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Four studies demonstrate how consumers resolve the aesthetic incongruity that arises between a newly acquired product and the existing consumption environment. The novel insight on which this research is based is that the aesthetic incongruity involving products high in design salience is more likely than aesthetic incongruity involving products low in design salience to be resolved by accommodating the product within the consumption environment, often through additional purchases. Furthermore, the relative presence of frustration versus regret is shown to mediate the relationship between design salience and the decision to buy more.

Keywords: aesthetics, product design, incongruity resolution, emotions, frustration, regret, consumption

Aesthetic Incongruity Resolution

Incongruities that arise between products often beg to be resolved. An example of this is what McCracken (1988) refers to as the "Diderot effect." In his essay, "Regrets on Parting with My Old Dressing Gown," Denis Diderot, an eighteenth-century French philosopher, talks about a gift of a fancy new dressing gown. Upon donning his new gown, it becomes apparent that the shabby old furnishings of his study do not quite fit with the splendor of his new garment, so he replaces them. Soon he finds himself replacing tapestries, chairs, desks, bookshelves, and even a clock. Upon reflection, Diderot realizes that a single item, his new dressing gown, has led him to purchase a whole host of new items, leaving him financially depleted, as well as uncomfortable and unhappy among his new possessions. In turn, this leads him to resent the "scarlet robe that forced everything else to conform with its own elegant tone" (Schor 1998, p. 145). McCracken argues that Diderot's dressing gown (an intruder product) shattered the unity among his possessions, leading him to alter his surroundings.

In the current research, we focus on aesthetic incongruity and aim to understand the processes underlying "aesthetic incongruity resolution." By aesthetic incongruity, we are referring to the inconsistency that arises from a mismatch between an object and its environment, often accompanied by negative affect and a motivation to resolve this incongruity. Aesthetic incongruity is an unpleasant state, and research in aesthetics suggests that people are motivated to strive for aesthetic congruity (Kreitler and Kreitler 1972). An honest self-analysis might reveal that something similar has happened to all of us. We buy something we like—for example, green curtains—but subsequently find that the curtains are too green or not the right shade of green, and so we either return the curtains or we buy new things, such as a rug and fabric to recover the couch, to match the green curtains. Indeed, many home owners have experienced the never-ending nightmare of renovation projects, precisely because things constantly need to be done and new items need to be acquired or old items need to be replaced to resolve aesthetic incongruity.

We suggest that Diderot's experience with aesthetic incongruity is not equally likely for all products but is contingent on the design salience of the mismatched product, that is, the extent to which design elements are a salient feature for that product. We theorize that mismatch for a product high in design salience, such as Diderot's scarlet robe appears to have been, results in consumers making additional purchases to accommodate the product into the consumption environment. Conversely, mismatch for a product low in design salience, such as a likeable but relatively conventional robe, would perhaps result in the product being removed from

the consumption environment and returned to the store. Prior research assumes that in the case of a mismatch or any other issue with the product, the default option for consumers is to return the product (Stock, Speh, and Shear 2002). Notably, the notion that consumers might instead choose to alter a consumption environment to accommodate the product is a key insight on which this research is developed.

There are several reasons aesthetic incongruity might arise among consumers' possessions. For example, it may arise from a gift that matches poorly with the consumption environment (Sherry, McGrath, and Levy 1992) or from an unplanned purchase in which consumers failed to foresee the mismatch (Bellenger, Robertson, and Hirschman 1978). Furthermore, consumers might be drawn to some aspect of a product, such as its color, and may exhibit a form of consumer myopia in that they fail to adequately consider the congruity between the product and the consumption environment. Regardless of how aesthetic incongruity arises, our research demonstrates that consumers not only enjoy aesthetically pleasing objects and environments but that they (1) are able to assess aesthetic incongruity, (2) have a negative affective response to such incongruity, and (3) are thus motivated to resolve the incongruity.

To our knowledge, no research has systematically investigated when, why, and how consumers strive to maintain and enhance aesthetic congruity among their own possessions, often leading them to buy more. In this research, we underscore the importance of aesthetics in consumption environments and investigate the differential behavioral responses to the aesthetic incongruity that arises in everyday consumption and the underlying emotions driving these responses. In a qualitative pilot study and three experiments, we investigate the consequences of a mismatch (aesthetic incongruity) between a product and the existing consumption environment. In our research, consumers' existing possessions constitute their consumption environment, and what the specific consumption environment is thus depends on the new acquisition and the purpose it is meant to fulfill. For example, an existing wardrobe might be the consumption environment for a new pair of shoes, whereas a living room and all the furniture and decorations therein might be the consumption environment for a new armchair. Thus, the consumption environment is defined as the set of preexisting possessions among which the new acquisition will be introduced and used.

CONCEPTUAL FRAMEWORK: AESTHETIC INCONGRUITY RESOLUTION

The Importance of Aesthetics

Why is aesthetics so important? It seems clear that some form of aesthetic appreciation is a universal experience of human nature (Dutton 2002). Indeed, whereas tastes and preferences might be influenced by factors such as culture or prior subjective experiences (Holbrook and Schindler 1994), an aesthetic response mechanism appears to be hardwired in the human brain. Lindgaard and Whitfield (2004, p. 76) argue that aesthetics derives from a precognitive state of human evolution and that it was the "modus operandi of 'knowing about' the world in the absence of semantic cognition." Averill, Stanat, and More (1998, p. 153) assert that aesthetics is tied to "cognitive representations of response

patterns that do or did contribute to the survival or enhancement of the species, society, or the self."

Given this, it seems natural that aesthetics will have a deep-rooted influence on consumer affect, cognition, and behavior, even though the prehistoric origins of this influence may not be a topic of daily reflection. Some consumers value the role of aesthetics in their lives and derive a substantial benefit from an aesthetically appealing consumption environment (Postrel 2003). Importantly, previous research has established that aesthetics has a ubiquitous and powerful influence on consumers via the design of goods and services (Bloch 1995; Bloch, Brunel, and Arnold 2003; Lindgaard and Whitfield 2004; Veryzer and Hutchinson 1998), and consumers make many product and brand decisions on the basis of aesthetics. Indeed, the importance of visual aesthetics for consumer preferences and satisfaction appears to be increasing for an ever-wider selection of products (Bloch, Brunel, and Arnold 2003), and product design is often the most important determinant of sales success (Bloch 1995). Therefore, it is not surprising that marketers go to great lengths to design products that appeal to consumers' aesthetic sensibilities.

Aesthetic Congruity

A natural consequence of aesthetic sensibilities is that consumers are able to assess aesthetic congruity and that aesthetic incongruity tends to stand out (Peracchio and Meyers-Levy 1994). Prior research has focused on how aesthetic appeal and aesthetic harmony may be assessed on the basis of basic aesthetic principles such as color, balance, style, unity, and complexity, among other attributes (e.g., Berlyne 1974; Hagtvedt, Hagtvedt, and Patrick 2008; Pickford 1972). This also resonates with a notion of aesthetic schema, whereby consumers have implicit theories about how an environment should look to be harmonious and aesthetically pleasing. Prior research has found that perceived congruity between the features of an item and those of a schema provides a sense of satisfaction that may carry over to the evaluation of the stimulus (Aggarwal and McGill 2007; Mandler 1982). Conversely, "perceived incongruity may lead to a sense of frustration" (Aggarwal and McGill 2007, p. 469).

Resolving Aesthetic Incongruity

Research in aesthetics suggests that people are motivated to resolve inconsistencies, ambiguities, imbalance, or incompleteness in their environments and that this resolution is often affectively rewarding (Kreitler and Kreitler 1972; Pavlova, Sokolov, and Sokolov 2005; Peracchio and Meyers-Levy1994). Kreitler and Kreitler (1972, p. 87) assert that "the pressure to straighten out, to improve, or to perfect the perceived figure may be so potent that it can be neither disregarded or withstood by the spectator … until it is resolved by a proper perceptual act." A study by Pavlova, Sokolov, and Sokolov (2005) examines emotions in the dynamics of shapes and finds that shapes that are unstable (e.g., a triangle on its head), presumably because of their implied imbalance, are strongly correlated with negative feelings, such as suffering or fear. Anyone who has experienced a compulsion to straighten a slightly crooked painting or to reorganize furniture until some symmetry or balance has been achieved knows that this is motivated by the dis-

comfort or frustration associated with aesthetic incongruity. Indeed, the "aesthetic experience, more than any other type of experience, is unified, integrated, complete" (Schrickel 1943, p. 630). Drawing on this research, we propose that the need for completeness, balance, or unity among possessions motivates consumers to strive for aesthetic congruity. When a new product is introduced into a consumption environment, the preexisting unity or harmony may be disrupted, and consumers may be motivated to reestablish aesthetic congruity, as was the case with Denis Diderot. A particularly relevant question, and the focus of our research, is when and why the pursuit of aesthetic congruity leads to making additional purchases.

The Role of Product Design Salience

In the current context, we propose that how aesthetic incongruity is resolved is contingent on the design salience of a mismatched product. The visual appearance of a product is a critical determinant of consumer response and product success (Bloch 1995), and thus corporations attempt to differentiate their products through aesthetics and product design (Page and Herr 2002). Indeed, consumers' judgments and choice of products are increasingly made on the basis of product design, not merely on the basis of functional attributes (Postrel 2003).

We conceptualize design salience as the extent to which consumers perceive the design elements of a product to be salient. In other words, design salience is a product characteristic in which design is a central product attribute that may serve as a point of differentiation and may be the basis of choice for a consumer. Notably, we argue that design salience is independent of other attributes, such as price, or evaluations, such as product liking or performance. Two products in the same category may be equally liked, regardless of whether they differ in product design salience. For example, there may be products perceived as unique or intricate in their design but are nonetheless considered ugly, and there may be products that are quite ordinary but are nonetheless aesthetically pleasing.

The relationship between design salience and incongruity is another important issue. In other words, could high design salience itself result in incongruity? In the current research, we conceptualize design salience and incongruity as distinct constructs and do not expect design salience per se to influence the degree of aesthetic incongruity between a product and its consumption environment. The following example illustrates this rationale: A purple chair low in design salience may be as incongruous with a predominantly brown living room as a purple chair that is high in design salience. In this example, incongruity arises because of a mismatch in color, but the color is not the basis for the difference in design salience. In our empirical work, to further allay concerns about this issue, we select stimuli for which the incongruity is not dependent on the level of design salience and pretest the stimuli such that both high- and low-design-salience products are *equally* incongruous with the consumption environment.

The central hypothesis of our research is that when aesthetic incongruity arises in a consumption environment, consumers are motivated to resolve the incongruity in different ways, depending on the design salience of the mismatched product. In either case, there may be some motivation to return the product and some motivation to accommodate the product. However, we argue that the likelihood of accommodating the product, often by making additional purchases, is greater in the case of high design salience than in the case of low design salience. Subsequently, we discuss the hypothesized process or rationale for *why* these different behavioral outcomes might occur.

The Process Underlying the Motivation to Buy More Versus Return

Appraisal theory suggests that emotions arise from the appraisal of personally relevant information and result in specific behavioral tendencies (Lazarus 2001). Therefore, the behavioral response to aesthetic incongruity, or how consumers resolve aesthetic incongruity, depends on the emotions resulting from the appraisal of that incongruity. We expect that incongruity between a newly acquired product and the consumption environment results predominantly in feelings of regret, perhaps stemming from the failure to foresee the mismatch at the time of purchase. Because of the mismatch, the consumer feels that he or she "should have known better," experiences feelings of regret, and consequently acts to reverse the purchase decision. Thus, we expect that regret leads predominantly to the desire to undo the purchase and results in product returns. This basic intuition also exists in the extant marketing literature (Inman 2007; Stock, Speh, and Shear 2002).

However, this research proposes another outcome, which we hypothesize is more likely in connection with high- (vs. low-) design-salience products. We argue that a consumer becomes more attached to a new high-design product after acquiring it and introducing it into the consumption environment, and consequently he or she has a stronger desire to keep it. Thus, the consumer is motivated to remedy the frustrating mismatch by accommodating the product within the consumption environment, often by making additional purchases.

Why do consumers become more attached to a high-design-salience acquisition? The answer to that question lies in the perception of uniqueness or specialness of the product. Extant research has illustrated that consumers tend to place greater value on an item after it is in their possession, a phenomenon known as "the endowment effect" (Brenner et al. 2007). This phenomenon is tied to loss aversion, a notion that was initially formalized as a component of prospect theory (Kahneman and Tversky 1979). Thus, a person would expect the endowment effect to counteract some of the purchase regret stemming from the mismatched product. However, the endowment effect might not be equal for all products. Indeed, Brenner et al. (2007) find that the endowment effect can even be reversed for unattractive items. Furthermore, consumers often form product attachments beyond what a person would expect from strictly rational commodity valuation (Epp and Price 2010).

In line with these notions, we expect that a special attachment is more likely to arise with a high- (vs. low-) design-salience product after that product has been acquired because the high-design-salience product is viewed as special or unique and emphasizes the intrinsic value of aesthetics (Averill, Stanat, and More 1998; Hirschman 1983). It seems reasonable that a product viewed as special or unique will engender a special attachment or appreciation, along

with a strong loss aversion, after that product has been acquired and introduced into the consumption environment. Indeed, it seems more likely to do so than a product that was initially equally liked but that is viewed as ordinary and easily replaceable. Therefore, the mismatch between the high-design-salience product and the environment is frustrating and motivates consumers to find ways to modify the consumption environment to accommodate the product. Frustration, an emotional response to opposition or conflict, often arises when a person has competing or interfering goals. In the case of aesthetic incongruity, feelings of frustration result because although consumers want to keep the high-design-salience product for its intrinsic value, the product does not fit with the consumption environment. Thus, consumers are motivated to modify the consumption environment to accommodate the product and alleviate the feelings of frustration.

In the current context, frustration and regret may be viewed as emotions that pull consumers in diametrically opposed directions. Regret gives rise to the desire to undo the product purchase, but frustration gives rise to the desire to do even more to make the product fit. Thus, the relative presence of frustration versus regret will increase the tendency to buy more. We theorize that a mismatch involving a product low in design salience does not give rise to sufficiently potent frustration to counteract the purchase regret or spur the consumer to make the product fit. However, for a mismatched product high in design salience, frustration spurs consumers to take action to accommodate the product in the consumption environment, often by buying additional items. Other possibilities also exist, such as gifting the product, storing it somewhere, or simply leaving it as it is. We discuss these alternative outcomes in the "General Discussion" section, but we focus here on the marketing-relevant outcome of additional purchases.

OVERVIEW OF THE EMPIRICAL INVESTIGATION

The pilot study is a qualitative study that relies on a critical incident technique to (1) identify typical product categories involved in return situations versus buy-more situations due to a mismatch with the consumption environment and (2) identify some common motivations resulting in the decision to return versus buy more under conditions of aesthetic incongruity. The results of the study indicate that, consistent with our theorizing, products high in design salience often lead to additional purchases, whereas products low in design salience are more likely to be returned. Study 1 demonstrates the basic behavioral responses (return vs. buy more) resulting from low versus high design salience of a product. The acquisition of a difficult-to-match pendant that is low versus high in design salience leads to the return of the pendant in the former case and the purchase of matching earrings in the latter case. Study 2 is an experiment in which images of armchairs are manipulated to be high versus low in design salience and mismatched with the consumption environment (photograph of a living room). Study 2 demonstrates that although mismatches result in regret, the mismatched items high in design salience result in greater feelings of frustration relative to regret and the intent to make additional purchases to accommodate the items. The mismatched items low in design salience are more likely to result in returns. Study 3 is a computer-based

experiment that replicates the results of Study 2, using two gender-specific items that are high versus low in design salience.

PILOT STUDY

Method

The goal of the pilot study was to identify typical product categories involved in return situations versus buy-more situations due to a mismatch with the consumption environment and to identify some of the common motivations resulting in the decision to return versus buy more under these conditions. We collected data from 125 people by asking them to describe a situation in which a product that did not fit with their consumption environment led them either to return the product or to buy additional items. We asked all participants to describe the product in detail and to explain what caused them to return the product or to buy more items, depending on the condition to which they were assigned.

Data Analysis and Results

We conducted a preliminary analysis of the open-ended responses to uncover any differences in the product categories and the nature of the products reported under the buy-more versus return conditions (for details, see Web Appendix A at http://www.marketingpower.com/jmrapril11). Next, we analyzed the transcripts to identify the consumer motivations involved in the decision to buy more or to return the product. We analyzed these data using a constant comparative technique (Dahl and Moreau 2007; Strauss and Corbin 1998). We read the participants' responses for each of the conditions and noted specific circumstances/situational variables in the data that resulted in the behavioral outcomes (buy more vs. return). A set of motivations for the two conditions emerged, and we noted the frequency with which they were mentioned. Table 1 presents the set of motivations for each condition, along with representative examples and frequency of occurrence. These results reveal that, consistent with our theorizing, product design salience is an important factor in determining how consumers resolve aesthetic incongruity within consumption environments. Indeed, high product design salience was the most frequently identified factor leading to additional purchases, but not to returns. We did not investigate the other factors that emerged but leave these as viable avenues for future investigations.

STUDY 1

Study 1 is a choice experiment designed to demonstrate that a high-design-salience product is more likely than a low-design-salience product to result in the decision to buy more rather than to return the product. We empirically test this notion by measuring the likelihood of purchasing an additional product (earrings) versus the likelihood of returning the original product (the pendant) for a group of women previously given difficult-to-match pendants that were pretested to be high versus low in design salience. The stimuli for Study 1 (difficult-to-match pendants that were high and low in design salience) were custom made for the experiment by a jewelry designer (for stimuli, see Web Appendix B at http://www.marketingpower.com/jmrapril11). A pair of earrings was also designed to equally match both pendants. The pendants were pretested with 30 women as

Table 1

PILOT STUDY: MOTIVATIONS TO ACCOMMODATE OR REMOVE THE MISMATCHED PRODUCT

Motivation	Explanation	Frequency	Examples
Accommodate Within Environment (Buy More)			
Product design salience	The product's unique look and feel in terms of color, style, and design.	37	"Impeccable design." "Unique design and cool colors."
Comfort	The product is comfortable, fits the consumer well, and/or is easy to use.	20	"It fit me well." "The shoes were very comfortable."
Liking	The consumer likes the product.	7	"I liked it a lot." "I liked the way it looked."
Quality	The product is a high-quality product, a good brand, or superior in performance.	7	"They were good quality." "It was a warm coat that also was rain repellent."
Price	The product was bought on sale, was a good deal, or was the best value for money.	6	"It was a good deal." "The price was right."
Return not an option	The product could not be returned, because it was a final sale or would be too much trouble.	3	"My roommate bought the coffee table." "I didn't feel like returning it and looking for another carpet."
Sentimental value	The product was gifted by a family member and had a special value associated with it.	2	"It was a gift from my aunt." "My dad bought me the suit."
Remove from Environment (Return)			
Disliking	The consumer does not like the product.	42	"It was ugly." "I don't like the way fleece feels."
Fit	The product is the wrong size or for other reasons does not fit well.	20	"It was way too big." "The collar bothered me, as it was tight and itchy."
Personality	The product mismatched with the consumer's personality.	15	"It wasn't my style," "The look and style of the sweater was not 'me.'"
Design issues	There is a lack of appealing design.	11	"It wasn't stylish enough. It was basic and boring." "It was 'uncool.'"
Usage	The consumer is unlikely to use the product.	10	"I felt like it would probably never get worn and just hang in my closet."
Functionality	The product does not have the right features or does not function adequately.	8	"The features." "Didn't work very well."

high versus low in design salience but equal in liking and equally difficult to match with a person's possessions (i.e., equal in extent of aesthetic incongruity; for pretest results, see Web Appendix C at http://www.marketingpower.com/jmrapril11).

Fifty-six working women with an average age of 37 years participated. As each woman entered the experimental room, one of the authors greeted her and gave her a welcome gift of a pendant (high vs. low in design salience) and $5. We then gave her an unrelated task (filling out a set of unrelated questionnaires) that took an average of 30 minutes. We then debriefed each participant and casually asked how well the pendant matched the rest of her wardrobe. Consistent with the pretest results, all participants indicated some degree of mismatch. We then informed the participant that she had a couple options regarding her welcome gift. Specifically, we told each participant that she could return the pendant in exchange for another $5 or she could spend the $5 she was given to buy a pair of matching earrings. We showed the additional $5 and the earrings to each participant before she made her final decision.

None of the participants indicated that they realized that the gifted pendant and subsequent choice was part of the experiment. Table 2 shows that, consistent with our prediction, the high- (vs. low-) design-salience product led to a higher likelihood of buying more (vs. returning the product). Two-tailed z-tests of proportions between the high-design-salience condition (n = 28) and the low-design-salience condition (n = 28) revealed a significant difference

Table 2

EFFECT OF DESIGN SALIENCE ON THE BEHAVIORAL MOTIVATIONS TO BUY MORE VERSUS RETURN

	% Choose to Buy Earrings (Buy More)	%Choose to Return Pendant (Return)	% Choose to Keep Pendant and $5 (Status Quo)
High-design-salience pendant	57.14%[a] (16 participants)	14.28% (4 participants)	28.57% (8 participants)[c]
Low-design-salience pendant	14.28% (4 participants)	85.72%[b] (24 participants)	0% (0 participants)

[a]Indicates that the percentage is significantly greater than for the low-design-salience condition.

[b]Indicates that the percentage is significantly greater than for the high-design-salience condition.

[c]When probed for the rationale of the choice, participants provided the following reasons: They did not wear dangling earrings (4 participants), they liked the pendant but not the earrings (3 participants), and their ears were not pierced (1 participant). It is reasonable to assume that these participants subsequently bought other items to match with the pendant, representing additional purchases not captured by this study.

for buying more (M_{high} = .57 vs. M_{low} = .14; z = 3.08, $p <$ .01) and for returning the product (M_{high} = .14 vs. M_{low} = .86; z = 5.12, $p < .001$).

This experiment supports the notion that aesthetic incongruity involving a high- (low-) design-salience product is more likely to result in additional purchases (returns). In the experiment that follows, we replicate these results in a lab

environment with different stimuli and demonstrate the mediating role of frustration versus regret.

STUDY 2

Method

Sixty-five undergraduate students participated in a between-subjects experiment with high versus low design salience as the independent variable. We pretested photographs of armchairs to identify products either high or low in design salience but equal in liking. We also pretested the extent to which each of the products matched a photograph of a living room typical of our target population's living spaces. Both products were rated equally low in terms of fit (high incongruity) with the picture of the room (for stimuli and pretest details, see Web Appendixes D and E at http://www.marketingpower.com/jmrapril11). We randomly assigned each participant to one of the two experimental conditions, and each viewed the picture of the living room and a picture of one of the two chairs. We told participants in both conditions to imagine a situation in which they had bought the chair for their living room.

We first asked participants an open-ended question about their thoughts and feelings about the chair to assess whether buying more was a spontaneous response to resolve incongruity without participants being prompted by a specific question to that effect. We next asked participants to report their feelings about the fit between the chair and their living room. Specifically, they reported the extent to which they felt frustrated and the extent to which they felt regretful (1 = "not at all," and 7 = "extremely"). In line with our theorizing that the relative presence of frustration versus regret drives additional purchases as a behavioral response to aesthetic incongruity, we subtracted the regret score from the frustration score to create a frustration–regret difference score (see, e.g., Colvin, Block, and Funder 1996; Tisak and Smith 1994). Participants then reported how likely (1 = "not at all likely," and 7 = "extremely likely") they would be to buy additional items to match the product. As an additional measure, participants also reported how likely (1 = "not at all likely," and 7 = "extremely likely") they would be to return the product. Although not a behavioral response predicted by our proposed framework, it is likely that some people would choose to do nothing and let the item remain, regardless of the incongruity with the consumption environment. To assess this tendency, all participants reported the likelihood of letting the chair remain as it is in the living room. We found no differences for this variable. Participants also reported the extent to which they liked the product (1 = "dislike," and 7 = "like"). We included this variable to test the notion that liking would be higher for the high- (vs. low-) design-salience product after purchase and introduction into the consumption environment, even though liking was equal before purchase. In addition, participants responded on a seven-point scale (1 = "less," and 7 = "more") to the question, "Do you like the chair less or more after bringing it home?"

Results

Open-ended responses. In the high- (low-) design-salience condition, 60.6% (18.8%) reported that they would buy more, 24.2% (62.5%) reported that they would return, and 15.2% (18.8%) reported no clear action plan. A logistic

regression with design salience as the independent variable and behavioral motivations as the dependent variable revealed that buying more (vs. returning) was significantly more likely in the high- (vs. low-) design-salience condition ($\chi^2(1) = 13.19$, $p < .001$).

Affective responses. An analysis of variance (ANOVA) with design salience as the independent variable and the frustration–regret difference score as the dependent variable revealed the expected main effect ($M_{high} = 1.82$ vs. $M_{low} = -.53$; $F(1, 63) = 7.95$, $p < .01$). Figure 1 illustrates the individual means for frustration and regret. These results support our theorizing that incongruity leads to a higher (lower) level of frustration relative to regret for products with higher (lower) design salience.

Behavioral responses. A similar ANOVA with buy more as the dependent variable revealed the expected main effect ($M_{high} = 4.67$ vs. $M_{low} = 2.94$; $F(1, 63) = 10.88$, $p < .01$). A similar ANOVA with return as the dependent variable revealed a main effect ($M_{high} = 3.00$ vs. $M_{low} = 5.03$; $F(1, 63) = 11.64$, $p < .01$).

Mediation analysis. Bootstrap estimation (Preacher and Hayes 2004) with 5000 resamples, as well as a Sobel test, confirmed that the frustration–regret difference score mediates the influence of design salience on intent to buy more ($M = -.94$, $SE = .35$; 95% confidence interval [CI] = -1.68, $-.28$; Sobel test: $z = -2.56$, $p < .05$). (For mediation of intent to return, see Web Appendix F at http://www.marketingpower.com/jmrapril11.)

Additional measures. An ANOVA with design salience as the independent variable and liking as the dependent variable revealed that postpurchase liking was indeed higher for the chair high (vs. low) in design salience ($M_{high} = 4.97$ vs. $M_{low} = 3.75$; $F(1, 63) = 6.48$, $p < .05$). An ANOVA on the extent to which participants liked the chair more after bringing it home revealed a similar pattern ($M_{high} = 3.82$ vs. $M_{low} = 2.81$; $F(1, 63) = 4.93$, $p < .05$).

Discussion

The results of Study 2 support our theorizing that aesthetic incongruity involving high- (vs. low-) design-salience products leads to additional purchases, as well as higher levels of frustration relative to regret. Furthermore, this emo-

Figure 1
STUDY 2: AFFECTIVE RESPONSES TO AESTHETIC INCONGRUITY
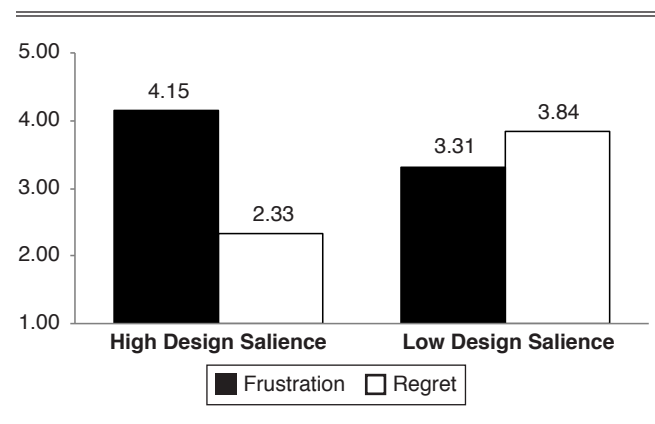
tional response mediated the intent to buy more. We collected additional data that support the notion that the high- (vs. low-) design-salience product is liked more after purchase, regardless of equal liking before purchase (for mediation analysis demonstrating that this postpurchase liking drives the emotional responses, see Web Appendix G at http://www.marketingpower.com/jmrapril11). In other words, this variable mediates the mediator.

Notably, including gender as a covariate in the analysis also revealed no significant influence of gender on the behavioral response to aesthetic incongruity for high- or low-design-salience items. This is in line with much of the previous research on design and aesthetics in which gender differences are not observed (Bloch 1995; Bloch, Brunel, and Arnold 2003; McManus and Furnham 2006; Page and Herr 2002; Veryzer and Hutchinson 1998). However, this might be the result of the use of gender-neutral stimuli in Study 2. To further investigate potential gender differences in how aesthetic incongruity is resolved, we use gender-specific stimuli in Study 3—namely, men's shoes and women's shoes.

STUDY 3

Method

Sixty-five undergraduate students (52% male) participated in a between-subjects experiment with design salience, manipulated to be high versus low, as the independent variable. The experiment was run on computers using a Qualtrics interface. Participants began the experiment by responding to demographic questions. The purpose of these questions was to divert the respondents to gender-specific, experimental conditions and, within these conditions, to randomly assign participants to high- versus low-design-salience conditions. We asked all participants to imagine they had bought a pair of shoes at the mall, and depending on the condition, we showed them a photograph of different, gender-appropriate shoes (i.e., a pair of men's or women's shoes) with or without salient design elements (for stimuli, see Web Appendix H at http://www.marketingpower.com/jmrapril11). We pretested the shoes with 40 undergraduate students to be equivalent in liking between gender ($M_{female} = 4.43$ vs. $M_{male} = 4.30$; F = .16, not significant [n.s.]) and between design salience levels ($M_{high} = 4.45$ vs. $M_{low} = 4.28$; F = .32, n.s.). We also pretested fit between the shoes and the participants' own wardrobes to be equally poor between gender ($M_{female} = 2.80$ vs. $M_{male} = 2.50$; F = .28, n.s.) and between design salience levels ($M_{high} = 2.75$ vs. $M_{low} = 2.55$; F = .12, n.s.).

As a manipulation check for design salience, participants reported, on seven-point scales (1 = "not at all," and 7 = "definitely"), the degree to which they agreed with the following statements about the shoes: "They are a design item," "Design elements are salient in these shoes," "Design is a central feature of these shoes," and "The design is noticeable." Participants next reported, on seven-point scales (1 = "not at all," and 7 = "definitely"), their feelings regarding the fit of the shoes with their current wardrobe. Specifically, they reported the extent to which the fit made them feel frustrated and the extent to which they felt regret. We subtracted the latter measure from the former measure to form the frustration–regret difference score. Participants then reported how likely (1 = "not at all likely," and 7 =

"extremely likely") they would be to buy additional items to match the product, as well as the additional measure of how likely they would be to return the product. As in Study 2, participants also reported the likelihood of just letting the shoes remain in the wardrobe regardless of fit. We found no differences for this variable between the high- and low-design-salience conditions.

Results

Manipulation check. A 2 (design salience: high vs. low) × 2 (gender: male vs. female) ANOVA on the design salience index revealed a successful manipulation of design salience ($M_{high} = 5.76$ vs. $M_{low} = 3.34$; $F(1, 61) = 78.92$, $p < .001$). No other effects were significant.

Affective responses. An ANOVA with design salience and gender as the independent variables and the frustration–regret difference score as the dependent variable revealed the expected main effect of design salience ($M_{high} = 1.07$ vs. $M_{low} = -1.19$; $F(1, 61) = 12.81$, $p < .01$). No other effects were significant. Figure 2 illustrates individual means for frustration and regret by gender and level of design salience. These results support our theory that incongruity leads to a higher (lower) level of frustration relative to regret for products with higher (lower) design salience.

Behavioral responses. A similar ANOVA with buy more as the dependent variable revealed the expected main effect of design salience ($M_{high} = 4.14$ vs. $M_{low} = 2.72$; $F(1, 61) = 7.92$, $p < .01$) and a main effect of gender ($M_{male} = 2.82$ vs. $M_{female} = 3.94$; $F(1, 61) = 4.41$, $p < .05$). A similar ANOVA with return as the dependent variable revealed a main effect of design salience ($M_{high} = 3.48$ vs. $M_{low} = 4.81$; $F(1, 61) = 6.51$, $p < .05$) and a main effect of gender ($M_{male} = 4.79$ vs. $M_{female} = 3.58$; $F(1, 61) = 5.17$, $p < .05$). Figure 3 illustrates the means for buy more and return by gender and level of design salience.

Mediation analysis. Bootstrap estimation (Preacher and Hayes 2004) with 5000 resamples, as well as a Sobel test, confirmed that the frustration–regret difference score mediates the influence of design salience on intent to buy more ($M = -.83$, $SE = .30$; 95% CI = -1.47, $-.31$; Sobel test: z = -2.73, $p < .01$). (For mediation of the influence of design

Figure 2
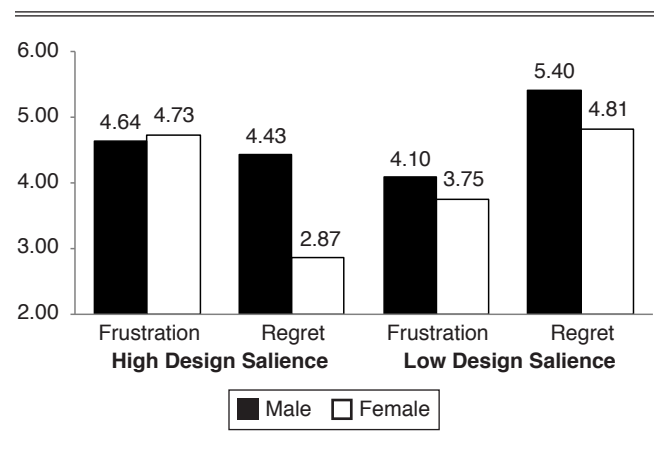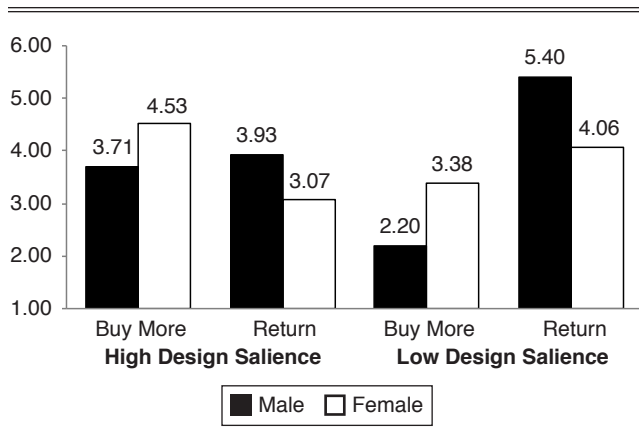STUDY 3: AFFECTIVE RESPONSES TO AESTHETIC INCONGRUITY

Figure 3
STUDY 3: BEHAVIORAL RESPONSES TO AESTHETIC
INCONGRUITY BY GENDER

salience on intent to return, see Web Appendix I at http://www.marketingpower.com/jmrapril11.)

Discussion

Study 3 demonstrates that incongruity between a new acquisition (the shoes) and the consumption environment (the existing wardrobe) tends to cause comparatively higher (vs. lower) levels of frustration relative to regret and results in a stronger (vs. weaker) intent to buy more in the high- (vs. low-) design-salience condition. Furthermore, there was a gender difference in that women showed a stronger intent to buy more than men, and men showed a stronger intent to return than women. However, this was only a difference in magnitude. In terms of the influence of design salience, the pattern of results was identical for men and women. In other words, design salience influences men and women in the same direction, but the tendency to buy more is stronger for women (vs. men), whereas the tendency to return is stronger for men (vs. women). Nonetheless, the observed willingness of women versus men to make purchases based on aesthetic incongruity is a viable domain for further research. Again, mediation analysis revealed that the frustration–regret difference score fully mediates the influence of design salience on the intent to buy more.

GENERAL DISCUSSION

Extant research has identified aesthetics as an important factor to consider in the design of products (Bloch 1995; Bloch, Brunel, and Arnold 2003; Dahl, Chattopadhyay, and Gorn 1999), in advertising (Peracchio and Meyers-Levy 1994), and as a key factor in determining what and why consumers buy (Holbrook and Schindler 1994; Postrel 2003; Schmitt and Simonson 1997). The current research is an investigation of when, why, and how consumers strive to achieve aesthetic congruity among their own possessions. Four studies demonstrate the affective and behavioral responses arising from aesthetic incongruity between a newly acquired product and the consumer's existing consumption environment, depending on the design salience of the acquired product. Aesthetic incongruity causes regret, and on the basis of both intuition and extant literature, we can expect this to be resolved by simply returning the

offending product. However, in the case of high- (low-) design-salience products, the aesthetic incongruity causes a higher (lower) level of frustration relative to the regret, leading to a higher (lower) likelihood of buying more to accommodate the product in the consumption environment. The four studies also provide insight into the underlying process by showing that the feelings of frustration versus regret mediate the influence of design salience on the intent to buy more. Thus, this research contributes to the understanding of a phenomenon with which many consumers may be familiar but on which little empirical research has been focused.

In the current research, regret and frustration represent two influences that may be understood to counteract each other. Thus, it is the relative presence of frustration versus regret that drives additional purchases. This notion is, in itself, a novel insight and a contribution of the current research. Most research on emotions focuses on specific affective states, not on the arguably more likely reality of various emotions existing contemporaneously or on the behavioral outcomes that result from their dual or multiple presences. The use of a frustration–regret difference score might be considered conceptually awkward in that it does not represent a separate construct that is clear and easy to grasp, and this may be viewed as a limitation of the current research. Therefore, although the difference score fits the conceptual framework, and although its influence has been empirically confirmed in multiple studies in this research, further research might employ alternative approaches, such as polynomial regressions or structural equation models, to investigate the influence of multiple emotions.

Our research focuses largely on the role of product design salience and the underlying feelings driving the intent to buy more. Conceptually, however, consumers may be motivated to remove or accommodate the product in a number of ways. Furthermore, there will always be consumers who choose to just live with the product, regardless of incongruity. These issues should be noted as possible areas for further research. As a starting point, our initial investigations into this phenomenon were with products that were intrinsically high (vs. low) in design salience, such as paintings (vs. toasters). Our results revealed that when mismatch occurred with the painting, participants were motivated not only to buy additional items but also to change the wallpaper or furniture in the room, but when mismatch occurred with the toaster, participants were motivated to return the product, gift it to friends or family, or put it under the counter and out of sight.

Gender is another issue that has only been partially illuminated. McManus and Furnham (2006) investigate the role of individual characteristics on aesthetic activities and attitude toward aesthetics. They report no relationship between gender and an aesthetic activity (e.g., going to the theater, reading, going to the cinema) or aesthetic attitude. They do report small differences in the *type* of aesthetic activity engaged in: Women were more interested in literature and the performing arts, whereas men were more likely to go to the cinema. There is also some indication from the vast number of studies that Hoss and Langlois (2003) review, regarding infants' responses to physically attractive faces, that no innate differences in aesthetic preference exist between female and male babies. Bloch (1995) and Bloch,

Brunel, and Arnold (2003) do not report gender differences in consumer responses to product form. Davies et al. (2009, p. 260) argue that human interest in and fascination with aesthetics "is pursued by and directed to all, regardless of age and gender." The extant literature reveals some gender differences in the type of preferences but no absolute differences in sensitivity to aesthetics per se. Web Appendix J (http://www.marketingpower.com/jmrapril11) presents a summary of the literature regarding gender differences.

In Study 3, aesthetic incongruity resulted in an identical *pattern* of responses from both men and women in terms of the tendency to buy more or return, but there were significant differences in strength of response. Women (vs. men) exhibited a stronger intent to buy more, whereas men (vs. women) exhibited a stronger intent to return. There could be several possible reasons for this. For example, perhaps women (1) are more sensitive to these types of aesthetic incongruities, (2) have a higher involvement in and a stronger tendency to buy on the basis of aesthetics, (3) are more confident about their aesthetic judgment and are less inclined to reverse decisions based on aesthetics, or (4) enjoy shopping more and have larger, more varied wardrobes and, thus, are more positively inclined to make additional purchases to incorporate a mismatched product. Consequently, several important issues emerge regarding the role of gender in aesthetics that remain to be investigated.

Managerial Implications

Managers might benefit from an understanding of aesthetic incongruity resolution in various domains. For example, firms may purposefully design products to be unique or different to stand out in the consumption environment in which the products are likely to be introduced. A series of products might be launched that fit well with each other but not with other items in the marketplace. Thus, if consumers are persuaded to buy an initial product—for example, by setting a low price for that item or by advertising it heavily— they may subsequently make several follow-up purchases from the same firm to reestablish aesthetic congruity in their consumption environments. This seems especially likely in the case of complementary products, but the implications are not restricted to such obvious cases and could include any situation in which products may be used in the same consumption environment. Thus, not only is product design salience relevant for today's marketplace and easy to manage and account for in a portfolio of products, but it is also a tool that managers can successfully use to inspire further purchases because of consumers' drive to resolve aesthetic incongruity. However, if design salience is low, the current research suggests that incongruity will simply lead to the product being returned to the store. This implication emphasizes the increasing importance of design as a critical product attribute in today's marketplace.

Marketers of various products for which aesthetic appeal is typically considered unimportant might choose to incorporate unique design elements into these items to make aesthetics a central factor to consider. For example, the new range of George Foreman kitchen equipment includes aesthetically designed grills, toasters, and countertop ovens that are likely to inform the design of the kitchen environment in which they are placed. In the current marketplace, even products such as flyswatters and toilet brushes are being designed to appeal to the consumers' aesthetic sensibilities (Postrel 2003).

Managers might also target sales to consumers, depending on what they know about consumers' current possessions. This is common intuition for selling fashion accessories, in which a salesperson might tag the purchase of a belt and tie to the purchase of a new suit. With the current customer relationship management technologies, firms have vast amounts of information about consumers' previous purchases, which may be used to simulate likely consumption environments for various new products for each individual consumer. Thus, firms might develop more holistic profiles for individual consumers, tracking their evolving consumption environments and even contributing to the development of consumption environments through targeted product promotions.

Another consideration pertains to the ethical implications of persuading consumers to buy more without necessarily increasing their satisfaction. Normative ethics are outside the scope of the current research, but the dilemma should nonetheless be noted. Policy makers might help educate consumers regarding mechanisms, such as those described in this research, and managers should consider the possible negative reactions of consumers who, upon reflection, realize that they have been persuaded to buy more through aesthetics-based marketing.

Future Research Directions

The current research focuses on the role of product design salience in consumer responses to aesthetic incongruity. However, as the pilot study reveals (see Table 1), there are several motivations involved in aesthetic incongruity resolution that represent interesting avenues for further research. Liking (or disliking) of the new product is perhaps too obvious an influence to be considered "interesting," and we might acknowledge product liking as a boundary condition for the current research. For example, if a product is not liked, it is likely returned or not purchased in the first place, whereas if a product is liked to an extremely high degree, it is likely retained regardless of incongruities. However, other motivations have less obvious outcomes. For example, further research might explore different conditions under which aesthetic involvement is so low that aesthetic incongruity goes unnoticed. A related question pertains to when consumers may or may not consider the fit between a prospective purchase and the consumption environment and the extent to which the consumers ask themselves how they will feel if the fit turns out to be low. If aesthetic involvement is high, the awareness of future emotional states may be a factor in self-regulation (Inman 2007; Nenkov, Inman, and Hulland 2008). With sufficient foresight, consumers might refrain from buying mismatched products, thus also avoiding the regret that may stem from additional purchases to match with the product (see also Inman and Zeelenberg 2002).

Note also that although the current research focuses on aesthetic incongruity resolution, the theoretical implications of this research go beyond the realm of aesthetics. According to our theorizing, design salience has a specific influence in this context because it endows a product with intrinsic value. Consumers are motivated to keep an intrinsically valued product for its own sake, and thus an incongruity with the consumption environment leads to the intent to buy more to successfully accommodate the product in the con-

sumption environment. This same logic should apply to any product that is intrinsically valued.

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