were asked to click on “1” if they knew the brand and “0” if they did not. From these tests, we computed scores for each brand in order to select the most well-known luxurious and non-luxurious brands. Chanel, Gucci, Dior, and Louis Vuitton appeared to be the most well-known luxurious brands and H&M, Zebra, GAP, and Forever21 the most well-known non-luxurious brands. On average, the luxurious brands were known by 64% of our sample and the non-luxurious brands by 67%.

#### 2.1.3. Procedure

To complete the task, participants were invited to sit in front of a computer in a cubicle. A set of 48 images of ready-to-wear products from the following categories was presented to the participants: belts, handbags, purses, and scarves. The selected products came from the brands that were most likely unknown from our sample (pre-test study, see above). This selection ensured that products chosen could not be recognized or categorized easily into any brand. Each product was presented with one of eight brands: four luxurious and four non-luxurious. Half of the products were randomly presented with a luxurious brand, while the other half were presented with a non-luxurious brand. The luxurious and non-luxurious brands were randomized between participants so that each product was seen with each of the brands across the whole sample. To test the effect of luxury vs. non-luxury brands, participants were asked to evaluate how much they appreciated the product presented with the brand on the computer screen.

### 2.2. Measures

#### 2.2.1. Materialism

In the Aspiration Index questionnaire (Grouzet et al., 2005), participants rate the importance of 57 goals on a scale ranging from 1 (“not important at all”) to 9 (“extremely important”). These goals refer to 11 aspirations that can be separated into two main dimensions: extrinsic and intrinsic. Extrinsic dimensions refer to the importance given to one’s own image (e.g., “I hope for the future that my image will be one that others find appealing”), popularity (e.g., “I will be admired by many people”), financial success (e.g., “I will have expensive possessions”), and conformism (e.g., “I will live up to the expectations of my society”). Intrinsic dimensions are the importance given to one’s own health (e.g., “I will feel energetic and full of life”), affiliation (e.g., “There will always be someone around to take care of me”), spirituality (e.g., “I will find personal answers to universal spiritual questions such as: Is there a supreme spiritual being? Is there life after death? What is the meaning of life?”), community (e.g., “I will assist people who need it, asking nothing in return”), hedonism (e.g., “I will choose what I do, instead of being pushed along by life”), safety (e.g., “I will have few threats to my personal safety”), and self-acceptance (e.g., “I will feel free”).

Materialism scores are computed as the relative importance of extrinsic vs. intrinsic aspirations. The more people consider extrinsic aspirations important compared to intrinsic aspirations, the more materialistic they are. From these materialism scores, we selected the upper and lower quartiles of the initial sample of participants. Our final sample consisted of 24 materialistic participants (mean = 0.07,  $SD = 0.37$ ) and 26 non-materialistic participants (mean =  $-2.46$ ,  $SD = 0.46$ ).

#### 2.2.2. Appreciation of the products

For each product, participants were asked to rate how much they appreciated the presented product on a scale ranging from  $-100$  to  $+100$ . Each product was presented once.

### 2.3. Data analyses

We performed linear mixed models by using *lmerTest* (Kuznetsova, Brockhoff, & Christensen, 2013) and *lme4* packages (Bates, Maechler, Bolker, & Walker, 2013) in R (R Development Core Team, 2008). We considered models with subjects and items as random effects. This ensured that we could control for otherwise unexplained variance in the data, which was imputed to participants and stimuli (Judd, Westfall, & Kenny, 2012). We visually inspected residual plots to detect deviations from homoscedasticity or normality. Conditional R squared values were computed by using the *MuMIn* package (Johnson, 2014; Nakagawa & Schielzeth, 2013). We assigned the coding  $-1/+1$  to fixed effect predictors as advised by Judd et al. (2012), which allowed us to interpret the effects as main effects. We entered brand (luxurious vs. non-luxurious), materialism (materialistic vs. non-materialistic), and their interaction term as fixed effect predictors into the model.

### 2.4. Results

Results of the analyses to test the effects of brand and materialism are reported in Table 1 and observed means are reported in Table 2. The main effects of brand,  $b = 3.800$ , 95% confidence interval [CI]  $[-8.536, 0.935]$ ,  $t(48) = 1.606$ ,  $p = 0.115$ , and materialism,  $b = -4.201$ , 95% CI  $[-1.963, 10.365]$ ,  $t(95) = -1.362$ ,  $p = 0.179$ , were not significant. However, the interaction effect between materialism and brand was significant,  $b = 2.122$ , 95% CI  $[0.143, 4.102]$ ,  $t(4466) = 2.102$ ,  $p = 0.036$ . This effect revealed that materialistic participants evaluated products more favourably when they were presented with a luxurious than when they were presented with a non-luxurious brand label,  $t(58) = -2.330$ ,  $p = 0.023$  (Fig. 1). Conversely, non-materialistic participants disregarded the brand,  $t(59) = -0.644$ ,  $p = 0.522$ . Fixed and random effects of the model explained 21.86% of the total variance of the data.

### 2.5. Discussion

These results suggest that, depending on their materialistic tendencies, people consider the information provided with a product differently: materialistic participants prefer products that are displayed with a luxury brand as opposed to a non-luxury brand, whereas non-materialistic participants do not seem sensitive to brand information. This finding suggests that personal characteristics modulate people's consideration of brand in their preferences. On the basis of these results, we wanted to test how people would consider two sources of information (i.e., quality and brand) in their preferences and how this could differ depending on their materialistic tendencies.

## 3. Experiment 2

The purpose of Experiment 2 was to test how materialistic and non-materialistic participants deal with specific sources of information about products. In this experiment, we wanted to assess how participants managed to integrate and reconcile multiple (non-)congruent cues (i.e., brand and quality) in their evaluations. Thus, we manipulated both brand presentation and the quality of the product displayed (i.e., high- vs. low-quality products). The brand and quality could provide either congruent or non-congruent information. In a congruent situation, (non-) luxury brands and (low-) high-quality products were displayed together. Conversely, in a non-congruent situation, (non-) luxury brands were presented with (high-) low-quality products. We hypothesized that materialistic and non-materialistic participants would consider congruent and non-congruent situations differently. Specifically, we hypothesized that materialistic participants would disregard quality cues in non-congruent situations, as they assign higher importance to the brand. In other words, they would prefer low-quality products with luxury brands over high-quality products with non-luxury brands.

### 3.1. Methods

#### 3.1.1. Participants

Three hundred twenty-nine female students were first recruited to complete an online version of the Aspiration Index (Grouzet et al., 2005) designed to measure their materialism scores. From these materialism scores, we selected the upper and lower quartiles of the initial sample of participants to classify the respondents and “achieve a clear separation” (Richins, 1994, p. 524). The selection consisted of 35 materialistic participants (mean score = 0.04,  $SD = 0.37$ ) and 35 non-materialistic participants (mean score =  $-2.54$ ,  $SD = 1.0$ ); mean age = 21.241 years, range = 18–44. One of the non-materialistic group did not show up.

#### 3.1.2. Material

A pre-test study was performed on an independent sample of 35 female participants to control for the perceived quality of the products presented. In order to select high- and low-quality products, we looked for products belonging to luxurious and non-luxurious brands. Thus, we used brands as a proxy for quality, as the literature has shown that luxury brands provide high-quality products (Dubois & Laurent, 1994). We took care that these brands were unknown to our participants (i.e., less than 2% of the participants) thanks to the pre-test in Experiment 1. We further took care that no information about the

**Table 1**

Summary of the mixed-effects model analyses for predicting product appreciation as a function of brand and materialism.

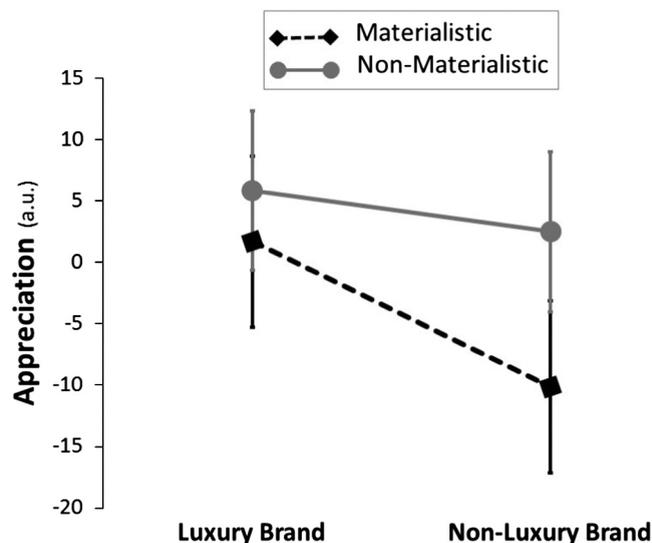
Fixed effects	b	SE	p-value
Intercept	−0.048	3.755	0.989
Materialism	4.201	3.085	0.179
Brand	−3.801	2.367	0.115
Materialism × brand	2.122	1.009	0.035*
Random effects	b	SE	p-value
<i>Participants</i>			
Intercept	422.110	20.540	
<i>Images</i>			
Intercept	2431.100	49.310	

\*  $p < 0.05$ .

**Table 2**

Means for materialistic and non-materialistic participants in the luxury and non-luxury brand condition.

	Materialists mean (SD)	Non-materialists mean (SD)
Luxury	1.673 (14.745)	5.831 (13.133)
Non-luxury	−10.172 (14.745)	2.475 (13.13)



**Fig. 1.** Appreciation of the product (mean  $\pm$  SD) as a function of the brand (luxury vs. non-luxury) in materialistic (black dashed line and squares) and non-materialistic participants (grey solid lines and circles).

brand could be seen on the picture. Participants were asked to assess how high the perceived quality of the product was on a continuous scale ranging from “very low” (−100) to “excellent” (+100). This evaluation referred to how people perceived the quality of the product based simply on the information contained in its picture. A two-sample  $t$ -test was performed to compare the perceived quality of products of high vs. low quality. This test confirmed that the difference between the selected high-quality products (mean = 20.170,  $SD = 10.220$ ) and the selected low-quality products (mean = 15.500,  $SD = 11.484$ ) was indeed significant,  $t(94) = 2.092$ ,  $p < 0.05$ .

### 3.1.3. Procedure

The task presented to participants was similar to that for Experiment 1. To test the interaction between brand and quality, we presented low-quality products for half of the 96 products and high-quality products for the other half (see pre-test study above). Half of the products were randomly presented with a luxurious brand, while the other half were presented with a non-luxurious brand. The luxurious and non-luxurious brands were randomized between participants so that each product was seen with each of the labels across the whole sample.

A few months after completion of the task, we contacted participants to control for their brand knowledge. We invited them to participate in an online study. In this study, participants were presented with each of the eight brands at a time and were asked to assess whether they knew it (“yes” button) or not (“no” button). The order of the brands was randomized across participants. Forty-three participants of the initial 69 in the sample answered our survey.

### 3.2. Data analyses

We performed a linear mixed model, in which we introduced participants and stimuli as random effects. We further entered materialism (materialistic vs. non-materialistic), quality (high quality vs. low quality), brand (luxury vs. non-luxury), and their interaction terms into the model. We refer to trials as “congruent” when the quality displayed was high and the brand luxurious or when the quality displayed was low and the brand non-luxurious. We refer to trials as “non-congruent” when the quality displayed was high and the brand non-luxurious or when the quality displayed was low and the brand luxurious. We further introduced participants’ brand knowledge (i.e., percentage of global brand knowledge) as a continuous predictor in the model.<sup>1</sup>

### 3.3. Results

Results of the analyses to test the effects of brand, quality, materialism, and their interactions are reported in Table 3. They reveal a main effect of quality,  $b = 4.334$ , 95% CI [0.825, 7.842],  $t(94) = 2.430$ ,  $p < 0.05$ , and a main effect of brand,  $b = 7.668$ , 95% CI [6.049, 9.28],  $t(3986) = 9.281$ ,  $p < 0.001$ . Moreover, results showed a significant interaction between quality and materialism,  $b = -1.7033$ , 95% CI [-3.322, -0.085],  $t(3986) = -2.062$ ,  $p < 0.05$ , as well as between brand and materialism,  $b = -3.0093$ , 95% CI [-4.631, -1.388],  $t(6650) = -3.636$ ,  $p < 0.001$ , suggesting that the impact of the brand was stronger for materialist than for non-materialist participants.

To test our hypotheses, we performed multiple comparisons by using Tukey HSD, which allowed us to compare the mean evaluations for both groups in congruent and non-congruent situations (observed means are reported in Table 4). In congruent situations, both groups behaved similarly: they evaluated high-quality products with luxurious brands more positively than they did low-quality products with non-luxurious brands (materialistic group:  $z = 5.843$ ,  $p < 0.001$ ; non-materialistic group:  $z = 4.650$ ,  $p < 0.001$ ; Fig. 2). Regarding non-congruent situations, the groups behaved differently: materialistic participants evaluated low-quality products with luxurious brands more positively than they did high-quality products with non-luxurious brands ( $z = 3.540$ ,  $p = 0.007$ ), whereas such a difference was not observed for non-materialistic participants ( $z = 0.644$ ,  $p = 0.996$ ). Interestingly, the significant interaction between quality and materialism suggests that the impact of quality is different for materialistic than for non-materialistic participants, as the latter are sensitive to quality cues ( $z = -3.046$ ,  $p = 0.009$ ), whereas materialistic participants are not ( $z = -1.338$ ,  $p = 0.468$ ). Fixed and random effects together explained 26.70% of the total variance of the data.

### 3.4. Discussion

These results suggest that people consider the information provided with a product differently, depending on their materialistic tendencies and on the congruence of the information provided. In a congruent situation, both groups behave similarly, as they both prefer high-quality products displayed with luxury brands to low-quality products displayed with non-luxury brands. However, when faced with a non-congruent situation, the groups behave differently: materialistic participants prefer low-quality products displayed with luxury brands to high-quality products displayed with non-luxury brands. On the other hand, non-materialistic participants seem to evaluate these two categories of products equally.

## 4. General discussion

In this study, we investigated how materialism is related to differences in product information integration in the context of luxury. More precisely, we evaluated the extent to which materialism in people determines the importance of brands and quality in the subjective assessment of goods, namely, their preferences. Experiment 1 focused on the impact of luxury brands, while Experiment 2 addressed the interaction of brand and quality.

Our results revealed that when the only available cue was the brand, materialistic participants devaluated the products presented with non-luxury brands compared to the products with luxury brands. Interestingly, with multiple (non-) congruent cues (i.e., brand and quality), our results showed that in a congruent situation, both groups obviously preferred high-quality products with a luxurious brand to low-quality products with a non-luxurious brand. In an incongruent situation, materialistic participants assigned high importance to the brand and preferred luxurious brands to non-luxurious brands,

<sup>1</sup> We computed the percentage of brand knowledge in general, the percentage of luxury brand knowledge, and the percentage of non-luxury brand knowledge for each participant. We compared whether materialistic and non-materialistic participants significantly differed in these three measures. We performed a simple  $t$ -test for each variable. Results revealed no significant difference in brand knowledge in general,  $t(41) = -0.556$ ,  $p = 0.581$ , on luxury brand knowledge,  $t(41) = -0.088$ ,  $p = 0.929$ , or on non-luxury brand knowledge,  $t(41) = -0.799$ ,  $p = 0.428$ .

**Table 3**

Summary of the mixed-effects model analyses for predicting product appreciation as a function of brand, quality, and materialism.

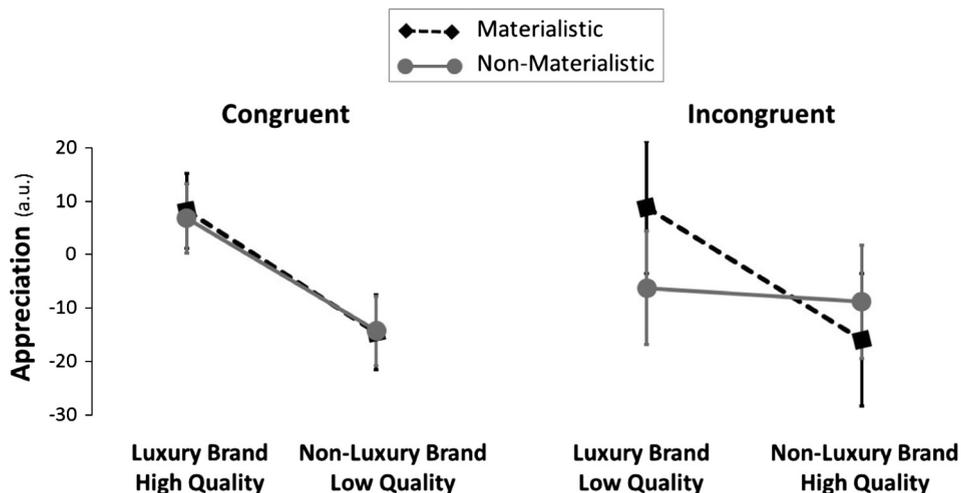
Fixed effects	b	SE	p-value
Intercept	-9.149	16.570	0.584
Quality	4.334	1.783	0.016**
Brand	7.668	0.826	0.001***
Materialism	5.901	4.041	0.152
Brand knowledge	7.500	22.034	0.735
Quality × Brand	-0.622	0.826	0.451
Materialism × Quality	-1.703	0.826	0.039*
Materialism × Brand	-3.009	0.828	0.001***
Materialism × Quality × Brand	0.374	0.828	0.651
Random effects	b	SE	p-value
<i>Participants</i>			
Intercept	660.600	25.70	
<i>Images</i>			
Intercept	239.7	15.48	

\*  $p < 0.05$ .  
 \*\*  $p < 0.01$ .  
 \*\*\*  $p < 0.001$ .

**Table 4**

Means for congruent and non-congruent situation for materialistic and non-materialistic participants.

		Materialists mean (SD)	Non-materialists mean (SD)
Congruent	Luxury brand-high quality	8.207 (15.198)	6.836 (11.462)
	Non-luxury brand-low quality	-14.586 (18.209)	-14.275 (16.694)
Non-congruent	Luxury brand-low quality	3.001 (14.451)	-5.525 (12.003)
	Non-luxury brand-low quality	-10.961 (19.371)	-6.981 (13.588)



**Fig. 2.** Appreciation of the product (mean  $\pm$  SD) as a function of brand (luxury vs. non-luxury) and quality of the products (high vs. low) in materialistic (black dashed line and squares) and non-materialistic participants (grey solid lines and circles). The left panel depicts the congruent situation and the right panel depicts the incongruent situation.

even when the quality was low. Conversely, non-materialistic participants seemed to take both cues (i.e., brand and quality) into account and try to reconcile them.

Our results support previous studies showing that extrinsic cues such as the price or brand affects consumer decisions (McClure et al., 2004; Plassmann et al., 2008). The results suggest a luxury brand effect, echoing previous evidence observed in the field of green consumption. Research has shown that products displayed with a green label were preferred to identical products presented with a regular label: consumers chose them more often, accepted paying more for them, and reported a better flavour (Lee, Shimizu, Kniffin, & Wansink, 2013; Linder et al., 2010; Sörqvist et al., 2013; Sörqvist, Haga, Langeborg

et al., 2015). Interestingly, however, our results point out that the impact of extrinsic cues can be modulated by people's values (i.e., materialism), extending previous findings into the domain of luxury consumption (e.g., Sörqvist, Haga, Holmgren, & Hansla, 2015). This finding suggests that a possible underlying mechanism of the luxury brand effect on people's preferences depends on materialistic tendencies. Such an effect could arise when people are convinced that products with luxurious brands are superior to non-luxurious brands. People who have a high involvement toward possessions – such as materialistic people – may idealize luxury brands to a higher extent than do people who have a low involvement toward possessions (i.e., non-materialistic people). Our results provide new insights about the processing of multiple cues, as they suggest that consumers facing multiple non-congruent cues can handle it in two ways: they may either add the cues or focus on one of them (Slovic, 1966). Specifically, the results suggest that in the case of luxury, non-materialistic participants added all available pieces of information, whereas materialistic participants focused on the brand, ignoring the information about quality. These results add new understanding to the previous literature showing that information processing depends on people's commitment toward brands (Ahluwalia et al., 2000). Our results also reveal that higher materialism leads to more important consideration of luxury brands, which further determines the way information associated with luxury brands is processed. This is in line with our hypothesized luxury brand effect, which reveals that people with a high concern for materialistic possessions may idealize any products displayed with luxury brands and may tend to neglect negative information.

Interestingly, the results between Experiments 1 and 2 are slightly different. Indeed, the effect of brand is not significant in Experiment 1, whereas it is significant in Experiment 2. This suggests that when introducing a supplementary factor (i.e., quality, orthogonally manipulated with brand), the importance of the brand is reinforced and becomes more significant. However, this may be driven by the materialistic group, as these participants strongly value the brand in the non-congruent situation. Again, this shows that, depending on the available information (i.e., brands only vs. brands and quality), people will process information differently and value it differently depending on their (materialistic) values.

Taken together, our results provide new insights into the field of research on consumer decision-making in the context of luxury consumption. Our study is the first to manipulate displayed brands and the quality of ready-to-wear products. Our findings provide evidence for the importance of the brand in establishing consumer preferences, while showing that inter-individual variables in the domain of materialism influence this process. Notably, the results reveal how strong the information provided by the brand may be to (materialistic) consumers, as the brands were randomly presented with the products, ensuring that the products displayed with the luxury brand would be preferred, even when the information conveyed by the brand was not congruent with the product's quality. This specific result, being consistent with previous research (e.g., Hahnel et al., 2015), highlights that values are important factors that have to be taken into account when studying consumer decision-making.

Some limitations of our experiments could be considered for future studies. First, we selected several luxurious and non-luxurious brands, not a particular brand. This was done to evaluate a global “luxury brand effect,” which would not be restricted to one particular brand. However, we did not take into account individuals' personal evaluation of each brand. Thus, some participants may not have liked a particular brand (whether it was luxury or non-luxury) and thus systematically disliked the products presented with this specific brand.

Another limitation is that our participants were exclusively students, who may not be familiar with luxury and luxury consumption. It would be interesting to evaluate whether our results could be replicated in luxury consumers. Finally, we focused our research on a female sample. This was related to the products chosen, which were exclusively designed for women. An interesting follow-up would be to evaluate whether the results observed in our study are also true for men.

## Acknowledgement

We thank Matthieu Boisgontier and Ulf Hahnel for their valuable insights into this work and for helping to improve the manuscript. This work was supported by the National Centre of Competence in Research for the Affective Sciences, financed by the Swiss National Science Foundation Grant 51NF40-104897, and hosted by the University of Geneva.

## References

- Ahluwalia, R., Burnkrant, R. E., & Unnava, H. R. (2000). Consumer response to negative publicity: The moderating role of commitment. *Journal of Marketing Research*, 37, 203–214.
- Aiello, G., Donvito, R., Godey, B., Pederzoli, D., Wiedmann, K.-P., Hennigs, N., ... Singh, R. (2009). An international perspective on luxury brand and country-of-origin effect. *Journal of Brand Management*, 16(5/6), 323–337.
- Allison, R. I., & Uhl, K. P. (1964). Influence of beer brand identification on taste perception. *Journal of Marketing Research*, 1, 36–39.
- Anderson, N. H. (1981). *Foundations of information integration theory*. New York, NY: Academic Press.
- Bastien, V., & Kapferer, J.-N. (2012). *Luxe oblige*. Paris, France: Editions Eyrolles.
- Bates, D., Maechler, M., Bolker, B., & Walker, S. (2013). lme4: Linear mixed-effects models using Eigen and S4 (Version 1.0-5) [Computer software]. Retrieved from <http://cran.r-project.org/web/packages/lme4/index.html>.
- Bauer, M. A., Wilkie, J. E. B., Kim, J. K., & Bodenhausen, G. V. (2012). Cuing consumerism situational materialism undermines personal and social well-being. *Psychological Science*, 23, 517–523.
- Bredahl, L. (2004). Cue utilisation and quality perception with regard to branded beef. *Food Quality and Preference*, 15, 65–75.
- Dubois, B., & Duquesne, P. (1993). The market for luxury goods: Income versus culture. *European Journal of Marketing*, 27, 35–44.
- Dubois, B., & Laurent, G. (1994). Attitudes toward the concept of luxury: An exploratory analysis. *Asia-Pacific Advances in Consumer Research*, 1, 273–278.
- Fournier, S., & Richins, M. L. (1991). Some theoretical and popular notions concerning materialism. *Journal of Social Behavior & Personality*, 6, 403–414.
- Gil, L. A., Kwon, K.-N., Good, L. K., & Johnson, L. W. (2012). Impact of self on attitudes toward luxury brands among teens. *Journal of Business Research*, 65, 1425–1433.

- Grouzet, F. M. E., Kasser, T., Ahuvia, A., Dols, J. M. F., Kim, Y., Lau, S., ... Sheldon, K. M. (2005). The structure of goal contents across 15 cultures. *Journal of Personality and Social Psychology*, 89, 800–816.
- Hahnel, U. J., Arnold, O., Waschto, M., Korcaj, L., Hillmann, K., Roser, D., & Spada, H. (2015). The power of putting a label on it: Green labels weigh heavier than contradicting product information for consumers' purchase decisions and post-purchase behavior. *Frontiers in Psychology*, 6.
- Johnson, P. C. D. (2014). Extension of Nakagawa & Schielzeth's R2GLMM to random slopes models. *Methods in Ecology and Evolution*, 5, 944–946.
- Judd, C. M., Westfall, J., & Kenny, D. A. (2012). Treating stimuli as a random factor in social psychology: A new and comprehensive solution to a pervasive but largely ignored problem. *Journal of Personality and Social Psychology*, 103, 54–69.
- Kardes, F. R., Kim, J., & Lim, J. (2001). Consumer expertise and the perceived diagnosticity of inference. *Advances in Consumer Research*, 19, 409–410.
- Kasser, T. (2003). *The high price of materialism*. Cambridge, MA: MIT Press.
- Kuusela, H., Spence, M. T., & Kanto, A. J. (1998). Expertise effects on prechoice decision processes and final outcomes: A protocol analysis. *European Journal of Marketing*, 32(5/6), 559–576.
- Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2013). lmerTest: Tests for random and fixed effects for linear mixed effect models (lmer objects of lme4 package) R package version 1.0-2 [Computer software]. Retrieved from <https://cran.r-project.org/web/packages/lmerTest/index.html>.
- L2 Think Tank & NYU Stren. (2010). *Gen Y prestige brand ranking 2010*. New York, NY: L2 Think Tank.
- Lee, W. J., Shimizu, M., Kniffin, K. M., & Wansink, B. (2013). You taste what you see: Do organic labels bias taste perceptions? *Food Quality and Preference*, 29, 33–39.
- Linder, N. S., Uhl, G., Fliessbach, K., Trautner, P., Elger, C. E., & Weber, B. (2010). Organic labeling influences food valuation and choice. *NeuroImage*, 53, 215–220.
- Loken, B. (2006). Consumer psychology: Categorization, inferences, affect, and persuasion. *Annual Review of Psychology*, 57, 453–485.
- McClure, S. M., Li, J., Tomlin, D., Cypert, K. S., Montague, L. M., & Montague, P. R. (2004). Neural correlates of behavioral preference for culturally familiar drinks. *Neuron*, 44, 379–387.
- Miyazaki, A. D., Grewal, D., & Goodstein, R. C. (2005). The effect of multiple extrinsic cues on quality perceptions: A matter of consistency. *Journal of Consumer Research*, 32, 146–153.
- Nakagawa, S., & Schielzeth, H. (2013). A general and simple method for obtaining R2 from generalized linear mixed-effects models. *Methods in Ecology and Evolution*, 4, 133–142.
- Nia, A., & Zaichkowsky, J. L. (2000). Do counterfeits devalue the ownership of luxury brands? *Journal of Product & Brand Management*, 9, 485–497.
- Plassmann, H., O'Doherty, J., Shiv, B., & Rangel, A. (2008). Marketing actions can modulate neural representations of experienced pleasantness. *Proceedings of the National Academy of Sciences of the United States of America*, 105, 1050–1054.
- Prendergast, G., & Wong, C. (2003). Parental influence on the purchase of luxury brands of infant apparel: An exploratory study in Hong Kong. *Journal of Consumer Marketing*, 20, 157–169.
- R Development Core Team (2008). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <http://www.R-project.org>.
- Richins, M. L. (1994). Special possessions and the expression of material values. *Journal of Consumer Research*, 21, 522–533.
- Slovic, P. (1966). Cue-consistency and cue-utilization in judgment. *The American Journal of Psychology*, 29, 427–434.
- Sörqvist, P., Haga, A., Holmgren, M., & Hansla, A. (2015). An eco-label effect in the built environment: Performance and comfort effects of labeling a light source environmentally friendly. *Journal of Environmental Psychology*, 42, 123–127.
- Sörqvist, P., Haga, A., Langeborg, L., Holmgren, M., Wallinder, M., Nösti, A., ... Marsh, J. E. (2015). The green halo: Mechanisms and limits of the eco-label effect. *Food Quality and Preference*, 43, 1–9.
- Sörqvist, P., Hedblom, D., Holmgren, M., Haga, A., Langeborg, L., Nösti, A., & Kägström, J. (2013). Who needs cream and sugar when there is eco-labeling? Taste and willingness to pay for "eco-friendly" coffee. *PlosOne*, 8(12), e80719.
- Veale, R., & Quester, P. (2009). Tasting quality: The roles of intrinsic and extrinsic cues. *Asia Pacific Journal of Marketing and Logistics*, 21, 195–207.
- Veblen, T. (2007). *The theory of the leisure class*. Don Mills, Canada: Oxford University Press (Original work published 1899).
- Vickers, J. S., & Renand, F. (2003). The marketing of luxury goods: An exploratory study – three conceptual dimensions. *The Marketing Review*, 3, 459–478.
- Vigneron, F., & Johnson, L. W. (1999). A review and a conceptual framework of prestige-seeking consumer behavior. *Academy of Marketing Science Review*, 1, 1–15.
- Vigneron, F., & Johnson, L. W. (2004). Measuring perceptions of brand luxury. *The Journal of Brand Management*, 11, 484–506.
- Wang, J., & Wallendorf, M. (2006). Materialism, status signaling, and product satisfaction. *Journal of the Academy of Marketing Science*, 34, 494–505.
- Wong, N. Y., & Ahuvia, A. C. (1998). Personal taste and family face: Luxury consumption in Confucian and Western societies. *Psychology & Marketing*, 15, 423–441.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *The Journal of Marketing*, 52, 2–22.