ORIGINAL EMPIRICAL RESEARCH

Hideous but worth it: Distinctive ugliness as a signal of luxury

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Abstract

Long-standing wisdom and academic research consistently agree that consumers choose attractive products and avoid ugly ones. And yet, multiple luxury brands successfully sell distinctively ugly products. This research provides an explanation, identifying distinctive ugliness as a signal of luxury and examining its impact on consumer choice. We explore this in seven studies, including a field study, a market pricing analysis, and five controlled laboratory experiments, three with consequential behavioral measures, incorporating a variety of fashion products, brands, aesthetic manipulations, and audiences. When products are from a non-luxury brand, consumers choose the attractive option and avoid the ugly. However, when from a luxury brand, consumers choose distinctively ugly products as often as attractive ones, not despite their ugliness but due to their ugliness and resulting ability to signal luxury. As such, brand prominence offers a boundary condition, as both a loud logo and distinctive ugliness serve to signal. Implications for both luxury and non-luxury brands are discussed.

Keywords Luxury · Aesthetics · Signaling · Distinctiveness · Conspicuous consumption

Introduction

The power of attractiveness to sell is well documented (Bloch, 1995; Bloch et al., 2003; Gibney & Luscombe 2000; Hoegg & Alba, 2008; Patrick & Peracchio, 2010; Postrel, 2003; Schmitt & Simonson, 1997). Highly attractive products can garner over a 200% price premium over their less attractive counterparts, even in product categories where consumers perceive price to be more important than design (Townsend & Sood, 2016). Ugly products are typically evaluated negatively, evoking distaste (Bloch, 1995), dislike, and disgust (Bloch et al., 2003).

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And yet, there is a particular ugly aesthetic in luxury fashion, examples including Balenciaga's Triple S sneakers and Gucci's multi-patterned tiger emblazoned sweaters, that has been, is currently, and is expected to continue to be successful (Davis, 2020; Madden, 2020; The Front Row 2020). To date, there exists no understanding from either the popular press (Cook, 2017) or academic research (as evidenced above) as to why consumers buy ugly luxury fashion. It is both counter to intuition and our understanding of the role of aesthetics in consumer choice.

The present research identifies this particular aesthetic as one combining ugliness and distinctiveness. Importantly, we identify a driver of its success; we show consumers recognize the ability of distinctive ugliness to signal the product as luxury. We find consumers value the signaling ability of distinctive ugly luxury enough to counterbalance its lack of attractiveness (i.e., ugliness). Thus, while among non-luxury brands consumers avoid ugliness, among luxury brands this is not the case and consumers are at least equally as likely to choose a distinctively ugly item as its more attractive counterparts. By identifying the counterintuitive value of distinctive ugliness and its role in the marketplace, we aid both theory and practice to capitalize and expand upon this phenomenon. Next, we set forth our conceptual framework drawing from the literature on signaling, aesthetics, and luxury to motivate our hypotheses. We then examine our hypotheses in seven studies.

Theoretical background

Aesthetics in fashion and luxury

The universal value of beauty High aesthetics are almost always preferred by consumers (Page & Herr, 2002; Reimann et al., 2010; Veryzer & Hutchinson, 1998). A body of research has considered the power of attractiveness to drive choice even in product categories where aesthetics' influence on judgment is less intuitive, such as industrial products (Yamamoto & Lambert, 1994), financial products (Townsend & Shu, 2010), or computing (Tractinsky et al., 2000). These results are less expected because these are areas where consumption is typically not public, self-presentation is not apparent, and consumers are likely unaware that there is any benefit (social or otherwise) to attractiveness.

For precisely these reasons, aesthetics are of particular importance in fashion, where consumption is public and products serve to signal (Lasswell & Parshall, 1961). Consumers are aware that their fashion choices influence how others perceive them (Calder & Burnkrant, 1977; Ratner & Kahn, 2002). The aesthetics of fashion matter, and generally, attractiveness offers a positive signal (Dion et al., 1972).

Luxury and signaling However, luxury differs from the rest of fashion; not only is signaling a large motivation for purchasing luxury (Berger & Ward, 2010; Dubois et al., 2001; Han et al., 2010), but consumers use luxury to signal a specific set of attributes – wealth, status, and prestige (Bagwell & Bernheim, 1996; Bearden & Etzel, 1982; Grossman & Shapiro, 1988; Veblen, 1899; Vigneron & Johnson, 1999). Luxury products can offer these signals because of their known high cost (Nelissen & Meijers, 2011).

As such, luxury is an example of costly signaling, where a viewer recognizes a cost associated with a behavior and thus understands the signaler to have a related value or resource (McAndrew, 2021). More generally, for signaling to occur, a cost does not necessarily need to be financial; the cost can be anything of value the signaler evidently gives up, such as time (Grafen, 1990; Zahavi, 1975), safety (Griskevicius et al., 2007; McAndrew & Perilloux, 2012), or energy (Bliege Bird et al., 2001). Because attractiveness is universally understood to have value (Bell, 1924; Redies, 2008), we predict that an overt lack of it will be perceived as a cost much like giving up money, time, safety, or energy, and, as such, can signal. Next, we examine a particular type of lack of attractiveness, distinctive ugliness, and discuss what it can signal.

Distinctive ugliness as a costly signal of luxury

Ugliness While philosophers, psychologists, and marketing experts agree that there is no universal definition of beauty, ugliness has always been defined as the opposite of beauty (Kant, 1790, as cited in Cohen, 2019). The field of empirical aesthetics identifies contrast, clarity, color, unity, order, and symmetry as the elements that influence aesthetic preference (Berlyne, 1973; Kreitler & Kreitler 1994; Hagtvedt, 2022). The general pattern is that mid (non-extreme) levels of these simple perceptual variables lead to evaluations of attractiveness, while extreme levels are evaluated as ugly (Leder et al., 2004).

Thus, while beauty and ugliness may be highly subjective, following these lines of reasoning and in accordance with prior research in marketing (e.g., Sevilla & Townsend, 2016; Townsend, 2017; Townsend & Shu, 2010) we define ugly products as those overtly lacking in beauty, those rated below the mean on measures of attractiveness. Moreover, while not measured, a visual examination of the study stimuli (see Appendix 1) strongly suggests that indeed the ugly products offer extreme levels of contrast, clarity, color, unity, order, and/or symmetry, in line with Leder et al. (2004).

During product evaluation, because aesthetics is almost unique among attributes for its visual, rather than symbolic (e.g., text) expression, its evaluation occurs automatically (Ramachandran & Hirstein, 1999; Zeki, 1999). As such, the appreciation of aesthetics feels innate; individuals presume others value it (Bell, 1924; Redies, 2008), particularly in the context of fashion. Thus, when attractiveness is not present, we predict consumers will view it as a cost.

Distinctiveness However, the cost must be accompanied by a signal that the ugliness is a deliberate choice and not a mistake or omission. Distinctiveness offers such a signal; distinctiveness implies something is intentional and not a misjudgment or mistake (Kordes-de Vaal, 1996). Moreover, prior research reveals that consumers recognize distinctiveness and that it can influence their decision-making (Berger and Heath 2007). In line with previous work, we define distinctiveness as a feature distinguishing a product from others (Dinwoodie, 1996) that is eye-catching, non-normative, or unique (Fiore, 2010).

Together these prior findings specify that an aesthetic that is both ugly, implicating the cost of giving up attractiveness, and distinctive, implicating intention, will suggest that the cost sustained was in order to gain another benefit of equal or greater value. We identify brand as this other benefit. This is because consumers view fashion products as primarily purchased for hedonic benefits (Kang & Park-Poaps, 2010; Kim & Hong, 2011). As such, in the context of fashion, the top-of-mind reasons for purchase are aesthetics or brand

(Wiedmann et al., 2009). The purchaser willingly forgoing aesthetics for another benefit implicates brand as that other benefit. Moreover, giving up attractiveness intentionally suggests the brand is more valuable than the cost of forgone attractiveness (Feltovich et al., 2002). We, therefore, propose that a distinctively ugly aesthetic implies the product is from a highly valuable, i.e., luxury, brand. More formally:

H1 Consumers perceive distinctive ugliness as a signal of luxury.

Next, we discuss how this influences consumer behavior, specifically, how consumers respond to distinctive ugliness in the marketplace.

Distinctively ugly luxury has value

While empirical studies focusing on the market response to ugliness are rare (Hoegg et al., 2010; Mookerjee et al., 2021), prior literature consistently shows that consumers will choose attractive products over ugly ones (Bloch, 1995; Bloch et al., 2003; Gibney and Luscombe 2000; Hoegg & Alba, 2008; Patrick & Peracchio, 2010; Postrel, 2003; Schmitt & Simonson, 1997; Townsend & Shu, 2010).

However, such research has not examined the role of aesthetics in the luxury market where purchase motivation is different; consumers purchase luxury in large part for its signaling ability (Berger & Ward, 2010; Han et al., 2010; Nelissen & Meijers, 2011; Wang & Griskevicius, 2014; Wiedmann et al., 2009). If luxury shoppers possess a desire to signal that is at least as great as their general desire for attractiveness, then a distinctively ugly luxury product will not be penalized in the marketplace for its ugliness (Page & Herr, 2002; Townsend & Shu, 2010; Veryzer & Hutchinson, 1998), but rather rewarded for its resulting signaling ability. At a minimum, distinctively ugly luxury products will be chosen at least as often as attractive ones. More formally:

H2a When from a non-luxury brand, choice is greater for attractive products than ugly ones. When from a luxury brand, distinctively ugly products are at least as likely to be chosen as distinctively attractive, as well as non-distinctively attractive and ugly, products.

H2b The recognition of distinctive ugliness as a signal of luxury mediates the influence of distinctive ugliness on choice of luxury products.

These hypotheses focus on the demand/buyer side of the marketplace. We also examine the valuation of distinctive ugliness from the seller's side. While, generally, attractive products will be priced higher than ugly ones, we expect an exception for distinctively ugly products from a luxury brand: they will be priced no less than distinctively attractive products.

Furthermore, our hypotheses mirror recent findings on the 'beauty premium' in the job marketplace. The 'beauty premium' refers to the greater wages earned by attractive workers (Biddle & Hamermesh, 1998). The greater market response to attractive individuals results from numerous sources including their above-average confidence and oral skills (Mobius & Rosenblat, 2006). Recent findings by Peng et al. (2020), however, identify an 'ugliness premium' in addition to the well-known 'beauty premium.' The authors find that, in the context of sellers on e-commerce platforms, ugliness increases perceptions of competence and that, because of this, the marketplace rewards individuals with unattractive faces (Peng et al., 2020). Our hypotheses align with these findings in two important manners. First, just as Peng et al. (2020) show that seller facial ugliness in the context of e-commerce platforms implicates competence, we predict that distinctive ugliness in the context of luxury products implicates an ability to signal (H1). Second, just as Peng et al. (2020) find this competence is enough to overcome a lack of attractiveness to lead to similar market response, we predict that a distinctive ugly luxury product's ability to signal is enough to overcome a lack of attractiveness to lead to a similar market response (i.e., choice; H2a-H2b).

### Luxury logo prominence and distinctive ugliness

If a distinctively ugly aesthetic is a signal of luxury (H1), and this is what drives its choice (H2a-H2b), then distinctive ugliness and another signal of luxury are redundant as they offer the same value. Loud luxury branding (i.e., when the brand's logo or name is prominently displayed) serves to signal luxury (Berger & Ward, 2010; Han et al., 2010; Wilcox et al., 2009), as it helps consumers easily identify brand provenance. We, therefore, further predict that the presence of distinctive ugliness will be a boundary condition for the benefits of a logo on consumer choice in the luxury context. More formally:

H3 In the context of a luxury brand, the presence of a logo increases choice unless the design is distinctively ugly.

Overview of studies

We examine our conceptual model in seven studies (four of which are pre-registered) that consider a range of product categories, multiple luxury and non-luxury brands, and several participant populations (see Fig. 1). See Table 1 for an overview of all study results. We also use a variety of manipulations of aesthetics to ensure our effects are not specific to any particular design element, including a single product manipulated to be attractive or ugly, as well as

Fig. 1 Conceptual model.
Notes: * We also include a replication of Study 3a in Web Appendix D revealing the same effects but among a different population and with different brands
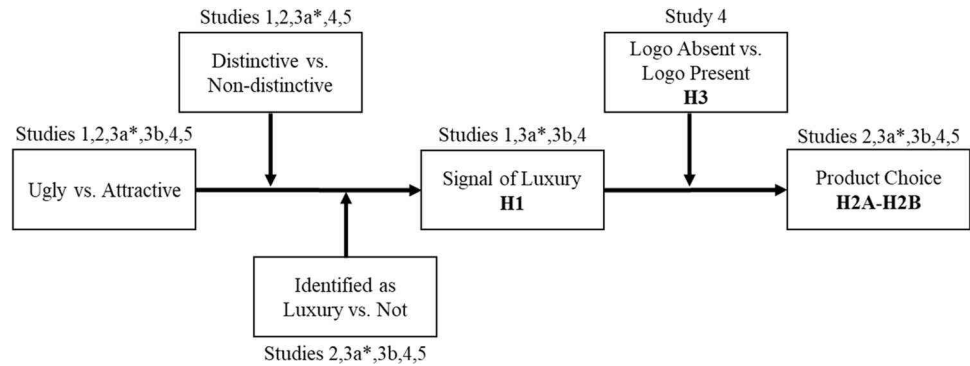
over 2,500 existing products. See Appendix 1 for all study stimuli. In all studies except Study 4, the non-luxury conditions function as our controls, as in these conditions we expect consumers to behave as prior theory would suggest, preferring attractive to ugly products regardless of distinctiveness. The unique value of the combination of distinctiveness and ugliness in the luxury context is highlighted when considered in contrast to how consumers respond to it in the non-luxury context.

The sample sizes for the studies were determined as follows. For Studies 1 and 5, we followed industry standards of having at least 10 participant evaluations per item (e.g., Hu et al., 2019). For Study 2, following Winterich et al. (2019), the promoted posts ran over the course of five days (Tuesday—Saturday). Instagram's split test function and a daily budget of $15 per condition ($120/daily) allowed us to reach ~ 2,800 impressions per condition per day. For Studies 3a, 3b, and 4 our aim was $N = 50$ participants per condition (VanVoorhis & Morgan, 2007). However, there was slight variance due to random assignment to conditions and irregular recruitment on the Prolific website (e.g., receiving 198 rather than 200 completed surveys).

Study 1: Distinctively ugly as a signal of luxury

Study 1 examines H1, that a distinctively ugly aesthetic signals the product is from a luxury brand. For items without prominent branding, we predict a two-way interaction between aesthetics and distinctiveness on luxury perceptions, such that items that are rated high on distinctiveness (i.e., distinctive) and low on aesthetics (i.e., ugly) will be rated the highest on perceptions of being from a luxury brand.

Methods

Participants were 1,170 Amazon Mechanical Turk workers (45.41% female, 54.14% male, 0.45% other, $M_{age} = 33.96$,

$SD_{age} = 10.87$) who were informed that the university was working with the design team of a brand seeking input on their upcoming clothing collections. Participants saw four randomly selected fashion items from a set of 250. The 250 items were randomly drawn from a set of 9,873 clothing items downloaded from the websites of five well-known luxury brands (Balenciaga, Dolce and Gabbana, Gucci, Louis Vuitton, and Prada) and five well-known non-luxury brands (Gap, H&M, Old Navy, Top Man, and Topshop) on July 9, 2020. The clothing items (male/female) included shirts, t-shirts, jackets, hoodies, coats, dresses, pants, shorts, and skirts and offered a comprehensive range of styles, colors, shapes, patterns, and levels of embellishment.

Given we were interested in understanding whether a distinctive ugly aesthetic is perceived as from luxury, we focused our analysis only on the products that did not have prominent branding. First, we excluded any item that had obvious brand symbols or logos (otherwise, luxury provenance would be obvious) and masked the brand on the label/tag of all other items. Second, we measured brand prominence by asking participants how easily they could recognize the brand the clothing item was from, meaning how prominently the clothing item displayed a trademark (e.g., logo, symbol, motto, emblem) that identified the brand (1 = not at all; 9 = a great deal). We retained only items from the bottom tercile of the brand prominence distribution (consistent with Du & Kamakura, 2011; Teixeira et al., 2014), which eliminated items whose branding might be identifiable due to branded color combinations (e.g., red and green for Gucci), branded patterns, etc. See Appendix 1 for a selection of the stimuli used.

For each item, participants rated it on four measures (all 1 = not at all to 9 = extremely, scale): attractive/good-looking (Sevilla & Townsend, 2016; Townsend, 2017); two measures of distinctiveness (unique/not ordinary and noticeable/eye-catching, r = 0.85; Fiore, 2010); and, luxury perceptions (likelihood it is from a luxury brand). Participants then gave their demographics, were debriefed, and thanked. See https://tinyurl.com/DUluxuryproject for full question text, data, and syntax for this and all studies.

Table 1 Overview of all study results

The column headers are organized into two aesthetic groups. For Study 1 the four conditions are labeled directly: Distinctive Attractive, Non-distinctive Attractive, Distinctive Ugly, Non-distinctive Ugly. For Studies 2 and 3a the eight conditions are grouped under **Non-luxury** and **Luxury**, each with: Distinctive Attractive, Non-distinctive Attractive, Distinctive Ugly, Non-distinctive Ugly.

	Hypotheses	Main DVs	Results	Non-luxury — Distinctive Attractive	Non-luxury — Non-distinctive Attractive	Non-luxury — Distinctive Ugly	Non-luxury — Non-distinctive Ugly	Luxury — Distinctive Attractive	Luxury — Non-distinctive Attractive	Luxury — Distinctive Ugly	Luxury — Non-distinctive Ugly
Study 1 $N = 1{,}170$	H1	Luxury Signaling	Aesthetics x Distinctiveness Interaction: $t(70) = -2.96$, $p < 0.01$	6.57* (Distinctive Attractive)	6.57* (Non-distinctive Attractive)			7.00 (Distinctive Ugly)		6.46* (Non-distinctive Ugly)	
Study 2 $N = 108{,}906$	Supportive of H2a	Click-Through-Rate (CTR)	Brand x Aesthetics interaction: $\chi^2(1) = 8.56$, $p = 0.003$ Brand x Distinctiveness interaction: $\chi^2(1) = 3.30$, $p = 0.069$	0.12%	0.21%***	0.08%	0.12%	0.15%***	0.12%***	0.24%	0.20%
Study 3a $N = 402$	H1, H2a, H2b	Luxury Signaling	Brand x Aesthetics interaction: $F(1, 394) = 7.80$, $p = 0.005$, $\eta^2 = 0.019$ Brand x Distinctiveness interaction: $F(1, 394) = 11.96$, $p = 0.001$, $\eta^2 = 0.029$	3.32	2.67	2.83	2.79	3.57*	2.22***	4.19	2.85***
		Lottery with choice between good and cash	Brand x Aesthetics interaction: $\chi^2(1) = 9.62$, $p = 0.002$ Brand x Distinctiveness interaction: $\chi^2(1) = 4.14$, $p = 0.042$	51%***	43%**	17%	19%	40%	28%*	52%	19%***

Table 1 (continued)

	Hypotheses	Main DVs	Results	Distinctive Attractive	Non-distinctive Attractive	Distinctive Ugly	Non-distinctive Ugly
Study 3a Replication (in Web Appendix) N=648	H1, H2a, H2b	Luxury Signaling	Brand x Aesthetics interaction: $F(1, 640)=5.32$, $p=0.021$, $\eta^2=0.008$ Brand x Distinctiveness interaction: $F(1, 640)=3.77$, $p=0.053$, $\eta^2=0.006$	4.33 / 4.11	4.39 / 4.12	4.22** / 3.49***	5.17 / 4.13**
		Hypothetical choice between good and cash	Brand x Aesthetics interaction: $F(1, 640)=5.70$, $p=0.017$, $\eta^2=0.009$ Brand x Distinctiveness interaction: $F(1, 640)=5.37$, $p=0.021$, $\eta^2=0.008$	3.67 / 4.40	3.14 / 3.66	4.82 / 4.38*	5.36 / 4.85
Study 3b N=198	H1, H2a, H2b	Luxury Signaling	Design x Brand interaction: $F(1, 194)=4.34$, $p=0.039$, $\eta^2=0.022$	- / 3.13	3.50 / -	- / 2.68***	4.29 / -
		Lottery with choice between good and cash	Design x Brand interaction: $(F(1, 194)=4.38$, $p=0.038$, $\eta^2=0.022)$	- / 3.27**	1.83 / -	- / 3.50	3.48 / -
Study 4 N=384	H2a, H3	Lottery with choice between good and cash	Distinctiveness x Logo interaction: $\chi^2(1)=3.95$, $p=0.047$	No Logo (Luxury) 38.30%** / 35.42%***	68.75% / 40.43%**	Logo (Luxury) 55.32% / 68.83%	72.92% / 74.47%
Study 5 N=1,184	Supportive of H2a	Log-Price	Brand x Aesthetics x Distinctiveness x Logo interaction: $t(27766)=-3.46$, $p<0.001$, $\eta^2=0.003$	Non-luxury 4.23*** / 4.02	3.91 / 3.79	Luxury 7.63 / 7.36**	7.61 / 7.27***

Notes: All pairwise comparisons relative to the distinctive ugly conditions, within luxury and within non-luxury; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Results

To examine H1, we regressed luxury perceptions on aesthetics, distinctiveness, and their interaction. We z-standardized our independent variables of interest and controlled for brand-specific fixed effects and clothing item gender (male/female). Specifically, our regression model was as follows:

$$Luxury\_perception = c + a_{brand} + \beta_1 Aesthetics + \beta_2 Distinctive$$
$$+ \beta_3 Aesthetics \times Distinctive + \beta_4 clothing\_gender + e$$

a_{brand} referred to the brand-specific fixed effect, which was allowed to be correlated with the independent variables of interest. a_{brand} controlled for all characteristics that were constant within a brand (including whether a brand was luxury or not, brand quality, brand personality, brand reputation, etc.). The model achieved an R-squared of 43%.

Results revealed only a main effect of distinctiveness ($\beta= 0.14$, $t(70) = 2.00$, $p = 0.049$), as well as an aesthetics by distinctiveness interaction ($t(70) = -2.96$, $p < 0.01$). Supporting H1, clothing items rated as ugly and distinctive were rated highest on luxury perceptions ($M_{DistinctiveUgly} = 7.00$, $SD = 0.10$; all pairwise comparisons: $ps < 0.05$; $\eta^2 > 0.05$; see Fig. 2). Results were similar when we excluded clothing gender and/or brand fixed effects (see Web Appendix A for further analyses).

Discussion

Among clothing items with no clear brand signal, distinctively ugly items are most likely to be perceived as from a luxury brand (H1).

The stimuli in this study offer three contributions. First, they provide external validity as they are from actual luxury and non-luxury brands. Second, they offer breadth; the set of clothing items used represents a variety of product designs, preven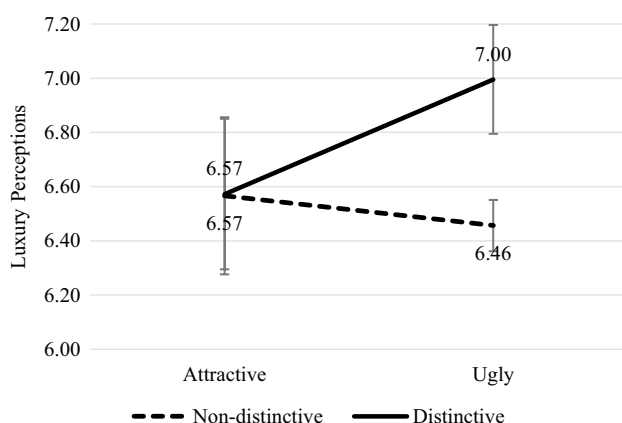ting ratings from being driven by any one particular style element. Third, there was a weak correlation between whether the product was actually from a luxury brand and perceptions of it as such ($r = 0.15$), perceptions of it as attractive ($r = -0.27$), or distinctive ($r = 0.17$). This suggests that these ten brands at very different price points offer products that vary on both aesthetics and distinctiveness. Moreover, consumers look to the aesthetics to (incorrectly) identify the products as luxury or not.

To reveal the signaling power of a distinctively ugly aesthetic, Study 1 examined the context where consumers do not know the product's brand. Such a situation occurs when, for example, a consumer views someone wearing a fashion item in public. Having examined such a context, in the next studies we inform participants of the product's brand to understand how consumers respond differently to distinctive ugliness depending on whether it is offered by a luxury brand or not. Such a situation occurs when, for example, the clothing item is in a brand's retail space (brick and mortar or online) or a branded advertisement.

Study 2: Instagram click-through-rates for distinctive ugly luxury

Preregistered Study 2 (https://tinyurl.com/S2UglyLuxury) examines actual luxury consumer behavior in a real-world context (i.e., Instagram) to see whether consumers respond differently to a distinctively ugly aesthetic when it is from a luxury brand versus when it is not. Consistent with H2a, we predict that when from a non-luxury (fashion, mainstream) brand, showing an ugly product would decrease click-through-rates (CTR, the number of link clicks divided by the number of impressions) regardless of whether the product is distinctive or not. However, when from a luxury brand, a distinctively ugly product would not decrease click-through and might, in fact, increase it.

Method

We ran a promotional campaign on Instagram reaching 108,906 unique Instagram users. To ensure they were luxury customers, the campaign only went to Instagram members who lived and were geo-targeted in the 50 wealthiest US zip codes per the U.S. Census (Han et al., 2010). Participants were randomly assigned to one of eight conditions in a 2 (Brand: Luxury vs. Non-luxury (fashion)) X 2 (Aesthetics: Ugly vs. Attractive) X 2 (Distinctiveness: Distinctive vs. Non-distinctive) design.

We created eight versions of an Instagram-promoted post for a brand called Orion. To manipulate brand perceptions, in the luxury (non-luxury) condition, the post said: "Introducing Orion, a luxury (fashion) brand. Click to enter the Orion world. #Orion #OrionWorld #Luxury (#Fashion)" (see

Fig. 2 Study 1: Luxury perceptions as a function of aesthetics and distinctiveness

Fig. 3 Study 2: Sample Instagram promoted posts: Distinctive ugly non-luxury (left) and distinctive attractive luxury (right)
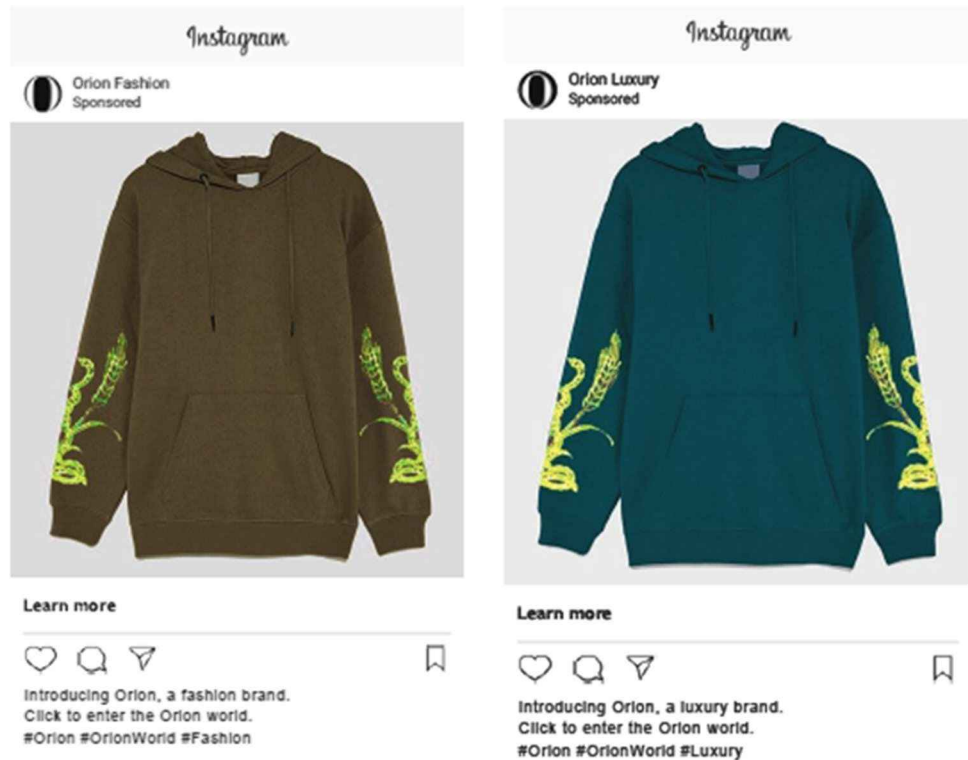

Fig. 3). To manipulate aesthetics and distinctiveness orthogonally, the post featured one of four sweatshirts designed to vary on aesthetics and distinctiveness as per condition (see Web Appendix B for pretest details).

The promoted posts ran over the course of five days (Tuesday—Saturday) using Instagram's split test function (Winterich et al., 2019) with a daily budget of $15 per condition ($120/daily). The key measure of interest was CTR (Kronrod et al., 2012). When a viewer clicked on the ad they were redirected to fictitious webpages of the brand (see Web Appendix C).

Results

In total, the campaign generated 115,540 impressions and 172 clicks (0.15% CTR). A binary logistic regression with brand, aesthetics, and distinctiveness as independent variables, and CTR as the dependent variable, found a marginal main effect of brand ($\chi^2(1)=3.43$, $p=0.064$), a brand by aesthetics interaction ($\chi^2(1)=8.56$, $p=0.003$), and a marginal brand by distinctiveness interaction ($\chi^2(1)=3.30$, $p=0.069$; see Fig. 4).

When the brand was described as non-luxury, there was a marginal main effect of aesthetics ($\chi^2(1)=3.58$, $p=0.059$) and a main effect of distinctiveness ($\chi^2(1)=4.82$, $p=0.028$). The attractive, non-distinctive condition had the highest CTR compared to all other conditions ($M_{\text{Non-distinctiveAttractiveNon-luxury}}=0.21\%$; $M_{\text{DistinctiveAttractiveNon-luxury}}=0.12\%$; $M_{\text{Non-distinctiveUglyNon-luxury}}=0.12\%$; $M_{\text{DistinctiveUglyNon-luxury}}=0.08\%$; all ps<0.001).

When the brand was described as luxury, there was a main effect of aesthetics ($\chi^2(1)=5.21$, $p=0.022$). The conditions with the highest CTR were the two ugly conditions ($M_{\text{DistinctiveUglyLuxury}}=0.24\%$; $M_{\text{Non-distinctiveUglyLuxury}}=0.20\%$) with the distinctive one directionally higher ($p=0.186$), but the ugly conditions were higher than both the attractive conditions ($M_{\text{DistinctiveAttractiveLuxury}}=0.15\%$; $M_{\text{Non-distinctiveAttractiveLuxury}}=0.12\%$; both ps<0.001).

Discussion

Study 2 offers partial support for H2a in a real marketing setting, revealing that luxury shoppers' response to ugliness depends on whether it is from a luxury brand or not. We hypothesized that ugliness would not detract from consumer response when distinctive and from a luxury brand. This was the case. However, that the effect occurred with luxury brands and ugliness even when the product was not distinctive was unexpected. Our *post-hoc* explanation is that, given the nature of the consumers targeted (i.e., those who live in the 50 wealthiest zip codes of the United States), this finding could be driven by an inadvertent oversampling of a subgroup of luxury consumers known as 'patricians' (individuals who have high financial means but low need for status). This group tends to use subtle signals of luxury (Han et al., 2010). Given that these consumers do not uniquely seek luxury products with overt signals (e.g., distinctive ugliness), they clicked on the non-distinctive ugly item as well as they believed it to also have signaling power among their in-group (other patricians).

Fig. 4 Study 2: Click-through-rates (CTR) by aesthetics and distinctiveness for non-luxury (mainstream/fashion) (left) and luxury (right) brands
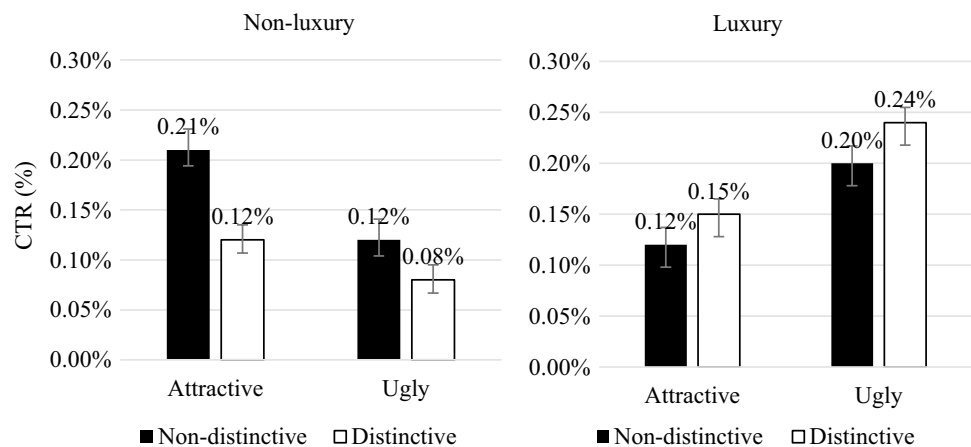
While the environment (social media), the sample (wealthy consumers), and behavior (CTR) were real in Study 2, we used a fictitious brand and created the product images to control for pre-existing knowledge. Study 3 (3a and 3b) complements this by using a controlled experimental setting, images from a real (luxury) brand (Study 3b), as well as real luxury and non-luxury brand names. Study 3 examines product ratings and choice by real luxury shoppers to offer support for H1-H2b.

Study 3a: Drivers of choice of a distinctively ugly luxury sweatshirt

Preregistered Study 3a (http://tinyurl.com/S3aUglyLuxury) examines H1-H2b by having participants randomly evaluate one of eight sweatshirts—those from Study 2 with orthogonally manipulated aesthetics, distinctiveness, and brand—Balenciaga (luxury) and Gap (non-luxury). We expect consumers to rate the distinctively ugly sweatshirt as more likely to be perceived by others as from a luxury brand (H1). When from Gap, we expect a higher choice likelihood for the attractive sweatshirt than the ugly one, regardless of distinctiveness. When from Balenciaga, we expect the choice likelihood of the distinctively ugly sweatshirt to be at least as high as that of the distinctively attractive, as well as non-distinctively attractive and ugly versions (H2a), and we expect its luxury signaling ability to mediate luxury sweatshirt choice (H2b). We ran this study with real luxury consumers; we also replicated it with student subjects and different brands, Christian Dior (luxury) and Old Navy (non-luxury). See Web Appendix D.

Additionally, to address the possibility that consumers choose distinctively ugly products only to satisfy a desire for uniqueness, or as a way to satisfy a need for attention, i.e., as a consequence of histrionic tendencies, we measured consumers' need for uniqueness (CNFU; Tian et al., 2001)

and histrionic behavior (Ferguson & Negy, 2014). If these factors do not interact with the choice measure, then this is evidence that neither need for uniqueness nor attention is driving the choice of distinctively ugly luxury. This is our prediction (see Web Appendix E for full covariate analyses in this and all following studies).

Methods

Participants were 402 consumers recruited from the Prolific platform (63.90% female, 35.80% male, 0.3% other, $M_{age} = 34.50$; SD = 16.34) who participated in exchange for payment.

Participants had a household income (HHI) of over $150,000, owned at least 2 luxury products costing over $270 each, and uploaded an image of their most expensive luxury good. Self-reported mean status level (1–10 scale; Bellezza et al., 2017) was $M_{Status} = 6.75/10$, SD = 1.22 (relative to scale mid-point of 5.5: $t(401) = 20.52$, $p < 0.001$) and mean number of luxury goods owned was $M_{LuxuryGoodsOwned} = 14.27$, SD = 18.78.

Participants were informed that the university was aiding the design team of a fashion brand seeking input on their upcoming clothing collection. Participants were randomly assigned to one of eight conditions in a 2 (Brand: Luxury (Balenciaga) vs. Non-luxury (Gap)) by 2 (Aesthetics: Ugly vs. Attractive) by 2 (Distinctiveness: Distinctive vs. Non-distinctive) between-subjects design using the sweatshirts from Study 2 and showing the brand name.

Participants were asked to rate the sweatshirt on three, 9-point scales: aesthetics and distinctiveness (unique/not ordinary and noticeable/eye-catching, r = 0.84) as manipulation checks. Given only a small percentage of consumers purchase luxury goods (0.50%, U.S. Bureau of Economic Analysis 2018; Deloitte, 2018) and that, even for luxury shoppers, a luxury purchase is not a regular occurrence (Statista, 2021), we expected a floor effect if we asked

purchase intent for the luxury products. Thus, we informed consumers of the value of the sweatshirt and offered them a potential choice between the good and 15% of its retail price in cash. Participants were told that the Balenciaga (Gap) sweatshirt retails for $500 ($50) and were given the dichotomous choice between receiving the jacket or 15% of its retail price in cash $75 ($7.50). Participants were informed that we would randomly select one participant to receive their choice (cash vs. the sweatshirt). To measure luxury signaling, participants read the following: "Imagine an acquaintance of yours is wearing the sweatshirt and walking down the street exactly as you saw it portrayed earlier. A stranger sees them in it, and they have never seen it before and don't know what brand it is from." They then answered: "How likely is it that they would perceive this sweatshirt as from a luxury brand?" (1 = not at all likely, 9 = extremely likely). Participants completed the CNFU (9 items, $\alpha = 0.96$) and the histrionic behavior ($\alpha = 0.85$) scales. They then rated Balenciaga and Gap on luxuriousness (1 = extremely low-end/economical, 5 = extremely high-end/luxurious) and personal brand familiarity (1 = not familiar at all, 5 = extremely familiar), gave basic demographic information (i.e., age, gender), and were debriefed. See Web Appendix F for brand luxuriousness and familiarity ratings for Studies 3a, 3b, and 4.

Results

Product perceptions An ANOVA with the aesthetics, distinctiveness, and brand manipulations on luxury signaling revealed a main effect of brand ($M_{Luxury} = 3.22$ vs. $M_{Non-luxury} = 2.90$, $F(1, 394) = 4.39$, $p = 0.037$, $\eta^2 = 0.011$), a main effect of distinctiveness ($M_{Distinctive} = 3.50$ vs. $M_{Non-distinctive} = 2.63$, $F(1, 394) = 33.87$, $p < 0.001$, $\eta^2 = 0.079$), an interaction of brand and aesthetics ($F(1, 394) = 7.80$, $p = 0.005$, $\eta^2 = 0.019$), and an interaction of brand and distinctiveness ($F(1, 394) = 11.96$, $p = 0.001$,

$\eta^2 = 0.029$). Overall, supporting H1, the distinctively ugly sweatshirt was the most likely to be perceived as signaling luxury ($M_{UglyDistinctive} = 3.51$) relative to all other conditions ($M_{UglyNon-distinctive} = 2.82$; $M_{AttractiveNon-distinctive} = 2.45$; $M_{AttractiveDistinctive} = 3.45$; all $ps < 0.066$). See Web Appendix G for further analyses of the interactions.

Product choice A binary logistic regression with brand, aesthetics, and distinctiveness, as predictors and choice (cash vs. sweatshirt) as the dependent variable, found a main effect of aesthetics ($\chi^2(1) = 9.52$, $p = 0.002$), a main effect of distinctiveness ($\chi^2(1) = 5.89$, $p = 0.015$), a brand by aesthetics interaction ($\chi^2(1) = 9.62$, $p = 0.002$), and a brand by distinctiveness interaction ($\chi^2(1) = 4.14$, $p = 0.042$).

When described as non-luxury, there was only a main effect of aesthetics ($\chi^2(1) = 18.04$, $p < 0.001$). Consumers were more likely to choose the sweatshirt over cash when it was attractive – regardless of distinctiveness ($\chi^2(1) = 0.07$, $p = 0.787$). See Fig. 5, left panel.

When described as luxury, there was only a main effect of distinctiveness ($\chi^2(1) = 10.60$, $p = 0.001$), and a marginal aesthetics x distinctiveness interaction ($\chi^2(1) = 2.83$, $p = 0.093$). The distinctively ugly sweatshirt was more likely to be chosen over cash than both the non-distinctively attractive and ugly ones (both $ps < 0.011$) and equally as likely to be chosen as the distinctively attractive one ($p = 0.174$). Put differently, when the sweatshirt was attractive, there was no influence of distinctiveness on choice ($\chi^2(1) = 1.38$, $p = 0.240$); however, when the sweatshirt was ugly, distinctiveness increased the likelihood that consumers chose it over cash ($\chi^2(1) = 11.92$, $p = 0.001$). See Fig. 5, right panel. These results support H1 and H2a.

Process To test our proposed process that the choice of distinctively ugly luxury is driven by perceptions of the product

Fig. 5 Study 3a: Effects of aesthetics, distinctiveness, and brand on choice of sweatshirt
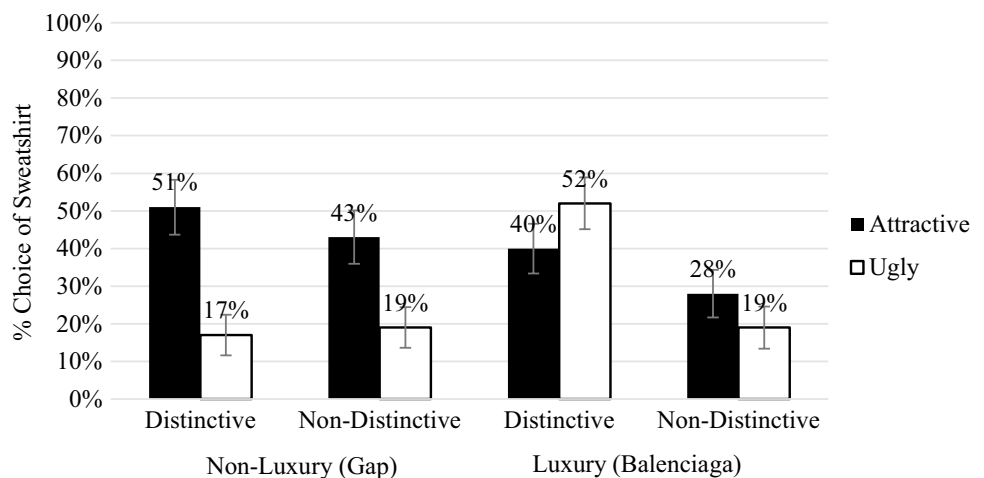
as a signal of luxury (H2b), we tested for moderated mediation (PROCESS macro, Model 12; Hayes, 2013), with aesthetics as the independent factor, choice as the dependent factor, perceptions of luxury signaling as the mediator, and brand and distinctiveness as the moderators. Supporting H2b, the negative effect of aesthetics on choice, via luxury signaling, was significant only when the sweatshirt was distinctive and from a luxury brand (index of moderated mediation: -0.384; -0.106; indirect effect when brand = luxury and sweatshirt = distinctive: b = -0.12, SE = 0.08, CI$_{95}$ = -0.303; -0.003); see Fig. 6). The effect was not significant in all other conditions. Including CNFU and histrionic behavior did not change the results, nor were there main effects of either variable (both ps > 0.624).

Discussion

Study 3a reveals that while in the context of a non-luxury brand consumers avoid ugliness, when from a luxury brand a distinctively ugly aesthetic is chosen at least as often as its attractive counterpart (H2a). Moreover, this study reveals what a distinctively ugly luxury product offers that compensates for the lack of attractiveness; this aesthetic signals that it is luxury (H1), and this is what drives its choice (H2b).

## Study 3b: Drivers of choice of a distinctively ugly luxury jacket

Methods

Preregistered Study 3b (http://tinyurl.com/S3bUglyLuxury) is the same as Study 3a except for the following two differences. First, one potential explanation for the results of Study 3a is that consumers perceive distinctively ugly designs as more expensive to create (e.g., more adornments), and that this may increase their choice of such products when from a luxury brand. To address this alternative explanation, in Study 3b we manipulated aesthetics by using two versions of the same Balenciaga jacket, presented either unbuttoned

(non-distinctively attractive design) or buttoned incorrectly (distinctively unattractive design). Note that this prevents Study 3b from offering a fully crossed design of the distinctive and attractive factors (but we have already tested such design in Study 3a). Second, to provide further breadth, we used different brands, Louis Vuitton (luxury) priced at $400 and Target (non-luxury) priced at $40, and offered participants a choice of the jacket or cash ($100 vs. $10).

Results

Results for Study 3b replicated those of Study 3a. There was an interaction of brand and design on luxury signaling (F(1, 194) = 4.34, p = 0.039, η^2 = 0.022) with no differences between designs when from non-luxury (M$_{Non-distinctiveAttractiveNon-luxury}$ = 3.13 vs. M$_{DistinctiveUglyNon-luxury}$ = 3.50, F(1, 194) = 0.81, p = 0.370) but a difference favoring the distinctively ugly design when from luxury (M$_{Non-distinctiveAttractiveLuxury}$ = 2.68 vs. M$_{DistinctiveUglyLuxury}$ = 4.29, F(1, 194) = 14.60, p < 0.001, η^2 = 0.070, H1). Similarly, when examining product choice, there was an interaction of brand and design (F(1, 194) = 4.38, p = 0.038, η^2 = 0.022). When from non-luxury, participants were more likely to select the attractive version (M$_{Non-DistinctiveAttractiveNon-luxury}$ = 3.27 vs. M$_{DistinctiveUglyNon-luxury}$ = 1.83F(1, 194) = 9.10, p = 0.003, η^2 = 0.045). However, when from luxury, participants were as likely to select the ugly version as the attractive version (M$_{Non-DistinctiveAttractiveLuxury}$ = 3.50 vs. M$_{DistinctiveUglyLuxury}$ = 3.48, F(1, 194) = 0.01, p = 0.948; H2a). Finally, we found support for our proposed process when we tested for moderated mediation (PROCESS macro, Model 8; Hayes, 2013). The negative effect of design (distinctively ugly) on choice, via luxury signaling, was significant only when the jacket was from luxury (index of moderated mediation: -7.087; -0.014; indirect effect when brand = luxury: b = -0.65, SE = 0.22, CI$_{95}$ = -1.123; -0.260 H2b). All results held when including CNFU as a covariate. See Web Appendix H for a full description of study 3b.

Fig. 6 Study 3a: Moderated mediation. Notes: * p < 0.05; ** p < 0.01; *** p < 0.001
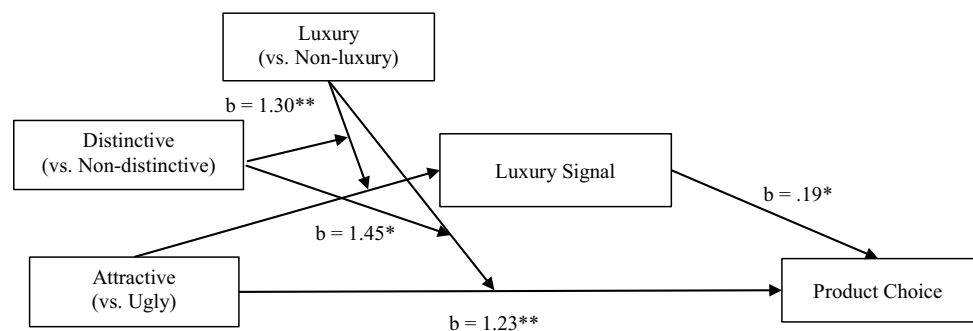
Discussion

Study 3b replicates Study 3a offering support for H1, Ha, and H2b while also controlling for material costs. Having examined the value of distinctively ugly luxury, we next aim to identify a boundary condition to the signaling benefit of distinctive ugliness. We thus look at the role of prominent branding.

Study 4: Logo prominence and distinctive ugliness

Preregistered Study 4 (http://tinyurl.com/S4LogoUglyLuxury) examines H3, that in the context of a luxury brand the presence of a logo increases choice generally but not when the design is distinctively ugly. For the stimuli, a designer created eight t-shirt images that varied independently on attractiveness, distinctiveness, and whether they prominently displayed a luxury logo (see Web Appendix I for pretest details).

Methods

Participants were 384 undergraduates from an Eastern U.S. university (60.40% Female, 39.30% Male, 0.30% other, $M_{age} = 18.89$; SD = 1.31) who participated for partial course credit. Participants were informed that Gucci was seeking input from potential customers on their upcoming clothing collection. Confirming that this population consists of current and potential luxury shoppers, participants rated themselves above the midpoint on social status (1–10 scale, Bellezza et al., 2017; $M_{SocialStatus} = 7.02/10$, SD = 1.50, relative to the scale mid-point of 5.5: t(383) = 19.84, $p < 0.001$). Also, the median selection for self-reported household

income was the highest category offered of "over $150,000", and participants reported owning over 8 luxury goods ($M_{LuxuryOwned} = 8.19$, SD = 13.96).

Participants were randomly assigned to one of eight conditions in a 2 (Aesthetics: Ugly vs. Attractive) by 2 (Distinctiveness: Distinctive vs. Non-distinctive) by 2 (Logo Prominence: Logo vs. No Logo) between-subjects design. We manipulated logo prominence by having the Gucci logo and iconic red and green colors either highly visible on the t-shirt or absent.

As a manipulation check, participants rated "How prominently does the t-shirt display the Gucci trademark (i.e., the Gucci brand name or logo)?" (1 = not at all; 7 = a great deal). See Web Appendix J for details. They then responded to the choice question from Studies 3a and 3b. The retail price of the t-shirt was $400, with a dichotomous choice between receiving the product and $60 in cash. Participants also completed the CNFU (9 items, $\alpha = 0.95$) and the histrionic behavior (11 items, $\alpha = 0.80$) scales. The rest was the same as the other lab studies.

Results

A binary logistic regression with aesthetics, distinctiveness, and logo prominence as predictors, and choice (cash vs. t-shirt) as the dependent variable, revealed a main effect of aesthetics favoring ugliness ($\chi^2(1) = 9.98$, $p = 0.002$), a main effect of logo prominence ($\chi^2(1) = 16.25$, $p < 0.001$), and a distinctiveness by logo interaction ($\chi^2(1) = 3.95$, $p = 0.047$). A prominent logo increased choice in all conditions (all $ps < 0.047$) except when the t-shirt was distinctively ugly ($\chi^2(1) = 2.02$, $p = 0.653$). Looked at another way, we found that a distinctively ugly aesthetic boosted choice (all $ps < 0.004$) but not when there was loud branding (all $ps > 0.109$). These results support H3 (see Fig. 7).

Fig. 7 Study 4: Choice of luxury t-shirt
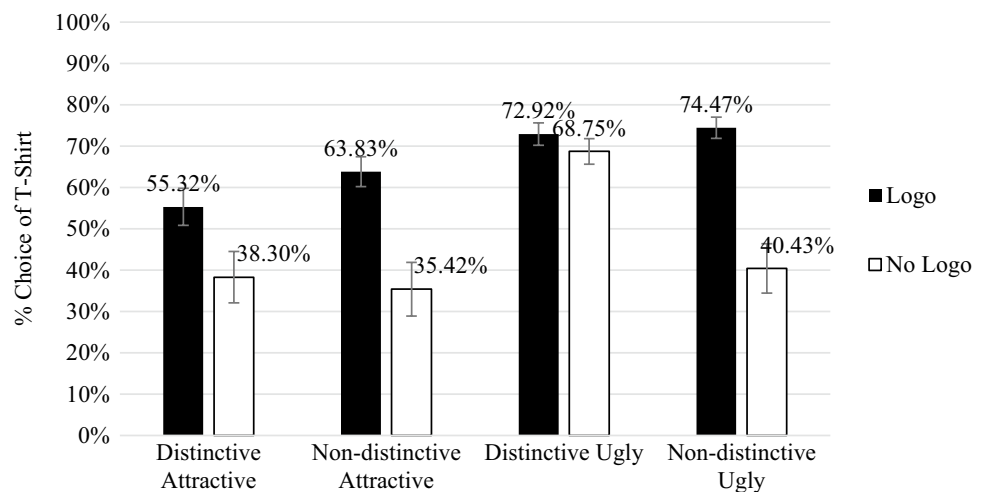
Discussion

Study 4 reveals that in the context of a luxury brand, a loud logo and distinctive ugliness are redundant; the loud logo offers no additional value to consumers (H3). As such, this study offers further support for H1: similarly to a loud logo, distinctive ugliness is a signal of luxury. Having examined the demand side of the phenomenon, in Study 5 we look at the supply side, by examining how prices vary by design (attractive vs. ugly; distinctive vs. non-) for both luxury and non-luxury brands.

Study 5: The price of distinctively ugly luxury and non-luxury

Study 5 examines the relationship between price, aesthetics, distinctiveness, and logo prominence for both luxury and non-luxury fashion products. We predict a four-way interaction between aesthetics, distinctiveness, logo prominence, and a brand being luxury. Moreover, we focus our examination of the interactive effect of aesthetics and distinctiveness only on items without loud branding (the bottom tercile of the logo prominence distribution, consistent with Du and Kamakura (2011) and Teixeira et al. (2014)). Consistent with H2a, we predict that, while non-luxury brands will price attractive products higher than ugly ones (regardless of distinctiveness), luxury brands will price distinctively ugly products the same as distinctively attractive ones.

Methods

Since our goal was to examine the pricing of thousands of products, we required an accurate tool to annotate the aesthetics, distinctiveness, and logo prominence of the items at scale. We trained and validated a computer vision model for this purpose.

Training set and computer vision model First, we collected a training set of images (i.e., photos) for the computer vision model. In July 2020, we downloaded apparel product photographs from the websites of five well-known luxury (Balenciaga, Dolce and Gabbana, Gucci, Louis Vuitton, and Prada) and five well-known non-luxury (Gap, H&M, Old Navy, Top Man, and Topshop) brands. This wide initial pool of brands allows the model to learn from a variety of styles and aesthetics. The clothing items (male/female) include coats, dresses, hoodies, jackets, pants, shorts, skirts, and t-shirts and offered a wide and comprehensive range of styles, colors, shapes, patterns, and levels of embellishment. See Appendix 1 for examples of items used.

Of the entire set of 9,873 products, we drew a random 1,596 sample to be rated by survey participants to create the training set. Participants were 1,814 undergraduates from a private, Eastern U.S. university who participated for partial course or extra credit. Each participant rated a random set of 11 items on our measures of attractive/good-looking, distinctiveness (2 items, $r = 0.95$), and brand/logo prominence used in Study 4. Each image received at least 10 participant evaluations ($M = 12.70$, $SD = 0.87$, Median $= 13$) consistent with Hu et al. (2019).

Next, we developed a model that predicted ratings of a product (i.e., aesthetics, distinctiveness, logo prominence) given a product image. This allowed us to scale our pricing study to thousands of items without relying on further human coding. We used computer vision algorithms to extract quantifiable characteristics from the product images including color, texture, shape, lines, curves, corners, edges, and orientation, shown to be relevant to the analysis of photography aesthetics (Datta et al., 2006; Khosla et al., 2014). Five hundred-seven (507) variables were extracted from the images. We then linked these variables (predictors) to lab participants' ratings of aesthetics, distinctiveness, and logo prominence for the 1,596 products (see Web Appendix K for all technical details of this study).

To estimate the predictive model, we split our set of images into training, validation, and testing sets (Yoganarasimhan, 2020). We then assigned 80% of the images to the training + validation set (and used cross-validation) and 20% to the test set. The pool of candidate predictive models included OLS (stepwise regression), lasso, ridge, elastic net, SVM, random forest, and gradient boosting. The best-performing model delivered correlations between actuals and predictions of $r = 0.81$ for aesthetics, $r = 0.89$ for distinctiveness, and $r = 0.75$ for logo prominence. Finally, we used this best-performing model to generate predictions on aesthetics, distinctiveness, and logo prominence for all 2,784 products from two luxury (Gucci, LV) and two non-luxury (Old Navy, Topman) brands for which we also collected pricing data.

Empirical model To examine the empirical relationship between product prices, product scores on aesthetics, distinctiveness, logo prominence, and the luxury status of a brand, we estimated the following model at the product level:

$$
\begin{aligned}
\log(price) = {} & c + a_{brand} + \beta_1 Aesthetics + \beta_2 Distinctive + \beta_3 LogoProminent \\
& + \beta_4 Aesth \times Dist + \beta_5 Aesth \times Logo + \beta_6 Dist \times Logo \\
& + \beta_7 Aesth \times Dist \times Logo + Luxury \times (\beta_8 Aesth \\
& + \beta_9 Dist + \beta_{10} Logo + \beta_{11} Aesth \times Dist + \beta_{12} Aesth \times Logo \\
& + \beta_{13} Dist \times Logo + \beta_{14} Aesth \times Dist \times Logo) + e
\end{aligned}
$$

We log-transformed price due to the presence of heavy outliers, particularly on the luxury side. As in Study 1, a_{brand} refers to the brand-specific effects, which was allowed to be correlated with the independent variables of interest. a_{brand}

controlled for all characteristics of a brand that are constant within a brand (e.g., whether a brand was luxury or not, brand quality, brand personality, brand reputation). We did not include the main effect of *Luxury* since it was absorbed in the brand-specific effect a_{brand}. The model reached an adjusted R-squared of 90%.

Results

There were main effects of aesthetics ($\beta = 0.10$, $t(2766) = 5.78$, $p < 0.001$, $\eta^2 = 0.008$), distinctiveness ($\beta = 0.12$, $t(2766) = 6.04$, $p < 0.001$, $\eta^2 = 0.03$), and logo prominence ($\beta = -0.22$, $t(2766) = -8.89$, $p < 0.001$, $\eta^2 = 0.022$) on price as well as a four-way interaction ($t(2766) = -3.46$, $p < 0.001$, $\eta^2 = 0.003$). We focused only on the items for which branding was hard to identify. Specifically, we restricted our sample to items in the bottom tercile of the logo prominence distribution ($N = 928$), consistent with Du and Kamakura (2011) and Teixeira et al. (2014). For this sample, we estimated the following model with a three-way interaction:

$$\log(price) = c + a_{brand} + \beta_1 Aesthetics + \beta_2 Distinctivex + \beta_3 Aesth \times Dist$$
$$+ Luxury \times (\beta_4 Aesth + \beta_5 Dist + \beta_6 Aesth \times Dist) + e$$

We did not include the main effect of *Luxury* since it was absorbed in the brand-specific effect a_{brand}. As before, for both luxury and non-luxury brands, we detected main effects of aesthetics ($\beta = 0.10$, $t(918) = 2.89$, $p < 0.001$, $\eta^2 = 0.002$), distinctiveness ($\beta = 0.06$, $t(918) = 2.11$, $p < 0.04$, $\eta^2 = 0.014$), and a three-way interaction of aesthetics, distinctiveness, and the luxury status of a brand ($t(918) = -2.97$, $p < 0.005$, $\eta^2 = 0.006$).

To clarify the results further, we estimated a two-way interaction (aesthetics × distinctiveness) model separately for the luxury (Gucci, LV) and non-luxury (Old Navy, Topman) brands. For non-luxury, we found a main effects of aesthetics ($\beta = 0.14$, $t(460) = 3.54$, $p < 0.001$, $\eta^2 = 0.027$),

distinctiveness ($\beta = 0.08$, $t(460) = 2.47$, $p < 0.020$, $\eta^2 = 0.015$), and a significant (positive) interaction ($t(460) = 2.23$, $p < 0.030$, $\eta^2 = 0.009$). For luxury, we only found a main effect of distinctiveness ($\beta = 0.15$, $t(460) = 5.75$, $p < 0.001$, $\eta^2 = 0.11$), and a significant (negative) interaction ($t(460) = -4.68$, $p < 0.001$, $\eta^2 = 0.04$). Looked at another way, there was a positive main effect of aesthetics on price in all cases with the exception of distinctive products from luxury brands. For non-distinctive products, both luxury and non-luxury brands charge a premium for attractiveness (luxury: $M_{Non-distinctiveAttractive} = 7.36$ vs. $M_{Non-distinctiveUgly} = 7.27$, $F(1, 460) = 5.78$, $p = 0.020$, $\eta^2 = 0.01$; non-luxury: $M_{Non-distinctiveAttractive} = 4.02$ vs. $M_{Non-distinctiveUgly} = 3.79$, $F(1, 460) = 12.77$, $p < 0.001$, $\eta^2 = 0.027$). The same attractiveness premium exists among non-luxury distinctive products (non-luxury: $M_{DistinctiveAttractive} = 4.23$ vs. $M_{DistinctiveUgly} = 3.91$, $F(1, 460) = 11.79$, $p < 0.001$, $\eta^2 = 0.025$). The exception is distinctively ugly luxury products; in this case, there is no price premium for attractiveness (luxury: $M_{DistinctiveAttractive} = 7.63$ vs. $M_{DistinctiveUgly} = 7.61$, $F(1, 460) = 0.06$, $p = 0.800$; see Fig. 8).

Discussion

This study offers three contributions. First, the results provide confirmation that beauty has value (Page & Herr, 2002; Reimann et al., 2010; Veryzer & Hutchinson, 1998) since both luxury and non-luxury brands charge more for better-looking products. Second, we identify the exception to this rule; luxury brands (only) charge the same price for distinctively ugly products as they do attractive ones, mirroring H2a. Third, we develop a scalable computer vision-based model that predicts the aesthetics, distinctiveness, and logo prominence of any apparel product using pixel-level information from the product image. Marketers can use this tool to create automatically sorted lists of products and put specific aesthetics/distinctiveness items at the top of user search results.

Fig. 8 Study 5: Luxury brands price distinctively attractive and ugly products the same (non-luxury brands (left); luxury brands (right)). Notes: Clothing items from the bottom tercile (consistent with Du & Kamakura, 2011; Teixeira et al., 2014) of the logo prominence scale
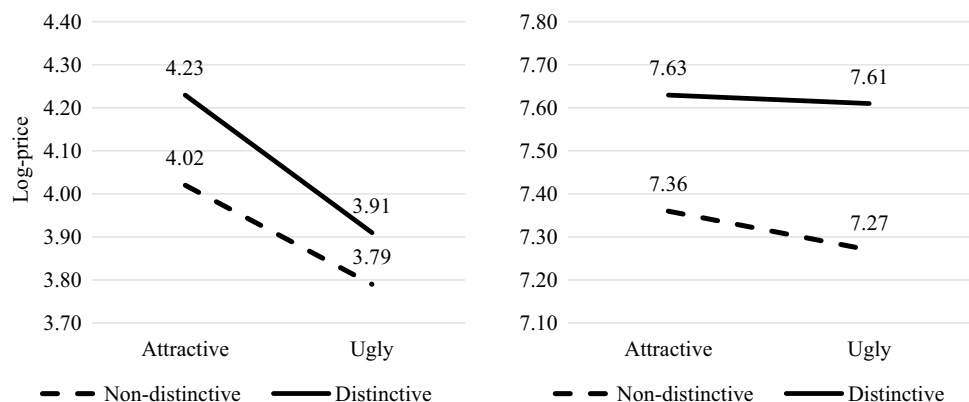
General discussion

Until now, neither academics nor fashion insiders could explain why a distinctively ugly aesthetic has repeatedly been successful in the luxury marketplace (Biondi, 2019; BoF Team, 2018; Gallagher, 2022). We answered this question across seven studies, including a field study on Instagram, five controlled laboratory experiments, and an examination of the pricing of thousands of products, to help managers and decision-makers of both luxury and non-luxury brands capitalize on the phenomenon, as we discuss later.

We found that consumers recognize a distinctively ugly aesthetic as a signal of luxury (H1, Studies 1–4). Moreover, while generally consumers choose beauty and avoid ugliness, when from a luxury brand distinctive ugliness is at least as likely to be chosen as its attractive counterparts (H2a, Studies 2–4), and this choice is driven by the ability of distinctively ugly luxury products to signal luxury (H2b, Studies 3a, replication of 3a, 3b). Study 4 identifies a boundary condition; when a logo is prominently displayed, there is no boost in choice likelihood among distinctively ugly luxury products (H3), further supporting that the value of this aesthetic comes, at least in part, from its ability to signal. Ultimately, the value of signaling luxury is great enough to overcome the cost of forgone beauty. Finally, Study 5 provides supportive evidence from the supply side; while generally, brands put a price premium on beauty, luxury brands price distinctively ugly products equally to distinctively attractive ones.

The studies included several participant populations, both genders, real luxury consumers, students from two private Universities, and both MTurk and Prolific workers, highlighting how the effects are not specific to a particular subpopulation. This is noteworthy given that the luxury shopper is, in fact, a small percentage of all consumers (U.S. Bureau of Economic Analysis 2018; Deloitte, 2018), and yet it seems a larger audience can identify and understand the signal and meaning of a distinctively ugly aesthetic. This is the first managerial contribution of this work. While leading voices in fashion offer a range of speculations for the success of the ugly luxury phenomenon, ranging from brands using it purely for social media attention (Cook, 2017) to consumers choosing practicality over everything else, including aesthetics (Madden, 2020), in this research, we identify the key benefit distinctive ugliness offers to consumers: this aesthetic signals luxury. This means that, for a large portion of the luxury market, the signaling benefit of a luxury good is more important than attractiveness.

Managerial implications

This research offers at least six other practical implications for brand managers, designers, and marketers of both luxury and non-luxury brands. We find that distinctive ugliness functions much like a brand logo, and distinctive ugliness is a "loud" signal, one understood not just by fashion insiders. This, and Study 4 in particular, suggests that luxury brands need not combine a distinctively ugly aesthetic and a loud logo as these two elements are redundant in their luxury signaling ability.

While ugliness may be the result of mere presentation differences, it is critical that the ugliness is distinctive and, thus, not perceived as a mistake. Luxury brands likely have a bit more leeway on this than non-luxury brands. Nevertheless, the results of Studies 1, 3a, the replication of Study 3a, 3b, 4, and 5 indicate distinctiveness is critical for there to be a positive choice response to ugliness.[1] Furthermore, understanding why consumers opt for distinctive ugliness may help brands take advantage of it; ultimately, what the consumer seeks are additional manners in which to signal luxury, signals that may be universally understood and yet less overt than a loud logo.

There are also implications for non-luxury brands. While these brands typically take their design cues from luxury brands (Reinach, 2005), this research implies that distinctive ugliness is a style they ought to copy with caution. While in Study 1 we find that a distinctively ugly aesthetic may suggest that the product is a luxury product even when it is not, Studies 3a, the replication of Study 3a, and 3b find that consumers are not likely to choose this aesthetic from a non-luxury brand. Similarly, Study 2 suggests that, while for luxury brands, using distinctively ugly images in advertising on Instagram feeds and stories increases click-through-rates and drives traffic to the brand's website, that is not the case for non-luxury brands. If a non-luxury brand is to adopt the distinctively ugly aesthetic, it may need to offer some signal that the item may be perceived as luxury, since prior theory, as well as the results of Study 3a, the replication of Study 3a, and Study 3b suggest it will not be purchased otherwise. For example, brands might need to signal with statements like "as seen on the runways." Similarly, to take advantage of the distinctively ugly aesthetic, non-luxury brands could explicitly copy or replicate recognizable designs of distinctively ugly luxury products, as they have repeatedly done in the past (Miller, 2013). Take Zara's 'contrasting sneaker with thick sole', clearly inspired by Balenciaga's famous Triple S sneaker, or Nike's socklike sneaker 'Veil Gyakusou', inspired by Balenciaga's famous Contrast Logo Speed sock sneaker (see Web Appendix L).

In terms of tools, in Study 5 we developed a computer vision-based model to predict aesthetics, distinctiveness, and logo prominence from only a product photograph. We offer

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[1] Study 2 found a positive effect of ugliness for a luxury brand regardless of distinctiveness. However, given the overwhelming results from the other studies indicating the necessity of distinctiveness, we expect distinctiveness is necessary for the effect and caution brands from assuming ugliness without distinctiveness will have the same effect.

Table 2 Summary of managerial contributions

- Consumers perceive distinctive ugliness as a costly signal implicating the product as from a luxury brand.
- Many consumers perceive the value of signaling luxury as greater than the cost of a lack of beauty.
- Loud brand elements (such as logos) and distinctive ugliness are redundant in signaling luxury. With a distinctive ugly aesthetic, luxury brands do not need to also employ a logo.
- A signal of intentionality (such as distinctiveness) is important when luxury managers employ novel signals (such as ugliness). Otherwise, they may be perceived as mistakes by consumers.
- Consumers desire novel ways to signal luxury besides logos. Distinctive ugliness is one newly identified way to do so.
- Non-luxury brands can implement a distinctively ugly aesthetic only when also offering an additional signal that it may be perceived as from a luxury brand.
- Using images of distinctively ugly luxury products increases Click-Through-Rates (CTR) and drives traffic to a brand's website.
- We offer practitioners a scalable computer vision-based tool to automatically score products' aesthetics using pixel-level information from product images.

this tool to marketers to help create automated lists sorted on any of these variables. For example, the desire for loud logos can vary by culture (Han et al., 2010). For some groups, putting items with louder logos upfront may increase sales.

More broadly, this research offers managers an example of how consumers rely heavily upon aesthetic cues to drive choice in fashion, but perhaps not always as one would expect. Ultimately, aesthetics matter, but not necessarily for the sake of beauty. The value of aesthetics may be in the ability to signal luxury even at the cost of beauty. See Table 2 for a summary of key managerial contributions.

Theoretical contributions

This work also offers important contributions to theory and our understanding of both luxury and consumer psychology. First, there is very little theoretical or empirical consideration of ugliness in general, in product design, or in consumer response to it. This work tackles this under-examined area. Second, we add to the literature on luxury (Kapferer & Bastien, 2012; Vigneron & Johnson, 1999; Wiedmann et al., 2009) by revealing just how strong a motivator is a desire for prestige, important enough to overcome the innate desire for beauty (Berlyne, 1973). Third, human attraction to beauty and avoidance of ugliness is widely recorded in mate selection (Zahavi, 1975), interpersonal relationships (Simpson et al., 1990), and, most relevantly, in product selection (Bloch, 1995; Bloch et al., 2003; Veryzer & Hutchinson,

1998). This work broadens our understanding of the universal appreciation for beauty; the desire for beauty is so self-evident that the lack of it is perceived as a cost. As such, we identify a lack of aesthetics as another costly signal, building on the work of Griskevicius et al. (2010), McAndrew (2021), and Zahavi (1975), among others. However, given a distinctively ugly aesthetic can be adopted by any firm, further research clarifying why distinctive ugliness remains a reliable signal of luxury would be useful.

However, fourth, we also identify a context where ugliness, a cue that is almost universally negative, is in fact positive. As such, this work adds to the literature on the context-dependence of consumer preferences (Bettman et al., 1998; Tversky & Simonson, 1993). Moreover, the fact that participants rated an option as ugly and yet opted to choose it potentially suggests an understanding by decision-makers of the context-dependent nature of their choice.

Fifth, we add to the literature identifying less traditional manners in which consumers are signaling status (e.g., Bellezza & Berger, 2020; Bellezza et al., 2014, 2017; Dubois et al., 2012), by identifying a novel signal (i.e., distinctive ugliness) that is apparently specific to luxury. Sixth, like Fuchs et al. (2013), our findings reveal another manner in which luxury is not just expensive fashion but perceived as fundamentally different from the rest of fashion by consumers. While in the non-luxury context, an ugly aesthetic offers no premium to the consumer, in the context of luxury, distinctive ugliness becomes a signal of luxury.

Table 3 Summary of theoretical contributions

- Consumers' desire to signal prestige is a strong motivator, important enough to overcome the innate desire for beauty.
- The universal appreciation and desire for beauty is so self-evident that the lack of it (i.e., ugliness) is perceived as a cost. (Distinctive) ugliness is a costly signal.
- Consumer perceptions are context-dependent. Ugliness, something generally undesirable, can be desirable in the luxury context.
- Distinctive ugliness is a newly identified, non-traditional signal of status in line with those identified by prior research (e.g., non-conformity, busy-ness, purchasing green products; Bellezza et al., 2014; Bellezza et al., 2017; Griskevicius, et al., 2010).
- Distinctive ugliness as a signal of luxury is fairly universal; its value is recognized by mainstream and luxury customers alike, regardless of luxury expertise.

Finally, while prior work on the luxury consumer has identified differences between those consumers who have more (vs. less) knowledge about luxury brands (Berger & Ward, 2010; Cesareo & Bellezza, 2022), this work reveals a cue, distinctive ugliness, that, much like a loud logo, is understood fairly universally. See Table 3 for a summary of key theoretical contributions.

Areas for future research and conclusion

While we offer seven studies, there are still questions left unanswered that future research might explore. First, while we provide robust evidence that a distinctively ugly aesthetic provides value in the form of signaling luxury, there are likely other reasons for luxury brands to create it and for consumers to buy it. In Studies 3a and 4, we measured both consumer need for uniqueness and attention (histrionic behavior tendencies) and ruled both out as drivers of choice. Nevertheless, future research might identify how distinctively ugly products might potentially satisfy a need to differentiate.

Second, we were careful to manipulate aesthetics and distinctiveness in multiple manners to offer consistent evidence of three things. First, these are separate constructs (indeed, the lack of correlation in Study 1 supports this). However, we acknowledge that extremeness, in both the attractive and ugly sense, is inherently distinctive. Second, ugliness and distinctiveness are both necessary for the hypothesized effects. However, when working with design, it is difficult to manipulate one element (e.g., distinctiveness) without influencing another (e.g., aesthetics), theoretically and empirically. Moreover, the results of Study 2 suggest the effect may occur with ugliness regardless of distinctiveness. Our *post hoc* explanation is that we may have over-sampled a specific type of luxury consumers (i.e., patricians, Han et al., 2010) who also seek luxury products without overt signals (i.e., non-distinctive). Third, the effects are not specific to one particular design feature. Study 1, in particular, reveals that the effect exists across hundreds of design variations. Future work might identify the amount of ugliness needed for viewers to identify its signaling potential.

Third, in the studies, viewers evaluated the products in a vacuum, without the context of the wearer or other fashion items in the outfit. It seems likely that such contextual cues influence the likelihood that distinctive ugliness is perceived as luxury. Additionally, this research does not consider the potential for attractive items to be combined to create a distinctively ugly aesthetic to boost signal potential and/or consumer choice (as some of the most recent haute couture runways have done). When the aesthetics is the result of multiple items rather than just one, would the effects be the same? The answer may depend on whether the designer versus the consumer assembled the items to look distinctively ugly, but only future studies can tell.

Also, we only examined our hypotheses in the context of fashion. There is no theoretical reason to believe that these effects are not present anywhere where luxury exists and where consumers seek to signal (Simmel, 1957). While not explicitly tested, we proffer that a distinctively ugly automobile, home electronics device, accessory, or other publicly consumed good might offer the same signaling power and differential influence on choice as presented in this research. In fact, in 2012 Lexus changed the grill of its cars to something many consumers perceive as overtly ugly.[2]

Finally, while distinctive ugliness as a signal of luxury has existed for a long time, every incarnation of the trend is different. Our research does not explore how the signaling ability of a particular type of distinctive ugliness works over time. With increased viewing, consumers might become normalized to a look and find it less distinctive and less ugly; this might decrease its signaling ability. However, the knowledge that a particular distinctively ugly aesthetic element is associated with a particular luxury brand likely increases the likelihood that the item is recognized as such. Either way, one thing that is certain is that fashion changes. This research, however, leads us to predict the distinctively ugly aesthetic that is currently so popular among luxury brands and consumers will be back, likely in a different form, again in the future.

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[2] We thank an anonymous reviewer for pointing us toward this example.

Appendix 1: All study stimuli

Studies 1 and 5
Selection from Luxury Brands
(Balenciaga, Dolce and Gabbana, Gucci, Louis Vuitton, Prada)
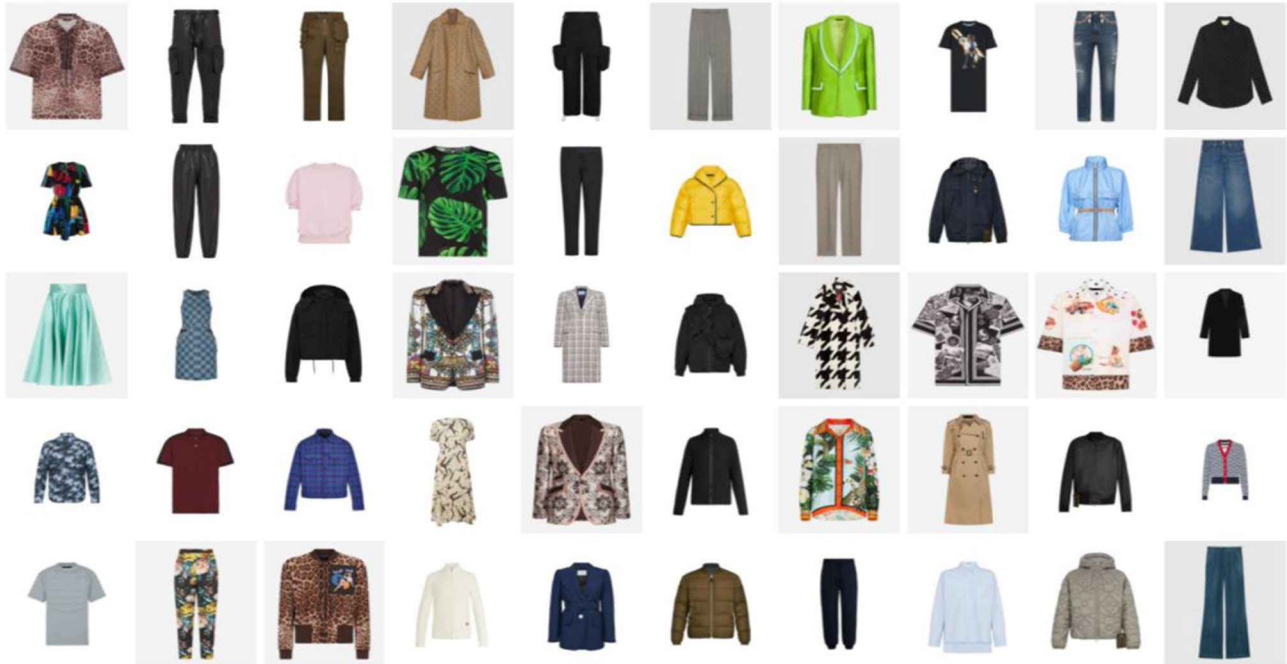
Selection from Non-Luxury Brands (Gap, H&M, Old Navy, Top Man, Topshop)

Study 2 and Study 3a: Sweatshirts

| Distinctive | Non-distinctive | Distinctive | Non-distinctive |
| Ugly | Ugly | Attractive | Attractive |

Study 3b: Denim Jackets

| Distinctive | Non-distinctive |
| Ugly | Attractive |

Study 4: T-Shirts

	Distinctive Ugly	Non-distinctive Ugly	Distinctive Attractive	Non-distinctive Attractive
No Logo				
Logo				

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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