



Short Article

Imagining thin: Why vanity sizing works

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Received 13 December 2010; revised 10 December 2011; accepted 21 December 2011

Abstract

Vanity sizing, the practice of clothing manufacturers, whereby smaller size labels are used on clothes than what the clothes actually are, has become very common. Apparently, it helps sell clothes—women prefer small size clothing labels to large ones. We propose and demonstrate that smaller size labels evoke more positive self-related mental imagery. Thus, consumers imagine themselves more positively (thinner) with a vanity sized size-6 pant versus a size-8 pant. We also show that appearance self-esteem moderates the (mediating) effect of imagery on vanity sizing effectiveness—while vanity sizing evokes more positive mental imagery for both low and high appearance self-esteem individuals, the effect of the positive imagery on clothing preference is significant (only) for people with low appearance self-esteem, supported by the theory of compensatory self-enhancement.

Our suggestion of simple marketing communications affecting valence of imagery and consequent product evaluation have implications for many other marketing domains.

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Keywords: Vanity sizing; Visual imagery; Self-esteem

A person's body image is an important source of self-esteem (Smeesters, Mussweiler, & Mandel, 2010). This is especially predominant among women—approximately 50% of girls and young women report being dissatisfied with their bodies (Bearman, Presnell, Martinez, & Stice, 2006). A model-thin body is now considered an ideal that every woman should admire and achieve (Wertheim, Paxton, Schutz, & Muir, 1997). The weight loss industry has grown tremendously over the last couple of decades with consumers, presented with idealized advertising images, trying to get thinner and thinner.

Body image is not simply a mirror-like reflection of external reality. Although the body concept includes objective physical attributes, its contents and associated positive or negative interpretations are highly subjective and influenced by one's environment (Phillips & de Man, 2010). Realizing the subjective

nature of body image and the everlasting desire of female consumers to get thinner, managers for clothing companies have found a simple way of transforming a size-8 woman into a size-6: 'vanity sizing,' a strategy used by many clothing companies today. In this strategy, women's apparel companies intentionally label a garment smaller than its true size. The practice is especially common in higher-end apparel (Kinley, 2003a). Kinley (2003b) examined over 1000 pairs of women's pants, and found, for instance, that the measurement for pants listed as size-6 ranged from 21 to 35 in for crotch seams (measured from the top of the waistband in the front to the top of the waistband in the back). Contending on the notion that thinner is better for today's women exposed to idealized thin images constantly, we propose that vanity sizing is used as a means to generate "positive" *self-related* mental imagery, which in turn improves attitudes toward the product.

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Through two studies, we demonstrate that mental imagery is more positive with vanity sizing—consumers imagine themselves more positively (e.g., thinner, more attractive) when a clothing item with a smaller size label fits them; thus, a vanity sized size-6 pant evokes more positive self-related imagery for a woman than a size-8 pant. We also show that appearance self-esteem moderates the (mediating) effect of imagery on vanity sizing effectiveness—while vanity sizing evokes more positive mental imagery for *both* low and high appearance self-esteem individuals, the effect of the positive imagery on product evaluation is significant only for people with low appearance self-esteem, supported by the theory of compensatory self-enhancement.

Why does vanity sizing evoke more positive mental imagery?

Mental imagery

Imagery has been described as “a process by which sensory information is represented in working memory” (MacInnis & Price, 1987). Imagery and discursive processing have been studied as the two conceptually distinct modes of information processing (Oliver, Robertson, & Mitchell, 1993). While discursive processing inquires how language and symbols are manipulated in working memory to perform some function, imagery is seen as a conceptually distinct way of representing information (MacInnis & Price, 1987), and has been defined as “a mental event involving visualization of a concept or relationship” (Lutz & Lutz, 1978).

The process of mental imagery has been studied extensively in psychology and consumer behavior, focusing on its various antecedents, moderators, and consequences (MacInnis & Price, 1987). Most imagery research in psychology has focused on imagery’s ability to enhance learning and memory (e.g., Anderson, 1978; Elliott, 1973; Peterson & McGee, 1974). Within consumer behavior research, imagery has been examined in several marketing contexts, including advertising effectiveness (Edell & Staelin, 1983), preference formation (Bone & Ellen, 1992; Miller & Marks, 1997), attitude development (Kisielius & Sternthal, 1984), anticipatory satisfaction with an experience (MacInnis & Price, 1990; Shiv & Huber, 2000), new product evaluations (Dahl & Hoeffler, 2004; Zhao, Hoeffler, & Dahl, 2009), and experiences in virtual shopping environments (Schlosser, 2003).

Building on these demonstrated positive effects of increased mental imagery on consumer responses in various contexts, research has focused on identifying strategies for evoking greater and more effective mental imagery through marketing communications. Three main strategies have been studied in depth in relation to their propensity of eliciting imagery: use of *pictures* or *concrete words* within the marketing communications, and explicit use of *instructions to imagine* given to respondents. As such, the effects of using various pictorial stimuli (e.g., Babin, Burns, & Biswas, 1992) and verbal stimuli in the form of individual concrete words (e.g., Babin & Burns, 1997) and instructions to imagine (e.g., Miller & Marks, 1997) have

been established with regard to their ability to generate mental imagery and to influence consumer attitudes. Hung and Wyer (2011) have stressed the need for identifying and studying more subtle techniques of imagery generation where consumers would spontaneously imagine themselves using the product. A focus on subtle techniques is warranted in order to make such strategies more readily and widely applicable in the marketplace, as well as to increase their authenticity. Furthermore, spontaneous and natural generation of imagery would circumvent the taxing nature of advertiser-imposed imagery tasks on available cognitive resources as demonstrated in previous research (Bolls & Muehling, 2007). Accordingly, in this paper, we focus on size labeling as a subtle strategy of eliciting imagery as opposed to including explicit instructions or additional visual support.

Lutz and Lutz (1978) indicate that “the power of the human imagination is vast and may supersede any advertiser-provided stimulus in being personally relevant or vivid to the consumer”. Thus, mental images formed by consumers themselves (i.e., self-generated imagery) may be much more powerful than illustrations. They would also be more personally relevant since they will be anchored in the person’s own experience base and generated by her own mental processes (as opposed to mental processes based on advertiser-imposed pictures or instructions to imagine specific situations).

Some scholars believe a ‘positivity bias’ is associated with imagery because people are disinclined to fantasize about negative outcomes, and note that imagery processing is likely to pertain to pleasant emotional or affective elements of the stimulus (e.g., Bone & Ellen, 1992; MacInnis & Price, 1987). More specifically, building on ‘self-positivity bias’, which indicates that most individuals possess a very positive view of the self (Lin, Lin, & Raghurir, 2003), it can be argued that positivity bias would be even more pronounced in the case of *self-related* mental imagery (i.e., consumers’ visualization of the self in product purchase, trial, or usage situations). This reasoning would suggest that self-relatedness will facilitate the generation of more favorable mental imagery based on self-positivity bias. Miller and Marks (1997) further indicate that the favorableness of the resulting attitude depends on the *valence* of the mental imagery generated. Thus, individuals should form favorable attitudes towards stimuli that evoke more positive self-related mental imagery, especially when the mental images are naturally and spontaneously formed by the consumers themselves in response to subtle marketing communication strategies.

Appearance self-esteem

Physical attractiveness is an attribute of inherent value to mankind (Bloch & Richins, 1992). Decades of research in social psychology have confirmed that physical attractiveness is positively related to social power and self-esteem (Adams, 1977; Edmonds & Cahoon, 1984; Goldman & Lewis, 1977). Especially for women, body image is an important source of self-esteem (Smeesters et al., 2010). Because society equates thinness with beauty and attractiveness in women, it is not surprising that women tend to be preoccupied with losing weight

and achieving a slim physique at young ages (Vaughn & Langlois, 1983). Rosen and Gross (1987) report that by adolescence, 63% of girls, compared with 16% of boys, are already trying to lose weight. As such, there is an overall notion of ‘thinner is better’. Thus, there is an internal motivation to feel thin, such that vanity sizing (i.e., possibility of fitting into a smaller size garment which insinuates the conception of thinner) can generate *positive* self-related imagery for female consumers. Hence, we propose that:

H1. Vanity sizing will generate more positive mental imagery than normal sizes.

Furthermore, research on the positive effects of imagery on consumer responses and self-positivity bias discussed earlier suggests that higher positive self-related imagery should then affect consumer attitudes toward the product. But, would the effect of vanity sizing depend on how a consumer perceives herself? Yang, Zhang, and Peracchio (2010) note the need to study attitude formation and persuasion through a general framework that incorporates both message factors (e.g., vanity sizing in our case) and message processor factors (e.g., consumer self-concept or self-esteem).

Self-enhancement, the motive to elevate positive self-concept, has been suggested to be a central goal of existence (Allport, 1937; Swann, Pelham, & Krull, 1989). People are motivated to feel good, to create and maintain generally pleasant or positive subjective states (Larsen, 2000). This would suggest that individuals would be motivated to maintain/improve their self-esteem, and in turn, process incoming information accordingly. This is in line with *simple self-enhancement* theory, which posits that all people strive systematically to promote their self-concept and the perception that others think well of them. More specifically, however, *compensatory* or *defensive self-enhancement* theory suggests that since people with negative self-concepts rarely receive positive feedback, they make compensatory efforts to win the favor of others. It assumes that people with negative self-views are more motivated to self-enhance than are people with positive self-views (Swann et al., 1989). Thus, although all consumers are motivated by simple self-enhancement, consumers with low appearance self-esteem may be influenced *more* by the positive nature of the mental imagery generated through vanity sizing compared to consumers with high appearance self-esteem. Hence, we propose that:

H2a. Moderated Mediation. Positivity of mental imagery will mediate the effect of vanity sizing on product evaluation; however, this mediation will be moderated by consumer appearance self-esteem level. More specifically,

H2b. The effect of positivity of mental imagery on product evaluations will be larger for consumers with lower (versus higher) appearance self-esteem.

For consumers with high appearance self-esteem, the *direct* effect of vanity sizing on product evaluations also builds on theories of congruence between perceived self and the product.

It has been shown that the extent to which a product or a possession is perceived as congruent with the self-concept is a critical determinant of attitudes toward that product (Ferraro, Escalas, & Bettman, 2011; Sirgy, 1982). Accordingly, fitting into a vanity sized product is already harmonious with the self-worth of consumers with high appearance self-esteem, creating what Ferraro et al. (2011) call ‘self-worth match’.

To clarify our hypotheses, we have proposed that H1 will hold for all consumers (vanity sizing generates more positive imagery than regular sizes, irrespective of self-esteem level). In H2a, we have proposed that there is an *indirect effect* between size and product evaluation through imagery (that is, imagery *mediates* the effect of size on product evaluation), and that this indirect route is moderated by self-esteem (*moderated mediation*). While this moderated mediation can stem from either (i) the effect from size to imagery depending on self-esteem, or (ii) the effect from imagery to evaluation depending on self-esteem, or both, in H2b, we have specifically proposed that it is (ii) and not (i). Our conceptual framework is presented in Fig. 1.

In more layman terms, we contend that individuals would form favorable attitudes towards marketing communications that generate positive self-related imagery. Since a thinner body is usually admired and strived for by females, imagining oneself fitting into a smaller-sized garment would trigger such positively valenced self-related imagery. We further propose that this positive imagery will make a bigger (positive) change to attitudes towards the clothing for lower (versus higher) self-esteem consumers—since the positive self-related mental imagery is likely to enhance the feelings of self-worth more.

Study 1

Methodology

Design

A one-way, 3-level (product size: smaller than, larger than, vs. same as respondent’s usual size) between-subject design was used for this experiment, and appearance self-esteem of the respondent was measured. Since research shows physical esteem to be more important for women (Rosen & Gross, 1987), we used seventy-nine female undergraduate students for the experiment.

Stimuli and procedure

Subjects were presented with the following scenario. The only thing that varied between the conditions was the size assigned to the target product.

“Please imagine that you are out shopping for a pair of jeans. You visit a clothing store where you have made a couple of purchases before and were satisfied with the products. You try on various styles of jeans and make a decision on one. This is a relatively new style with a different cut than the jeans you currently have. The size that fits you the best ends up being *one size smaller* (vs. higher vs. same as) than your usual size.”

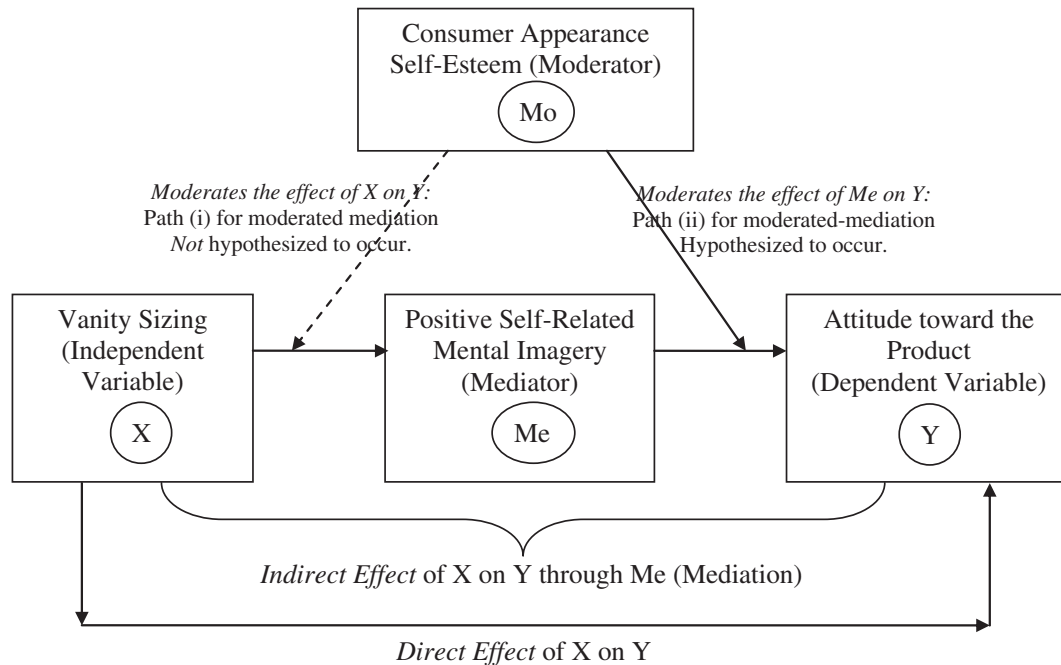


Fig. 1. Conceptual framework—moderated mediation model for vanity sizing, imagery, product evaluation, and self-esteem.

After reviewing the scenario, subjects responded to a set of questions measuring their attitudes and self-related mental imagery generated, together with measures on appearance self-esteem and some control questions.

Measures

Attitude-toward-the-product, the dependent variable, was measured using a three-item scale with seven-point semantic differential questions anchored at 'negative' and 'positive' (Cronbach's Alpha = .78). A two-item scale was developed for measuring positive self-related mental imagery, specific to the context of vanity sizing. Respondents rated their agreement with two positive statements (I pictured myself thinner; I pictured myself more attractive), on a seven-point scale, anchored at 'strongly agree' and 'strongly disagree' ($r(77) = .56, p < .01$). Finally, consumer appearance self-esteem was measured by using the six-item scale developed by [Heartherton and Polivy \(1991\)](#) (Cronbach's Alpha = .82).

Results and discussion

We expect that the 'smaller size' presentation would generate higher positive imagery (per [H1](#)) compared to the 'larger size' and 'same size' presentations; and that imagery will mediate the effect of size on product attitude, but that this mediation will be moderated by self-esteem ([H2a](#)); further, imagery will have a larger effect on product attitude for lower (vs. higher) self-esteem subjects ([H2b](#)).

Imagery

An ANCOVA with positive self-related mental imagery as the dependent variable and product size (smaller, larger, vs.

same as) as the independent variable, and respondent's appearance self-esteem as a covariate, revealed a significant main effect for product size ($F(1,75) = 7.05; p < .01$); self-esteem was not significant ($p > .2$) indicating that vanity sizing affects imagery regardless of self-esteem level of consumers, consistent with our conceptualization. Planned contrasts including self-esteem as a covariate, showed that the message with a 'smaller size' presentation results in significantly improved imagery compared to both the 'larger size' and 'same size' presentations ($M_{\text{smaller}} = 4.56; M_{\text{larger}} = 3.48; t_{\text{smaller-larger}} = -3.72, p < .01; M_{\text{same}} = 3.90; t_{\text{smaller-same}} = 2.23, p < .05$).

While we focus on the effect of vanity sizing (i.e., the smaller size), we also did contrasts between the larger and same as (control) cells. They were not significantly different from each other ($p > .2$). This is in accordance with our conceptual development. Self-positivity bias and favorability of imagery would suggest that people do not generate imagery detrimental to their self-worth.

Moderated mediation analyses

To test for moderated mediation ([H2a](#)) and path (i) versus (ii) for moderated mediation, we conducted three sets of equations per [Muller, Judd, and Yzerbyt \(2005; see also cf. model 5 Preacher, Rucker, & Hayes, 2007\)](#). Since the model they propose requires two levels of the independent variable, and since we did not have a significant difference between the larger and same as sizes in imagery, for simplicity, we focus on the 'smaller' and 'larger' size conditions of product size.³ The values of

³ In Study 2, we use the 'smaller' and 'same as' size conditions.

the independent variable were contrast coded. Also, the continuous variables appearance self-esteem (moderator) and positive self-related mental imagery (mediator) were centered at their mean in order to increase the interpretability of various parameters in the equations that include interaction terms (Aiken & West, 1991; Muller et al., 2005). The results are reported in Table 1.

A *first equation* regressed product size (X), appearance self-esteem (Mo), and the interaction between product size and appearance self-esteem (X*Mo) on attitude-toward-the-product (DV). This equation showed a significant effect only for product size on the dependent variable ($\beta = -.57$, $t = -5.33$, $p < .01$) which is the *direct effect* of product size on attitudes; the other variables were not significant ($ps > .6$). Not getting a significant effect for X*Mo also implies that the *direct effect* of size on attitude is not moderated by self-esteem. A *second equation* included the same factors, but these were now regressed on positive self-related mental imagery (Me). Again, only the independent variable, product size (X) was significant ($\beta = -.41$, $t = -3.37$, $p < .01$; other $ps > .2$), indicating that both low and high self-esteem individuals have greater imagery with smaller sizes. Note that the interaction of size and self-esteem not being significant in explaining imagery also rules out path (i) for moderated mediation. A *third equation* added the mediator (positive self-related mental imagery—Me) and the interaction between the mediator and the moderator (MoMe) to the original model used in the first equation. As before, product size was significant ($\beta = -.56$, $t = -4.60$, $p < .01$), but so was the interaction of self-esteem and imagery (MoMe; $\beta = .29$, $t = 2.08$, $p < .05$) supporting path (ii)—thus, the partial effect of mental imagery on product attitudes depends on the respondent's appearance self-esteem. No other variables were significant ($ps > .1$) for this third equation. This shows that the potency of the mediating process depends on the moderator, that is, across the three equations, all requirements of the moderated mediation model are met for path (ii). Thus, H2a and path (ii) are supported; path (i) is not supported.

This mediation analysis, however, does not inform us whether imagery does indeed have a stronger mediating effect for low self-esteem consumers compared to high self-esteem consumers on product attitude as we proposed (H2b). In order to test this, we performed a 'spotlight'

analysis (Aiken & West, 1991; Fitzsimons, 2008; Irwin & McClelland, 2001). Accordingly, we mean-shifted the appearance self-esteem data up or down one standard deviation. The spotlight analysis at one standard deviation below the mean showed a positive and significant effect of the mediator on product attitudes for low self-esteem consumers ($\beta = .419$, $t = 2.07$, $p < .05$). However, the spotlight analysis at one standard deviation above the mean did not yield a significant effect of the mediator on product attitudes for high self-esteem consumers ($p > .2$). Together, these results indicate that the mediating effect of positive self-related imagery on product attitudes is larger for consumers with lower appearance self-esteem compared to high self-esteem consumers, supporting H2b.

Discussion

Our results suggest that vanity sizing enhances positive mental imagery, irrespective of self-esteem level. However, while the positive imagery significantly impacts attitudes for low self-esteem consumers, it does not do so for high self-esteem consumers. This implies that imagery mediates the effect of vanity sizing on attitudes for low but not high self-esteem consumers (i.e., self-esteem moderates the mediating effect of imagery). Since mediation is considered an indirect effect (Zhao, Lynch, Chen 2010; also see Fig. 1), this is the same as saying that the indirect effect of vanity sizing on attitudes through imagery is moderated by self-esteem. Differing results for high and low self-esteem customers are consistent with compensatory self-enhancement theory whereby low self-esteem customers need that extra lift in self-image and may get it from a product label. The results also suggest that vanity sizing has a *direct effect* on product attitudes for all consumers, irrespective of self-esteem level. This direct effect validates the existence of vanity sizing and the common belief that "it works".

While the study supports all our hypotheses, there can be concerns about our measurement of self-esteem *following* the product size manipulation (telling subjects which size jeans they fit into)—that is, the size manipulation may also have impacted self-esteem. Therefore, in the next study, we measure appearance self-esteem *before* the respondents are given the vanity sizing scenario. Note, however, that measuring self-esteem first can also prime it and impact the effect of

Table 1
Study 1 results: Summary of regressions for moderated mediation test.

Predictor	Equation 1: Product attitude			Equation 2: Positive self-related mental imagery			Equation 3: Product attitude		
	Beta	t	Sig	Beta	t	Sig	Beta	t	Sig
X product size	-.57	-5.11	.00 ⁺	-.41	-3.37	.00 ⁺	-.56	-4.60	.00
Mo appearance self-esteem	-.06	-.49	.63	.16	1.29	.20	-.10	-.86	.39
XMo interaction	.04	.34	.73 ⁻	.11	.88	.38	.20	1.46	.15
Me positive self-related mental imagery							.11	.92	.36
MeMo interaction							.29	2.08	.04 ⁺

Note: Bold and (°) sign indicates that the beta needs to be significant for our proposed moderated mediation model; bold and (°) indicates that the beta should not be significant for our proposed moderated mediation model.

vanity sizing. Thus, in the new study, self-esteem is measured under the guise of another experiment and the vanity size manipulation is done after a substantial time delay and other tasks between self-esteem measurement and our main experiment. The two studies together should be a strong demonstration of the vanity sizing phenomenon and its explanation, since Study 1 circumvents possible priming concerns of collecting self-esteem measures first, and Study 2 circumvents the possible confounding of self-esteem measures with the product size manipulation.

Study 2

Methodology

Design and procedure

We used a similar design to Study 1 with the same jeans scenario in this second experiment, where subjects were presented with a shopping scenario with different size manipulations of a pair of jeans. However, we focused only on the smaller than (vanity sizing) and the same as (control) conditions. So, we have a one-way, 2-level (product size: smaller than vs. same as respondent's usual size) between-subjects design and we measure appearance self-esteem *before* our main experiment. Ninety-four female undergraduate students participated in the experiment for course credit.

Measures

To be able to keep the results of the two studies comparable for interpretation, we used the same measures here as in Study 1. Accordingly, attitude-toward-the-product was the dependent variable (3-item scale, Cronbach's Alpha = .88), positive self-related mental imagery was the mediator (2-item scale, $r(92) = .46$, $p < .01$), and respondent appearance self-esteem level was the moderator (6-item ASE scale, Cronbach's Alpha = .78).

Results and discussion

Moderated mediation analyses

We again conducted three sets of equations per Muller et al. (2005), following the necessary transformations. The results are reported in Table 2.

The *first equation* regressed product size (X), appearance self-esteem (Mo), and the interaction between product size and appearance self-esteem (X*Mo) on attitude-toward-the-product (DV). This equation showed a significant effect only for product size on the dependent variable ($\beta = -.24$, $t = -2.29$, $p < .05$); the other variables were not significant ($ps > .4$). These results support the *direct effect* of product size on attitude and also show that it is not moderated by self-esteem (X*Mo is not significant). The *second equation* regressed the same variables on positive self-related mental imagery (Me). Only the independent variable, product size (X) was significant ($\beta = -.34$, $t = -3.38$, $p < .01$; other $ps > .5$), indicating that both low and high self-esteem individuals have greater imagery with smaller sizes (supporting H1). The interaction between product size and self-esteem (X*Mo) not being a significant predictor of imagery rules out path (i) for moderated mediation. Finally, a *third equation* included the mediator (positive self-related mental imagery—Me) and the interaction between the mediator and the moderator (MoMe) to the original model used in the first equation. Product size was significant ($\beta = -.22$, $t = -2.08$, $p < .05$), and so was the interaction of self-esteem and imagery (MoMe; $\beta = .23$, $t = 2.15$, $p < .05$) supporting path (ii)—thus, the partial effect of mental imagery on product attitudes depends on the respondent's appearance self-esteem. No other variables were significant ($ps > .4$) for this third equation. This shows that the strength of the mediating process depends on the moderator, that is, across the three equations, all requirements of the moderated mediation model are met for path (ii). Thus, H2a and path (ii) are supported; path (i) is not supported, replicating Study 1.

The spotlight analysis (Aiken & West, 1991; Fitzsimons, 2008; Irwin & McClelland, 2001) at one standard deviation below the mean showed a positive and significant effect of the mediator on product attitudes for low self-esteem consumers ($\beta = .345$, $t = 2.11$, $p < .01$). However, the spotlight analysis at one standard deviation above the mean did not show a significant effect of the mediator on product attitudes for high self-esteem consumers ($p > .3$). Together, these results indicate that the mediating effect of positive self-related imagery on product attitudes is larger for consumers with lower appearance self-esteem compared to high self-esteem consumers, supporting H2b. This, once again, replicates the results of Study 1, with vanity sizing specifically tested against the control

Table 2
Study 2 results: Summary of regressions for moderated mediation test.

Predictor	Equation 1: Product attitude			Equation 2: Positive self-related mental imagery			Equation 3: Product attitude		
	Beta	t	Sig	Beta	t	Sig	Beta	t	Sig
X product size	-.24	-2.29	.02 ⁺	-.34	-3.38	.00 ⁺	-.22	-2.08	.04
Mo appearance self-esteem	.09	.84	.40	.01	.08	.94	.05	.50	.62
XMo interaction	.01	.08	.94 ⁻	.06	.60	.55	.06	.57	.57
Me positive self-related mental imagery							.08	.70	.48
MeMo interaction							.23	2.15	.03 ⁺

Note: Bold and (†) sign indicates that the beta needs to be significant for our proposed moderated mediation model; bold and (–) indicates that the beta should not be significant for our proposed moderated mediation model.

condition (smaller than vs. same as respondent's regular size), and with appearance self-esteem measured before the main experiment.

Conclusion

Two studies provide a consistent explanation for why vanity sizing works. We find that fitting into a pair of jeans labeled smaller than its true size can increase positive self-related mental imagery for consumers, irrespective of their self-esteem level. The studies also demonstrate the influence of individual appearance self-esteem on the mediating effect of mental imagery. Specifically, we demonstrate a mediating effect of positive self-related mental imagery (for the effect of marketing communications on consumer evaluations) for consumers with low self-esteem, but not high self-esteem. This is consistent with low self-esteem consumers using external stimuli to boost their self-worth in line with *compensatory self-enhancement* theory.

We also find a direct effect of vanity sizing on product attitudes for all consumers, regardless of self-esteem level, which lends credence to the common belief that vanity sizing works. There can be many reasons for this direct effect, for instance, bragging rights ("I wear a size 4!) or enhancement of self-perception merely by purchasing a "thinner" size. This is also in line with *simple self-enhancement* theory, which posits that all people strive systematically to promote their self-concept.

The desire to be beautiful, when combined with personal values and social comparison, originates a self-perception about one's appearance (Abdala, Ricardo, Rossi, & Alberto, 2008), which is an integral part of self-concept. Frequent media exposure may cause consumers to cultivate unrealistic perceptions about the prevalence of desirable attributes such as physical ideals (Smeesters et al., 2010). When comparing the self-concept with the beauty ideals, women generally see a difference that causes dissatisfaction and preoccupation (Abdala et al., 2008). In this perspective, consumption is a way to reduce the distance between the self and ideal of beauty (Watson, Rayner, Lysonski, & Durvasula, 1999) by changing the impression made on others or on oneself. In this paper, we demonstrate (and explain the process of) such a phenomenon, vanity sizing, which is effective on low self-esteem consumers because it is in line with compensatory self-enhancement motives. We did not collect before-and-after self-esteem measures simultaneously in this research, which could be a good area of investigation, to see whether exposure to such marketing activities do indeed improve consumer self-perceptions over time or for that instance. In other words, our explanation rests on the effectiveness of positive self-related mental imagery; however, exploring the more enduring consequences of this positivity of imagery on consumer self-perceptions could be a viable research venue. Recent research, which provides a more nuanced view of attitude and preference as driven by a liking component and a more motivational reward component (Berger & Shiv, 2011), can shed further light into such inquiries. Investigating whether positive self-related mental imagery exhibits motivational reward characteristics can further clarify the processes of how it affects consumer behavior ("I wear a size 4!").

Both in our conceptual development and in our experimental designs, we tried to keep our context as simple and as clean as possible. However, studying the variables that could potentially exacerbate or attenuate the effectiveness of vanity sizing could be another possible research area. For instance, a priming manipulation that would heighten the importance of body image could plausibly increase the effects demonstrated here. Similarly, individual difference variables, such as *physical vanity* might influence the processes studied here. Physical vanity has been operationalized as a "concern for physical appearance and a positive (and perhaps inflated) view of physical appearance" (Watson et al., 1999). It could be interesting to systematically inquire how physical vanity interacts with vanity sizing.

Another important area for future research is to see to what degree vanity sizing can be practiced before consumers can no longer generate improved images of themselves, or to see if such a boundary condition even exists. Another direction is to study vanity for men. Do men exhibit the same vanity effects? Lastly, while the practice of vanity sizing is limited to the clothing industry by definition, there is great scope to study vanity feedback in non-clothing industries—for instance, Wii Fit reports the consumer's fitness age based on their performance. Should Wii adopt "vanity-aging" to increase product preference?

References

- Abdala, Z., Ricardo, P., Rossi, V., & Alberto, C. (2008). *Vanity and consumption: How physical vanity influences the consumer behavior. Advances in Consumer Research—Latin American Conference Proceedings*, 2, (pp. 214–215).
- Adams, G. R. (1977). Physical attractiveness research: Toward a developmental social psychology of beauty. *Human Development*, 20, 217–239.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Holt.
- Anderson, J. R. (1978). Arguments concerning representations for mental imagery. *Psychological Review*, 85, 249–277.
- Babin, L. A., & Burns, A. C. (1997). Effects of print ad pictures and copy containing instructions to imagine on mental imagery that mediates attitudes. *Journal of Advertising*, 26(3), 33–44.
- Babin, L. A., Burns, A. C., & Biswas, A. (1992). A framework providing direction for research on communication effects of mental imagery-evoking advertising strategies. *Advances in Consumer Research*, 19(1), 621–628.
- Bearman, S., Presnell, P., Martinez, E., & Stice, E. (2006, April). The skinny on body dissatisfaction: A longitudinal study of adolescent girls and boys. *Journal of Youth and Adolescence*, 35, 217–229.
- Berger, J., & Shiv, B. (2011). Food, sex and the hunger for distinction. *Journal of Consumer Psychology*, 21(4), 464–472.
- Bloch, P. H., & Richins, M. L. (1992). You look 'mahvelous': The pursuit of beauty and the marketing concept. *Psychology and Marketing*, 9(1), 3–15.
- Bolls, P. D., & Muehling, D. D. (2007). The effects of dual-task processing on consumers' responses to high- and low-imagery radio advertisements. *Journal of Advertising*, 36(4), 35–47.
- Bone, P. F., & Ellen, P. S. (1992). The generation and consequences of communication-evoked imagery. *Journal of Consumer Research*, 19(1), 93–104.
- Dahl, D. W., & Hoeffler, S. (2004, July). Visualizing the self: Exploring the potential benefits and drawbacks for new product evaluation. *Journal of Product Innovation Management*, 21, 259–267.

- Edell, J. A., & Staelin, R. (1983). Information processing of pictures in print advertisements. *Journal of Consumer Research*, 10(1), 45–61.
- Edmonds, E. M., & Cahoon, D. D. (1984). Female clothes preference related to male sexual interest. *Bulletin of the Psychonomic Society*, 22, 171–173.
- Elliott, L. (1973). Imagery versus encoding in short- and long-term memory. *Journal of Experimental Psychology*, 100(2), 270–276.
- Ferraro, R., Escalas, J. E., & Bettman, J. R. (2011). Our possessions, our selves: Domains of self-worth and the possession-self link. *Journal of Consumer Psychology*, 21(2), 169–177.
- Fitzsimons, G. J. (2008). Death to dichotomizing. *Journal of Consumer Research*, 35(1), 9.
- Goldman, W., & Lewis, P. (1977). Beautiful is good: Evidence that the physically attractive are more socially skillful. *Journal of Experimental Social Psychology*, 13, 125–130.
- Heartherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring self-esteem. *Journal of Personality and Social Psychology*, 60(6), 895–910.
- Hung, I. W., & Wyer, R. S. (2011). Shaping consumer imaginations: The role of self-focused attention in product evaluations. *Journal of Marketing Research*, 48(2), 381–392.
- Irwin, J. R., & McClelland, G. H. (2001). Misleading heuristics and moderated multiple regression models. *Journal of Marketing Research*, 38(1), 100–109.
- Kinley, T. (2003, October 28). *A fat price tag can bring a slimmer size: A perfect 10? No such thing really* (pp. E1). Seattle Post.
- Kinley, T. (2003, November 4). *In women's pants, smaller sizes can mean larger prices* (pp. D8). Tulsa World.
- Kisielius, J., & Sternthal, B. (1984, February). Detecting and explaining vividness effects in attitudinal judgment. *Journal of Marketing Research*, 21, 54–64.
- Larsen, R. J. (2000). Toward a science of mood regulation. *Psychological Inquiry*, 11, 129–141.
- Lin, Y. C., Lin, C. H., & Raghurir, P. (2003). Avoiding anxiety, being in denial, or simply stroking self-esteem: Why self-positivity? *Journal of Consumer Psychology*, 13(4), 464–477.
- Lutz, K. A., & Lutz, R. J. (1978). Imagery-eliciting strategies: Review and implications of research. *Advances in Consumer Research*, 5(1), 611–620.
- MacInnis, D. J., & Price, L. L. (1987). The role of imagery in information processing: Review and extensions. *Journal of Consumer Research*, 13(4), 473–491.
- MacInnis, D. J., & Price, L. L. (1990). An exploratory study of the effects of imagery processing and consumer experience on expectations and satisfaction. In R. Holman, & M. Solomon (Eds.), *Advances in Consumer Research* (pp. 41–47). Provo, UT: Association for Consumer Research.
- Miller, D. W., & Marks, L. J. (1997). The effects of imagery-evoking radio advertising strategies on affective responses. *Psychology and Marketing*, 14(4), 337–360.
- Muller, D., Judd, C. M., & Yzerbyt (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, 89(6), 852–863.
- Oliver, R. L., Robertson, T. S., & Mitchell, D. (1993, December). Imaging and analyzing in response to new product advertising. *Journal of Advertising*, 22, 35–49.
- Peterson, M. J., & McGee, S. H. (1974). Effects of imagery instructions, imagery ratings, and number of dictionary meanings upon recognition and recall. *Journal of Experimental Psychology*, 68(3), 355–359.
- Phillips, N., & de Man, A. F. (2010). Weight status and body image satisfaction in adult men and women. *North American Journal of Psychology*, 12(1), 171–183.
- Rosen, J. C., & Gross, J. (1987). Prevalence of weight reducing and weight gaining in adolescent girls and boys. *Health Psychology*, 6(2), 131–147.
- Schlosser, A. E. (2003). Experiencing products in the virtual world: The role of goal and imagery in influencing attitudes versus purchase intentions. *Journal of Consumer Research*, 30(2), 184–198.
- Shiv, B., & Huber, J. (2000, September). The impact of anticipating satisfaction on consumer choice. *Journal of Consumer Research*, 27, 202–216.
- Sirgy, M. J. (1982, December). Self-concept in consumer behavior: A critical review. *Journal of Consumer Research*, 9, 287–300.
- Smeesters, D., Mussweiler, T., & Mandel, N. (2010, April). The effects of thin and heavy media images on overweight and underweight consumers: Social comparison processes and behavioral implications. *Journal of Consumer Research*, 36, 930–949.
- Swann, W., Pelham, B. W., & Krull, D. S. (1989). Agreeable fancy or disagreeable truth? Reconciling self-enhancement and self-verification. *Journal of Personality and Social Psychology*, 57(5), 782–791.
- Vaughn, B. E., & Langlois, J. H. (1983, July). Physical attractiveness as a correlate of peer status and social competence in preschool children. *Developmental Psychology*, 19, 561–567.
- Watson, J. J., Rayner, R. S., Lysons, S., & Durvasula, S. (1999). Vanity and advertising: A study of the impact of appearance-related, sex, and achievement appeals. *Advances in Consumer Research*, 26, 445–450.
- Wertheim, E. H., Paxton, S. J., Schutz, H. K., & Muir, S. L. (1997, April). Why do adolescent girls watch their weight? An interview study examining sociocultural pressures to be thin. *Journal of Psychosomatic Research*, 42, 345–355.
- Yang, X., Zhang, J., & Peracchio, L. A. (2010). Understanding the impact of self-concept on the stylistic properties of images. *Journal of Consumer Psychology*, 20(4), 508–520.
- Zhao, M., Hoeffler, S., & Dahl, D. W. (2009, February). The role of imagination-focused visualization on new product evaluation. *Journal of Marketing Research*, 46, 46–55.
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206.