Available online at www.sciencedirect.com

ScienceDirect

Journal of Consumer Psychology 24, 1 (2014) 70 – 78

JCP JOURNAL OF CONSUMER PSYCHOLOGY

Research Report

The flip side of vanity sizing: How consumers respond to and compensate for larger than expected clothing sizes☆

JoAndrea Hoegg [a], Maura L. Scott [b], Andrea C. Morales [c], Darren W. Dahl [a,*]

[a] *Sauder School of Business, University of British Columbia, 2053 Main Mall, Vancouver, BC V6T 1Z2, Canada*
[b] *Florida State College of Business, Florida State University, 821 Academic Way, Tallahassee, FL 32306-1110, USA*
[c] *W.P. Carey School of Business, Arizona State University, P.O. Box 874106, Tempe, AZ 85287-4106, USA*

Received 2 May 2012; received in revised form 18 July 2013; accepted 18 July 2013
Available online 26 July 2013

Abstract

Vanity sizing has become a popular retail trend and recent work shows it has a favorable impact on consumers. However, as the current research demonstrates, significant variations in sizing standards across retailers mean that consumers are as likely to encounter larger sizes as they are smaller, "vanity" sizes when shopping, highlighting the importance of understanding how consumers react to this potential threat in the marketplace. Across five studies we demonstrate that larger sizes result in negative evaluations of clothing and show that these effects are driven by consumers' appearance self-esteem. Importantly, we also find that instead of unilaterally lowering purchase intent as one might assume, larger sizes can actually increase spending, as consumers engage in compensatory consumption to help repair their damaged self-esteem. In so doing, this research reveals a dynamic and complex relationship between consumers and sizing labels, where shopping can serve to build, strengthen, threaten, and/or repair appearance self-esteem.
© 2013 Society for Consumer Psychology. Published by Elsevier Inc. All rights reserved.

Keywords: Vanity sizing; Self-esteem; Appearance; Compensatory consumption

Introduction

Vanity sizing, the practice of altering measurement specifications for garments to enable consumers to fit into smaller sizes (Alexander, Connell, & Presley, 2005), has been shown to lead to more positive evaluations of clothing, based on the positive mental imagery that is evoked when consumers visualize themselves in a smaller size (Aydinoglu & Krishna, 2012). However, because manufacturers do not adhere to sizing guidelines and can pursue vanity sizing to varying degrees, significant variation exists across retailers (Kinley, 2003). This variation suggests that consumers will frequently encounter sizes that are either smaller or larger than their expected sizes, highlighting the importance of studying consumer reactions to altered sizes on both ends of the spectrum. As such, the debates over vanity sizing's impact on female consumers (Clifford, 2011) ironically may be too narrow in focus. This research explores how consumers respond when they find that their usual size is too *small* and they require a *larger* size.

Across five studies we show that requiring a larger size results in negative evaluations of clothing, but can also lead to compensatory consumption of other products. These effects are driven by the impact of sizing on consumers' appearance self-esteem. Specifically we demonstrate that requiring a larger size in clothing reduces appearance self-esteem, which negatively impacts attitudes toward the clothing. In contrast, a heightened

☆ First authorship is shared by the first and second authors. Third authorship is shared by the third and fourth authors. The authors are grateful to the editor, associate editor, and three anonymous reviewers for their helpful guidance. They would also like to express appreciation to Shalina Bhagat for her assistance with the studies. The authors gratefully acknowledge support from a MSI-ACR Shopper Marketing Grant.
* Corresponding author. Fax: +1 604 822 4697.
E-mail addresses: joey.hoegg@sauder.ubc.ca (J. Hoegg), mlscott@cob.fsu.edu (M.L. Scott), acmorales@asu.edu (A.C. Morales), darren.dahl@sauder.ubc.ca (D.W. Dahl).

1057-7408/$ -see front matter © 2013 Society for Consumer Psychology. Published by Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.jcps.2013.07.003

level of appearance self-esteem can render consumers immune to the influence of larger sizes. Importantly, although consumers respond unfavorably to larger clothing sizes, they respond more favorably to products that can help to repair their damaged appearance self-esteem or that can help to affirm their self-esteem in another domain, such as intellect.

Vanity sizing

Encountering altered sizes

The industry shift toward smaller sizes suggests that most consumers expect that the garments they purchase will be labeled with a fairly low number. In other words, particularly for younger individuals who do not remember a time when a size 0 did not exist, vanity sizing represents normal sizing. The question of interest, then, is what happens when a consumer shops at a store that has not followed the vanity-sizing trend, has inconsistent sizing standards, or has downshifted sizes to a lesser degree. Previous research has suggested that while size labels indicating a smaller-than-expected size can generate positive mental imagery, labels indicating a larger-than-expected size do not generate such imagery, because mental imagery about being a larger size could be detrimental to self-worth (Aydinoglu & Krishna, 2012). Building on this notion, we suggest that being faced with larger-than-expected sizes can, indeed, be damaging to a consumer's self-worth because they act as a threat to consumers' appearance self-esteem. People's clothing can be conceived of as a part of their self-view (Belk, 1988; Cassut, 2008; Fromm, 1976), and similar to the manner in which a brand label can reflect desired identities (Berger & Ward, 2010), a size label can be an aspect of a consumer's self-concept (e.g., "I *am* a 6."). If the size label suggests a size that is larger than what a consumer is used to, this can have a temporary negative effect on appearance self-esteem, which will carry over to negative evaluations of the clothing item.

If the effect of larger-than-expected sizes on clothing evaluation occurs as a result of a threat to consumers' state-level appearance self-esteem, then increasing appearance self-esteem should protect consumers from this threat. A central, underlying motivation of human behavior is the protection of self-esteem (Baumeister, 1998; Crocker & Park, 2004). Self-affirmation can maintain positive self-esteem and buttress consumers against esteem threats (Sivanathan & Pettit, 2010). Thus, bolstering appearance self-esteem should reduce the threat of a larger size and attenuate its influence on clothing evaluation. More formally,

H1. For consumers with bolstered appearance self-esteem, the negative impact of requiring a larger- than- expected size on clothing evaluations will be mitigated.

It is important to note that we expect a domain-specific bolstering effect. That is, only bolstered appearance self-esteem will mitigate sizing effects, whereas boosts from other domains (e.g., intelligence) should still leave individuals vulnerable in the appearance self-esteem domain (Park & Maner, 2009). Appearance self-esteem is a particularly important aspect of women's self-worth (Grabe, Ward, & Hyde, 2008), and appearance self-esteem threats have different effects than threats to other aspects of a woman's self-esteem (Park & Maner, 2009).

Coping through compensatory consumption

One way consumers compensate for threats to their self-esteem is by consuming (Braun & Wicklund, 1989). When specific dimensions of consumers' self-esteem are threatened, they will seek out products that can affirm those threatened aspects of the self (Gao, Wheeler, & Shiv, 2009). A threat to appearance self-esteem due to larger than expected clothing sizing should therefore increase the desire for products which have affirmational properties for appearance. Thus, products designed to enhance one's appearance (e.g., makeup, jewelry) would provide affirmational value to one's sense of appearance, while mitigating further threats. Importantly, however, because other sized items (e.g., clothing) would provide additional potential threats, they should be less desirable. By purchasing appearance-enhancing, non-sized products, consumers can compensate for the threat of requiring a larger than expected clothing size with a success in the same appearance domain (Carver, Blaney, & Scheier, 1979). Formally,

H2. Consumers who find that they require a larger clothing size than expected will be more likely to purchase non-sized, appearance- enhancing products than consumers who fit into their expected clothing size.

Consumers may also seek out products from an unrelated domain when faced with an appearance self-esteem threat. When people experience a threat in one domain they may utilize consumption to reaffirm themselves in an unrelated domain (Crocker & Wolfe, 2001). For example, once consumers have had their appearance esteem threatened, they may seek to affirm themselves in a different domain, such as intelligence. This could lead them to purchase products that would make them feel smart, such as sophisticated reading material. We propose,

H3. When consumers find that they require a larger clothing size than expected, they will be more likely to purchase products that affirm a different esteem domain than consumers who fit into their expected clothing size.

Note the asymmetry in the domain specificity of self-esteem and sizing effects. As noted earlier, with regard to protection from an imminent appearance self-esteem threat (i.e., requiring a larger-than-expected size in clothing), a boost in a distinct domain such as intelligence will not be effective. Only enhanced self-esteem in the relevant domain (i.e., appearance) will insulate consumers from this threat. However, after appearance self-esteem has been threatened, consumers may seek affirmation in a distinct domain in an effort to restore overall levels of self-esteem (Sherman & Cohen, 2006).

Study 1

Study 1 tests the moderating role of appearance self-esteem on the effects of larger sizing on attitudes toward clothing (H_1). We

experimentally bolstered participants' appearance self-esteem to determine whether this would nullify the influence of sizing. We also examined the effect of bolstering self-esteem in a domain unrelated to appearance, namely intellect, to address the proposed domain-specificity of our effect. We predicted that appearance bolstering, but not intellect bolstering, would render consumers immune to the effects of altered sizing. We compared these bolstering conditions to a control condition in which esteem was not bolstered.

Method

The study comprised a 2 (numerical size of clothing: usual size, larger-than-expected) × 3 (bolstering: appearance, intelligence, control) between subjects design. One hundred nineteen female business undergraduates participated for credit. The study involved two phases. In phase 1, participants reported their usual size in business attire as part of a demographic survey. Phase 2 was held three weeks later, and was conducted individually.

When participants arrived at the lab for phase 2, those in the control condition were told they would be completing a "fashion evaluation" study. Those in the bolstering conditions were told that they would be completing two studies, a computer-based study (i.e., the bolstering manipulation) and a "fashion evaluation" study.

Bolstering manipulation

Participants in the intellect bolstering condition completed an "aptitude test," consisting of 14 relatively difficult GRE items (Jiang, Hoegg, Dahl, & Chattopadhyay, 2010). After the test, the computer "calculated" their score and reported that they ranked in the 89th percentile of students who had been tested. Participants in the appearance bolstering condition completed a test that ostensibly measured body proportions. Four digital photographs were taken of each participant and were "entered" into a computer program. The program then appeared to analyze the photos and calculate symmetry and proportion metrics. After performing its "calculations" the computer reported that they ranked in the 89th percentile of students who had been tested. Both manipulations were pretested to ensure that they successfully bolstered the target esteem domain (see Appendix A for details).

Sizing manipulation

The fashion evaluation study followed. Control participants began the study at this point. Each participant was told she would be evaluating custom-fit clothing, but that in order to do that, first she would need to take her body measurements using a clothing measurement guide. The guide provided a human figure and descriptions of six measurements (bust, hip, neck, shoulder, waist and lower waist). The participant recorded the measurements using a tape measure and mirror in a private fitting room. She brought her measurements back to an administrator who ostensibly used them to determine the size of the suit. The administrator pretended to cross check each measurement with a fictitious size chart and assigned the size.

The administrator gave the participant a card with the clothing size, a picture of the suit, and some details about the suit. Half of the participants were given the size they had reported in phase 1. The other half received a numerical size two sizes larger than their usual size. Participants took the card to a computer and completed a survey that asked about their attitude toward the suit using four semantic differential scale items (bad/good, dislike/like, unpleasant/pleasant, dissatisfied/satisfied; each on a 7-point scale). Finally, participants were thanked and debriefed.

Results

Attitude toward suit

A 2 (numerical size) × 3 (bolstering) ANOVA on the attitude index ($\alpha = .97$) revealed a main effect of sizing ($M_{usual} = 4.89$ vs. $M_{larger} = 4.10$; $F(1, 113) = 10.25$, $p < .005$), qualified by its interaction with bolstering ($F(2, 113) = 4.40$, $p < .01$) (see Fig. 1). Attitude toward the suit diminished when the size was a larger number than expected (vs. usual number) when participants were in the control group ($M_{usual} = 4.98$ vs. $M_{larger} = 3.93$; $F(1, 113) = 5.58$, $p < .05$) or in the intelligence bolstering group ($M_{usual} = 5.04$ vs. $M_{larger} = 3.50$; $F(1, 113) = 12.74$, $p < .001$); however, participants showed no difference in attitude toward the suit when their appearance esteem had been bolstered ($M_{usual} = 4.66$ vs. $M_{larger} = 4.86$; $F < 1$).

Furthermore, when the numerical size was larger, attitude toward the suit was significantly higher for the appearance bolstered group versus the intelligence bolstering group ($M_{appearance} = 4.86$ vs. $M_{intel} = 3.50$; $F(1, 113) = 9.98$, $p < .005$) and versus the control group ($M_{appearance} = 4.86$ vs. $M_{control} = 3.93$; $F(1, 113) = 4.24$, $p < .05$). There was no difference between the intelligence bolstering and control conditions ($F(1, 113) = 1.12$, $p > .29$).

Discussion

Study 1 provided several key findings. First, it provided evidence that appearance self-esteem underlies the effect that large size labels have on clothing evaluation. When appearance self-esteem was bolstered, participants were unaffected by the potential threat of a larger-than-expected size. Second, the

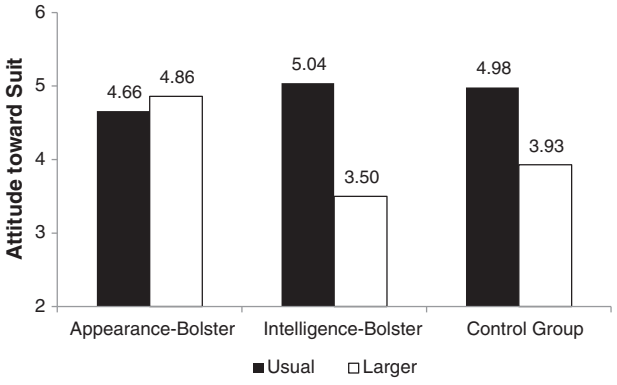

Fig. 1. Attitude toward suit as a function of bolstering and sizing (Study 1).

study demonstrates the domain-specific nature of the effects of sizing. Bolstering esteem in a domain unrelated to the esteem threat (i.e., intelligence esteem) had no effect on reactions to the larger size. When participants in the intelligence bolstering and control conditions viewed the larger sizing labels, they evaluated the suit more negatively.

Study 2 uses the same measuring-tape/suit evaluation experience (without esteem bolstering) to test the proposed retail therapy effect (H_2). After the sizing experience, we asked about participants' likelihood to buy the suit, other items that would also be sized (i.e., clothing), other non-sized appearance-enhancing items, and other items that might make a consumer feel better but would not affirm a dimension of self-esteem. These questions enabled a test of H_2.

Study 2

The study was a 2 (numerical size of clothing: usual size, larger-than-expected) × 3 (other purchases: sized clothing items, non-sized appearance related items, non-sized comfort related items) mixed design experiment. Sizing was manipulated between subjects, and other purchases were manipulated within subject.

The participants were 42 adult females in a weight loss program (M_{age} = 49; range 29 to 64). We selected this group to enhance the generalizability of our findings and also because we expected that clothing size would be particularly salient to these individuals. In exchange for their participation, each participant received $5.

When a participant arrived at the study location, she was told that she would be evaluating clothing from a retailer that is considering opening a store in the area but that in order to do so she would first need to take her body measurements. Participants also indicated their typical clothing size in jeans, pants, blouses, and dresses. The rest of the study mirrored that of the fitting room experience of Study 1. Participants then indicated their attitude toward the suit (same items as Study 1) and their likelihood of purchasing other products from the same store (i.e., sized items, appearance enhancing items, comfort enhancing items). Sized clothing items included boot cut jeans and a sleeveless dress, non-sized appearance-related items included eye makeup and a tooth whitening kit, and non-sized comfort-related items included a heated neck pillow and massaging rub. Each item was evaluated on a seven point scale (1 = definitely would not purchase; 7 = definitely would purchase), with order of item groupings counterbalanced.

Results and discussion

Suit evaluation

An ANOVA on the attitude index (α = .94) indicated that participants in the usual size condition had a more positive attitude toward the suit relative to those in the larger- than- expected size condition (M_{usual} = 4.76 vs. M_{larger} = 3.37; $F(1, 40) = 10.71$, $p < .005$).

Purchase of other items

A 2 (sizing: usual size vs. larger size) × 3 (other purchases: sized, appearance enhancing, comfort enhancing) × 2 (replicate) mixed ANOVA revealed no three way interaction ($p > .30$), and no interactions involving replicate ($ps > .13$) but did reveal a significant interaction of sizing and other purchases ($F(2, 39) = 5.97$, $p < .005$) (see Table 1). The other purchases main effect ($p > .30$) and the sizing main effect ($F < 1$) were nonsignificant. Contrasts revealed that purchase intention for sized items followed the pattern of the suit. That is, participants were less likely to purchase jeans or a dress when their size for the suit was larger than they expected than when it was in their correct size (M_{usual} = 3.74 vs. M_{larger} = 2.58; $F(1, 40) = 5.63$, $p < .05$). In contrast, and in support of H_2, purchase intention for appearance-related items showed the reverse pattern; participants who were told they required a larger size exhibited a higher likelihood for purchasing non-sized appearance-related items than those who were given their correct size (M_{usual} = 2.87 vs. M_{larger} = 3.68; $F(1, 40) = 4.50$, $p = .07$). There was no significant difference in purchase likelihood for comfort-related items ($F < 1$).

Discussion

This study provided support for H_2, whereby consumers faced with larger-than-expected sizes indicated a higher purchase likelihood of items that could enhance their appearance self-esteem. Importantly the study also showed that these consumers avoided other sized items that presumably could pose additional threat and were no more or less likely to purchase non-appearance related items that did not enhance self-esteem but rather were related more to general soothing or comfort. In other words, it appears that consumers who are threatened by large sizes are attracted to products that can help to reaffirm appearance self-esteem and avoid products that can pose additional threat.

Table 1
Purchase of other products as a function of numerical sizing (Study 2).

		Regular size (N = 23)	Larger size (N = 19)
Category	Items	Mean (SD)	Mean (SD)
Sized items	Bootcut jeans	3.91 (1.83)	3.05 (1.81)
	Sleeveless dress	3.57 (2.15)	2.11 (1.33)
	Average	3.74 (1.74)	2.58 (1.36)
Appearance items	Eye makeup	3.04 (1.89)	3.63 (2.14)
	Tooth whitening kit	2.70 (1.58)	3.74 (2.31)
	Average	2.87 (1.40)	3.68 (2.10)
Other (feel good) items	Heated neck pillow	2.96 (1.61)	2.68 (1.60)
	Relaxing muscle rub	2.91 (1.76)	2.84 (1.83)
	Average	2.93 (1.46)	2.76 (1.62)

Study 3

Method

The goals of Study 3 were to provide support for the mediating role of appearance self-esteem in the impact of sizing on clothing evaluations and also to provide additional evidence for the compensatory consumption effect observed in Study 2. One hundred sixty-nine females from an online participant pool (Amazon Mechanical Turk; M_{age} = 32.7) read a scenario about shopping for clothing. They were asked to imagine they were shopping in an unfamiliar store for a pair of black pants they could wear to work and out for the evening. After some searching they found a pair that fit well and were debating buying them. The key manipulation was the number on the size label of the pants that fit: the number was either the individual's usual, expected size or was two sizes larger than her usual size. The survey asked participants to rate their likelihood of purchasing other items from the retailer. The products included additional sized items (t-shirt and skirt with jacket), appearance enhancing non-sized items (necklace and lip gloss), and other items that might make the consumer feel good but would not enhancing appearance (heated neck pillow and relaxing eye mask). After reading the scenario, participants completed a questionnaire also measuring state appearance self-esteem and attitude toward the pants.

Measures

State appearance self-esteem was measured using a scale adapted from Heatherton and Polivy (1991). Items included "I would feel unattractive at that moment" (reverse coded), "I would be satisfied with the way my body looks right now," "I would be dissatisfied with my weight" (reverse coded), "I would be pleased with my appearance right now," and "I would feel that others would admire me" (α = .93). Evaluations of the pants were measured as in previous studies (α = .95). Demographics were also collected.

Results

Evaluations of the pants

As expected, participants had a significantly more negative reaction to the pants when the size that fit was two sizes larger than expected (M_{large} = 3.85) than when it was their usual size (M_{usual} = 6.03; $F(1, 167) = 93.13$, $p < .001$).

Appearance self-esteem

Participants who were told that the size of the pants that fit was two sizes larger than expected also reported lower levels of state appearance self-esteem (M_{large} = 2.12) than did participants who were told that the size of the pants that fit was their usual size (M_{usual} = 3.82; $F(1, 167) = 105.15$, $p < .001$).

To assess the role of state appearance self-esteem in the effect of sizing on clothing attitude, we performed the Preacher and Hayes (2008) bootstrap test for indirect effects with 5000 bootstrapped samples, using sizing as the independent variable (usual size = 0; larger size = 1), attitude toward the pants as the dependent variable, and appearance self-esteem as the mediator. The indirect effect of sizing on attitude through appearance self-esteem was negative ($\beta = -1.17$) and significant (95% CI: −1.60, −.82), indicating a mediating role of appearance self-esteem in the relationship between sizing and clothing evaluations.

Purchase of other items

A 2 (sizing) × 3 (category: clothing, appearance, other) × 2 (replicate) repeated measures ANOVA was conducted to assess the role of sizing in the purchase of additional items. There was no significant three-way interaction ($F < 1$), nor any two-way interactions involving replicate ($p > .25$), but as expected, there was a significant interaction of sizing and category ($F(2, 167) = 7.63$, $p < .01$) (see Table 2). There were also main effects of category ($F(2, 167) = 84.76$, $p < .001$) and replicate ($F(1, 167) = 39.41$, $p < .001$), but no effect of sizing ($F < 1$). Participants who required a larger-than-expected size were less likely to buy additional sized items (M_{large} = 4.37 vs. M_{usual} = 4.87; $F(1, 167) = 5.83$, $p < .05$), more likely to buy non-sized appearance-enhancing items (M_{large} = 4.24 vs. M_{usual} = 3.73; $F(1, 167) = 4.12$, $p < .05$), but no more or less likely to buy other "feel-good" items that could not enhance appearance (M_{large} = 3.01 vs. M_{usual} = 2.69; $F(1, 167) = 1.34$, $p > .20$).

Discussion

Study 3 built on the findings of Study 1 by demonstrating the mediating role of appearance self-esteem in the effect of sizing on clothing evaluations. Moreover, the study provides additional evidence that consumers who face the threat of larger than expected sizes are less likely to purchase sized items (which would present more threat) and more likely to purchase appearance-enhancing items.

Study 4

Studies 2 and 3 showed that when faced with a threat to their appearance esteem due to larger sizes, these consumers purchase other products that reaffirm their appearance esteem (e.g., non-sized appearance enhancing products) but do not

Table 2
Purchase of other products as a function of numerical sizing (Study 3).

		Regular size (N = 81)	Larger size (N = 88)
Category	Items	Mean (SD)	Mean (SD)
Sized items	Skirt and jacket	4.51 (1.73)	4.07 (1.64)
	Shirt	5.23 (1.51)	4.67 (1.62)
	Average	4.87 (1.24)	4.37 (1.44)
Appearance items	Lip gloss	3.94 (2.02)	3.60 (1.98)
	Necklace	4.55 (1.81)	3.85 (1.97)
	Average	3.73 (1.64)	4.24 (1.66)
Other (feel good) items	Heated neck pillow	2.84 (1.89)	3.18 (2.21)
	Eye mask	2.54 (1.80)	2.83 (2.04)
	Average	2.69 (1.67)	3.00 (1.85)

show heightened interest in other products that are not esteem affirming (e.g., products that would make them feel good) (H_2). Study 4 again tests H_2, and also examines H_3, which proposes that when faced with a threat to appearance esteem, consumers may also cope by purchasing items that can affirm esteem in a different domain (e.g., intelligence).

Method

Ninety-one females from an online subject pool (Amazon Mechanical Turk) completed the study. They read a scenario about shopping for a pair of black pants in a new store in a nearby mall. The pants that fit them were either their usual size, or were two sizes larger. Next participants indicated their evaluations of the pants (as in prior studies). They were then asked to imagine that they were still in the store and saw a number of other clothing items (i.e., jeans, shirts) and personal appearance accessories (i.e., lip gloss, tooth whitener). These two sets of items comprised the sized items and non-sized appearance-related items. For each of the four products (order counterbalanced) participants were asked to indicate their purchase likelihood.

To assess participants' likelihood of buying items that could enhance esteem in a separate domain (i.e., intelligence), we also asked participants to imagine that they left the store and wandered into a café/bookstore and assessed their purchase likelihood for each of four specific items, two intellectual (The Economist magazine, Learn-A-New-Language CD) and two less intellectual (People magazine, Top-40 CD).

Results and discussion

Evaluation of pants

Consistent with Study 3, the attitude index ($\alpha = .96$) indicated that participants liked the pants better when they were their usual size than when they were a larger size ($M_{usual} = 6.31$ vs. $M_{larger} = 4.09$; $F(1, 89) = 69.18$, $p < .001$).

Purchase of appearance-related items

We conducted a 2 (numerical size of clothing: usual, larger) × 2 (product type: sized, non-sized-appearance) × 2 (replicate) mixed ANOVA on the purchase of other products in the store. Analysis indicated no three-way interaction ($F(1, 89) = 2.55$, $p > .10$), and no interaction of numerical size and replicate ($F < 1$), but did reveal a significant interaction of numerical size and product type ($F(1, 89) = 21.13$, $p < .001$). There was also a main effect of product type ($F(1, 89) = 143.27$, $p < .001$) and a main effect of replicate ($F(1, 89) = 30.03$, $p < .001$), but no main effect of numerical size ($F < 1$). Participants requiring larger sized pants were less likely to purchase sized items than those who fit into their usual size ($M_{usual} = 5.48$ vs. $M_{larger} = 4.52$; $F(1, 89) = 11.68$, $p < .01$). For the evaluation of non-sized appearance related items, we saw the reverse pattern; consistent with H_3, participants requiring larger sized pants were more likely to purchase the items than those who fit into their usual size ($M_{usual} = 2.64$ vs. $M_{larger} = 3.26$, $F(1, 89) = 3.79$, $p = .05$). See Table 3 for full details.

Purchase of non-appearance related items

To test whether sizing would alter the purchase of items in a domain unrelated to appearance, we conducted a 2 (size: usual, larger) × 2 (product type: intellectual, non-intellectual) × 3 (replicate) mixed ANOVA. Analysis indicated no three-way interaction ($F < 1$), and no interaction of numerical size and replicate ($F < 1$), but did reveal a marginally significant interaction of numerical size and product type ($F(1, 89) = 3.45$, $p = .06$). There was also a main effect of product type ($F(1, 89) = 4.84$, $p < .05$), a main effect of replicate ($F(1, 89) = 5.00$, $p < .05$), and a main effect of numerical size ($F(1, 89) = 6.96$, $p < .05$). Consistent with H3, participants requiring larger sized pants were more likely to purchase intellectual items than those who fit into their usual size ($M_{usual} = 1.49$ vs. $M_{larger} = 2.35$; $F(1, 89) = 13.50$, $p < .001$). There was no difference between conditions in likelihood of purchasing less intellectual items ($F < 1$).

Discussion

Study 4 confirmed that when faced with a size threat, consumers cope by purchasing non-sized, appearance enhancing items. We also found that people cope with a size threat to appearance esteem by purchasing items that can affirm a different aspect of their self-esteem. Participants faced with the prospect of larger sizes were more likely to purchase items that would make them feel intelligent, such as news magazines and language CDs. This finding is particularly salient in light of Study 1, which demonstrated that an intelligence esteem boost was insufficient to protect against the threat of a large size. Although a boost in another domain does not seem to protect consumers from an appearance threat, once their appearance esteem has been threatened, they may seek to affirm themselves in another domain. Thus the relationship between appearance esteem and intelligence esteem appears asymmetric with respect to protecting oneself from versus compensating for a threat to appearance esteem.

Table 3
Purchase likelihood of other products as a function of numerical sizing (Study 4).

		Regular size (N = 45)	Larger size (N = 46)
Category	Items	Mean (SD)	Mean (SD)
Sized items	Jeans	5.36 (1.43)	4.17 (1.97)
	Shirt	5.60 (1.01)	4.87 (1.72)
	Average	5.48 (.99)	4.52 (1.60)
Appearance items	Lip gloss	3.24 (2.13)	3.61 (1.89)
	Tooth whitening kit	2.04 (1.35)	2.91 (1.86)
	Average	2.64 (1.53)	3.26 (1.49)
Intellect-enhancing items	Economist magazine	1.51 (1.08)	2.37 (1.82)
	Learn-a-language CD	1.47 (.92)	2.33 (1.59)
	Average	1.49 (.82)	2.35 (1.34)
Non-intellect enhancing items	People magazine	2.47 (1.91)	2.65 (1.89)
	Top 40 CD	1.80 (1.25)	2.15 (1.67)
	Average	2.13 (1.32)	2.40 (1.49)

The evidence from Study 4 is consistent with a story of self-esteem repair; that is, once a consumer faces an appearance self-esteem threat, she will either attempt to restore her appearance self-esteem, or attempt to boost self-esteem in a different domain. However, it is not clear whether consumers make these product choices in a strategic attempt at self-esteem repair. In our final study we directly asked participants the extent to which different types of purchases would impact different aspects of self-esteem in an effort to better understand the motivations behind the different types of purchases.

Study 5

Two-hundred and twenty-nine female undergraduates participated in exchange for course credit. The study was a 2 (sizing: usual size vs. larger size) × 3 (other purchases: appearance-enhancing, intelligence-enhancing, no purchases) between subjects design. Sizing was manipulated using the pants scenario from Study 4. We manipulated other purchases within the scenario by indicating that after the pants experience, the consumer buys appearance enhancing items (earrings, eye makeup, and a tooth whitening kit), intelligence enhancing items (The Economist magazine, a brain teaser book, and a learn-a-new language kit), or nothing at all, depending on condition.

Next, participants were asked to think about how the woman is trying to make herself feel by buying these items (those in the control condition were simply asked to think about how she feels). They answered this question by indicating their agreement with a number of items related to intelligence self-esteem (adapted from Paulhus, Lysy, & Yik, 1998), appearance self-esteem, and global self-esteem (adapted from Rosenberg, 1965), each on seven-point (see web appendix for items).

Results

Appearance esteem

A 2 (sizing) × 3 (other purchases) ANOVA revealed significant main effects of numerical sizing ($F(1, 223) = 27.83$, $p < .001$) and other purchases ($F(2, 223) = 14.15$, $p < .001$), and an interaction ($F(2, 223) = 17.38$, $p < .001$) (see Table 4).

For participants in the usual size condition, appearance self-esteem was unaffected by other purchases ($F(2, 223) = 1.38$, $p > .25$). For the larger size, the differences were significant ($F(2, 223) = 32.30$, $p < .001$). In the larger condition, shopping for intelligence items and for beauty items led to greater appearance esteem than the control condition ($M_{intel} = 4.35$ vs. $M_{control} = 2.79$; $p < .001$) and ($M_{appearance} = 5.13$ vs. $M_{control} = 2.79$; $p < .001$); in addition, shopping for appearance items led to greater appearance esteem than shopping for intelligence items ($p < .05$).

Intelligence esteem

A 2 (sizing) × 3 (other purchases) ANOVA revealed main effects of numerical sizing ($F(1, 223) = 20.84$, $p < .001$), other purchases ($F(2, 223) = 75.08$, $p < .001$), and their marginal interaction ($F(2, 223) = 2.52$, $p < .10$). For the regular size, intelligence esteem varied as a function of purchase type ($F(2, 223) = 32.81$, $p < .001$); all contrasts were significantly different ($ps < .001$). For the larger size, intelligence esteem also varied by purchase type ($F(2, 223) = 46.11$, $p < .001$); all contrasts were significantly different ($ps < .05$).

Table 4
Study 5: Appearance esteem, intelligence esteem, and global esteem as a function of numerical sizing and other purchases.

	Regular size			Larger numerical size		
	Mean	SD	N	Mean	SD	N
Appearance esteem						
Purchased appearance items	5.15	1.22	50	5.13	1.63	33
Purchased intelligence items	4.73	1.04	36	4.35	1.14	36
Control	5.20	1.43	29	2.79	1.43	45
Intelligence esteem						
Purchased appearance items	3.62	1.09	50	2.98	1.44	33
Purchased intelligence items	5.39	.60	36	5.17	.79	36
Control	4.48	.95	29	3.51	.95	45
Global esteem						
Purchased appearance items	4.71	1.03	50	4.79	.69	33
Purchased intelligence items	4.83	.89	36	4.91	.82	36
Control	5.03	.68	29	4.00	.85	45

Global esteem

A 2 × 3 ANOVA revealed significant main effects of numerical sizing ($F(1, 223) = 6.45$, $p < .05$), other purchases ($F(2, 223) = 3.06$, $p < .05$) and their two-way interaction ($F(2, 223) = 10.01$, $p < .001$). For the regular size, global esteem was unaffected by other purchases ($F(2, 223) = 1.33$, $p > .26$). However, for the larger size, the differences were significant ($F(2, 223) = 13.38$, $p < .001$). In the larger condition, purchasing intelligence items or appearance items led to greater global esteem than the control condition ($M_{intel} = 4.91$ vs. $M_{control} = 4.00$; $p < .001$ and $M_{appearance} = 4.79$ vs. $M_{control} = 4.00$; $p < .001$); purchasing intelligence or appearance items did not result in differences in global esteem ($p > .56$).

General discussion

Recent research examining effects of clothing size has shown that although smaller numbers on clothing labels generate positive mental imagery, larger numbers do not have the same effect (Aydinoglu & Krishna, 2012). In the current work we investigated whether larger sizes may result in other outcomes for consumers, such as reduced appearance self-esteem and compensatory consumption behaviors. Although few clothing manufacturers would strategically scale their sizes larger, the lack of sizing standards and the industry trend toward smaller sizes makes it likely that consumers will encounter larger-than-expected sizes in the marketplace. We show that larger-than-expected sizes have negative implications for clothing evaluation and can lead to compensatory consumption.

Study 1 showed that female consumers react negatively to larger than expected sizes. The study demonstrated that a

bolstered sense of appearance self-esteem can mitigate this reaction, but a bolstered sense of esteem in an unrelated domain (i.e., intelligence) does not have similar protective effects. Studies 2, 3, and 4 examined compensatory consumption as a way in which consumers cope with the negative impact of requiring a larger size. Relative to consumers who fit into their expected size, those who encountered larger sizes were less likely to purchase additional sized items (i.e., clothing), and more likely to purchase items that could enhance their appearance self-esteem or an unrelated domain of self-esteem. Finally in Study 5 we provided evidence that compensatory consumption appears to be motivated by an attempt to restore overall self-esteem levels.

The current work provided several insights into how consumers react to sizes on the opposite end of the clothing size spectrum; however, there are many opportunities for additional work. First, although we found that when faced with larger than expected sizes, consumers indicated a higher likelihood to purchase products that could restore self-esteem, our measures were survey-based. It is also important to demonstrate the extent to which actual in-store choice would reflect this tendency. External validity would also be enhanced by considering known retailers. Our studies involved unknown brands. If an existing retailer changed their sizing practices (e.g., Abercrombie & Fitch's policy of targeting slim people) it is unclear whether the impact would be the same. Similarly, our research cannot speak to unusual sizing practices. For example, some retailers use non-standard sizes such as 1, 2, and 3 (e.g., Ted Baker, Chicos). Although these sizes essentially equate to small, medium, and large, a size 3 may be psychologically more attractive than a "large" label. Furthermore, since retailers vary in the extent to which they target specific body types, future research should examine the effects of body mass index (BMI) and body shape, on responses to altered sizing. Women at different BMI levels may respond negatively to larger than expected sizes for different underlying reasons.

Our research also focused on female consumers. Here we parallel previous research (e.g., Aydinoglu & Krishna, 2012) on vanity sizing that focused on the population thought to be most susceptible to this marketing tactic. However, it remains unclear how clothing sizes impact men. It is possible that rather than mirroring their female counterparts, male consumers are instead ambivalent to sizing labels, or perhaps even exhibit the opposite effect and actually hope to be "bigger" in some sizing contexts.

One important consideration that remains to be explored is the effects on the brand versus the retailer. We have shown that a larger-than-expected size leads to negative evaluations of the clothing item but greater purchase likelihood of esteem-enhancing products. In our studies we have shown that this pattern occurs within the same retailer and at other retailers, suggesting that while consumers may be angry at the brand, they do not punish the retailer. However, we were never explicit about a brand name or the extent to which the other items (appearance, intelligence, etc.) are manufactured by the same brand (e.g., Banana Republic selling its own earrings) or are simply sold by the retailer and are actually different brands (e.g., Macy's selling multiple brands). Participants may have assumed that the clothing items were the same brand but the other items were not. Although this cannot account for an increase in purchase of esteem-enhancing items, it is an alternative explanation for a reduced likelihood to purchase clothing items. That is, it may not be about avoiding additional threat but rather about punishing the brand that threatened them. Future research is needed to tease apart this important distinction.

Although we were interested in the effect of encountering larger-than-expected sizes on state-level appearance self-esteem, the issue of sizing effects can also be considered from the perspective of chronic self-esteem. Indeed, previous research demonstrated that vanity sizing effects are more pronounced among consumers with low appearance self-esteem (Aydinoglu & Krishna, 2012). From the perspective of consumers' psychological well-being, it may be important to consider both chronic and situational self-esteem in tandem. If sizing effects are more pronounced among women with low self-esteem and at the same time, these sizing manipulations can alter state self-esteem in positive or negative ways, understanding the extent to which chronic self-esteem may mitigate or magnify compensatory behaviors would be an important consideration.

The effects of sizing practices also have implications for social welfare. On the one hand, it is possible that vanity sizing is contributing to the obesity epidemic by convincing consumers that they are thinner than they really are. Perhaps encountering larger sizes could actually help consumers face their physical size and encourage action. On the other hand, perhaps the threat of larger sizes and the consequent damage to appearance self-esteem may cause some consumers to seek comfort in food products such as chocolate and ice cream that make the problem worse (Bublitz, Peracchio, & Block, 2010). Our studies did not examine the relationship between sizing manipulations and food consumption, a prominent coping mechanism for many consumers. Investigating these and other consumer welfare implications resulting from sizing practices would also be an interesting endeavor.

Appendix A. Pretest of bolstering manipulation used in Study 1

Forty-one undergraduate students were given either the appearance bolstering manipulation or no bolstering, and subsequently indicated the extent to which they felt unattractive (reverse coded), felt they had a more attractive physical shape than others, and felt inferior to others (reverse coded). Each question was rated on a 7-point scale from 1 = "not at all" to 7 = "very much," and the items were collapsed into an appearance esteem index ($\alpha = .72$). Participants who received the bolstering manipulation indicated more positive feelings about their appearance ($M = 4.90$) than did participants who did not receive bolstering ($M = 4.15$), $t(39) = 2.04$, $p < .05$.

Thirty-six separate participants from the same subject pool were given either the intelligence bolstering manipulation (i.e., the false GRE feedback) or no bolstering, and subsequently indicated the extent to which they felt intelligent, like someone who enjoys thinking about complicated problems, and not academically gifted (reverse scored). Each statement was rated on a 7-point scale from 1 = "not at all" to 7 = "very much," and the items were collapsed

into an intelligence index (α = .78). The results indicated that participants who received the bolstering manipulation felt better about their intellect level (M = 5.37) than those who did not receive the manipulation (M = 4.63), $t(34) = 2.21$, $p < .05$.

Appendix B. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.jcps.2013.07.003.

References

Alexander, M., Connell, J. L., & Presley, A. B. (2005). Clothing fit preferences of young female adult consumers. *International Journal of Clothing Science and Technology*, *17*, 52–64.

Aydinoglu, N., & Krishna, A. (2012). Imagining thin: Why vanity sizing works. *Journal of Consumer Psychology*, *22*, 565–572.

Baumeister, R. F. (1998). The self. In Daniel Gilbert, Susan T. Fiske, & Gardner Lindzey (Eds.), *The handbook of social psychology* (pp. 680–740). New York, NY: McGraw-Hill.

Belk, R. (1988). Possessions and the extended self. *Journal of Consumer Research*, *15*, 139–168.

Berger, J., & Ward, M. K. (2010). Subtle signals of inconspicuous consumption. *Journal of Consumer Research*, *37*, 555–569.

Braun, O. L., & Wicklund, R. A. (1989). Psychological antecedents of conspicuous consumption. *Journal of Economic Psychology*, *10*, 161–187.

Bublitz, M. G., Peracchio, L. A., & Block, L. G. (2010). Why did I eat that? Perspectives on food decision making and dietary restraint. *Journal of Consumer Psychology*, *20*, 239–258.

Carver, C. S., Blaney, P. H., & Scheier, M. F. (1979). Focus of attention, chronic expectancy, and responses to a feared stimulus. *Journal of Personality and Social Psychology*, *37*, 1186–1195.

Cassut, M. (2008). Vanity sizing: We'll pay more to take a size 4. *Seattle Times*, (March), www.seattletimes.com.

Clifford, S. (2011). One size fits nobody: Seeking a steady 4 or a 10. *New York Times*, April 24.

Crocker, J., & Park, L. E. (2004). The costly pursuit of self esteem. *Psychological Bulletin*, *130*, 392–414.

Crocker, J., & Wolfe, C. T. (2001). Contingencies of worth. *Psychological Review*, *108*, 593–623.

Fromm, E. (1976). *To have or to be?* London: Routledge & Kegan Paul.

Gao, L., Wheeler, S. C., & Shiv, B. (2009). The shaken self: Product choices as a means of restoring self-view confidence. *Journal of Consumer Research*, *36*, 29–38.

Grabe, S., Ward, M., & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, *134*, 460–476.

Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, *60*(6), 895–910.

Jiang, L., Hoegg, J., Dahl, D. W., & Chattopadhyay, A. (2010). The persuasive role of incidental similarity on attitudes and purchase intentions in a sales context. *Journal of Consumer Research*, *36*, 778–791.

Kinley, T. R. (2003). Size variation in women's pants. *Clothing and Textiles Research Journal*, *1*, 19–31.

Park, L. E., & Maner, J. K. (2009). Does self-threat promote social connection? The role of self-esteem and contingencies of self-worth. *Journal of Personality and Social Psychology*, *96*, 203–217.

Paulhus, Delroy L., Lysy, Daria C., & Yik, Michelle S. M. (1998). Self-report measures of intelligence: Are they useful as proxy IQ tests? *Journal of Personality*, *66*(4), 525–554.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*, 879–891.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, N.J.: Princeton University Press.

Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, *38*. (pp. 183–242)San Diego, CA: Academic Press.

Sivanathan, N., & Pettit, N. C. (2010). Protecting the self through consumption. *Journal of Experimental Social Psychology*, *46*, 564–570.

Web Appendix

Table 2: Items Used to Measure Intelligence Esteem and Appearance Esteem in Study 5.

Intelligence Esteem (adapted from Paulhus, Lysy, and Yik 1998)

Intelligent
Ingenious
Smart
Like a deep thinker
Like a clear-thinker
Clever and sharp witted
Not exceptionally gifted at academic things [R]
Like someone who enjoys thinking about complicated problems

Appearance Esteem:

Satisfied with the way her body looks
Dissatisfied with her weight [R]
Please with her appearance right now
Unattractive [R]

Global Esteem (Rosenberg 1965):

I feel that I am a person of worth, at least on an equal plane with others.
I have a number of good qualities.
I am able to do things as well as most people.
I take a positive attitude toward myself.
On the whole, I am satisfied with myself.