

When Will Larger-Sized Female Models in Advertisements Be Viewed Positively? The Moderating Effects of Instructional Frame, Gender, and Need for Cognition

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ABSTRACT

A variety of negative consequences for girls and women have been associated with women's and men's viewing unrealistic portrayals of women in advertising. However, research on the positive consequences of presenting larger-sized women in advertisements, and the conditions under which they are effective, has been lacking. The present research examined such positive effects and found that larger-sized female models in ads were rated as more attractive when an instructional frame activated nontraditional beliefs (a new women's magazine that features larger-sized models) than when it activated traditional beliefs (a traditional women's magazine). These effects were more pronounced for women than for men, and particularly for women who scored higher in their need for cognition. The degree to which women generated positive thoughts about themselves in response to the ads tended to correspond with their ratings of increased attractiveness of the models in the ads. Implications of findings for using positive larger-sized female models in ads are discussed. © 2004 Wiley Periodicals, Inc.

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Marketers and social scientists have suggested that the effects of advertising extend beyond product awareness and product preferences to broader effects on the target audience's beliefs, values, attitudes, and behaviors about issues of relevance in our society (e.g., Duke, 2002; Pollay, 1986). For example, researchers have argued that exposure to gender-stereotypical images contribute to social problems such as sexual harassment, eating disorders, violence against women, and overly narrow perceptions of body ideals for men and women (Courtney & Whipple, 1983; Hall & Crum, 1994; Lavine, Sweeney, & Wagner, 1999; Rudman & Borgida, 1995). Media images that pervasively show exceptionally thin female models in advertising have been viewed as contributing to body-image dissatisfaction, lower self-esteem, excessive dieting, anorexia, bulimia, and depression among girls and young women (Field, Camargo, Taylor, Berkey, Roberts, & Colditz, 2001; Hankin & Abramson, 1999; Stice & Shaw, 1994). Although advertising has changed somewhat in its depiction of women (Gagnard, 1986), women in advertisements continue to be portrayed as below average in weight, as compared to the general population of women in the United States. Public health and education efforts that address these issues will continue to be important for future public-policy initiatives.

Although past research has emphasized the negative consequences resulting from the portrayal of women in advertisements, little attention has been given to the positive consequences associated with more realistic portrayals. In the present research, the question is asked whether women with larger (and more realistic) body sizes can be viewed favorably in ads for women if presented in a context that supports the use of larger-sized models. How women and men differ in their perceptions of these ads and the thought processes underlying positive effects of realistic portrayals is also addressed.

PRIOR RESEARCH ON BODY SIZE AND WOMEN IN ADVERTISEMENTS

Researchers have written extensively about the potential harmful consequences of portrayals of women in ads that represent unrealistic ideals. One of these harmful consequences is that a woman may become increasingly dissatisfied with her own body size. The ideal body size and resulting images of beauty for women has changed over time in our society (e.g., Seid, 1989; Wolf, 1991). Although a larger body size was once associated with female beauty, current societal expectations emphasize a smaller body size, and female models in ads have been increasingly thinner over time (Seid, 1989; Silverstein, Perdue, Peterson, & Kelly, 1986; Wolf, 1991). Along with this trend in advertising is an increased tendency over time for women to be dissatisfied with their weight (Cohn & Adler, 1992; Richins, 1991) and perceive an ideal body type to be thinner

than their own actual body size (Cohn & Adler, 1992; Davis, 1997; Tigge-
mann, 1992). Therefore, because the cultural norm for female attrac-
tiveness includes the attribute of thinness, and because the advertise-
ments portraying thin models reinforce this cultural stereotype,
researchers are increasingly concerned that the average-sized woman's
dissatisfaction with her body stems from this stereotype (Lavine, Sweeney,
& Wagner, 1999; Martin & Kennedy, 1993).

A second harmful consequence argued by researchers is that unrealis-
tic portrayals of women, by reinforcing the cultural stereotype, may affect
men's perceptions of women. In particular, men will view average- to larger-
sized women as less attractive, and the thin cultural norm for women will
decrease men's satisfaction with their relationships or lead them to expect-
ations of thinness that cannot be met by women. Recent evidence sug-
gests that the portrayal of women in advertising may play a causal role in
ratings of both women's and men's body dissatisfaction (Botta, 1999; Lavine,
Sweeney, & Wagner 1999). Further, analysis of both women's and men's use
of media and eating disorders suggests larger negative effects for print
(magazine) than for TV media (Harrison & Cantor, 1997).

A third harmful consequence is that the use of thin, attractive mod-
els in ads can have a harmful effect on women's perceptions not only of
themselves, but also of other women. Richins (1991) found that women
undergraduates who saw attractive models rated women of "average"
attractiveness lower than they would have had they not viewed the very
attractive models. The effects can also be found for men's viewing of
female models. Kenrick and Gutierrez (1980) found that when men and
women were exposed to extremely attractive models, their judgments of
the average woman's attractiveness and dating desirability were nega-
tively affected, demonstrating contrast effects from initial attractiveness
ratings.¹

If advertisements can affect women's and men's negative perceptions
of body size, it is expected that they should also be able to positively
influence perceptions. Although the amount of prior experimental
research on the effects of gender stereotyping in advertising is minimal,
the research does suggest that advertisements can influence viewers'
self-concepts and that a healthier or more diverse set of expectations
can be created. For example, research has found that women who were
exposed to nontraditional gender stereotypes compared to those who

¹The issue of women's body size in advertising is important for yet another reason. Within this cul-
ture, research has shown that overweight individuals endure negative consequences that other
individuals do not endure. Gortmaker, Must, and Perrin (1993) reported that overweight indi-
viduals often suffer harmful social and economic consequences and note that the likelihood of
employment discrimination increases with weight. Overweight people are less likely to get a job
or secure a promotion, and they also earn less (Ziolkowski, 1994). Overweight people are more
likely to be rated as lazy or dependent (Weiss, 1990). Additionally, overweight women may be more
adversely affected than overweight men with regard to employment discrimination (Bellizi,
Klassen, & Belonax, 1989; Everett, 1990; Jasper & Klassen, 1990; Pingitore, Bernard, Dugoni,
Tindale, & Spring, 1994).

were exposed to traditional stereotypes had more self-confidence and conformed less (Geis, Brown, Jennings, & Porter, 1984; Jennings, Geis, & Brown, 1980). However, little or no research that examines whether the context in which these beauty types appear will influence ratings of attractiveness has been conducted. In the present research, conditions under which exposure to diverse female body sizes increases or decreases women's and men's ratings of the attractiveness of women in the ads are examined.

Instructional Frame

Research in psychology and consumer behavior has demonstrated the importance of framing effects in consumer judgments (e.g., Herr, 1989; Tversky & Kahneman, 1981), and more specifically in the portrayals of women and men in advertising (e.g., Debevec & Iyer, 1988). In the present research, the manner in which female body types (both thin and larger-sized) are perceived should depend on whether traditional stereotypes about women are activated from memory. The activation of traditional stereotypes about female body size will depend on both the norms or expectations that the viewer brings to the situation, as well as the way in which the information is framed. In experimental research, instructional sets are used as a way to frame information. If information is framed in a way that activates a nontraditional female stereotype, larger-sized females should be perceived more positively, and the attractiveness ratings of larger-sized female models should increase:

- H1:** When information that shows diverse body types is framed in a way that activates nontraditional stereotypes (a new women's magazine with larger-sized models), a body type that is congruent with that stereotype (larger-sized models) will be rated as more attractive than when it is framed in a way that activates traditional stereotypes (a traditional women's magazine with thin models).

Gender Differences

When viewing ads that have women models, women viewers, more than men viewers, should tend to relate information about body size and body attractiveness to perceptions of themselves. When people self-reference, they relate the information they receive to the self as represented in a knowledge structure in memory (Burnkrant & Unnava, 1995; Krishnamurthy & Sujana, 1999). By activating the self-structure, the opportunity for processing linkages between different aspects of the self and aspects of the ad (message) increases, which thereby increases elaboration of the information received (e.g., Klein & Loftus, 1988). Self-referencing may occur to some extent for males, too, when viewing women in ads, in that men may imagine their own perceived attractiveness to

women. But if the focus of the ads is a female (not male) model, women viewers should be more likely than men to self-reference. Further, women have been culturally conditioned to engage in more self-reflection than men with respect to body size and body attractiveness. Therefore, when larger-sized female models are shown in advertisements, women (more than men) should tend to draw comparisons of the models to themselves and relate the ad information more directly to themselves if the models in the advertisements are both larger sized and women. Viewing larger-sized models may lead women to have more positive thoughts about their own body size, and these positive thoughts may be reflected back to more positive ratings of the larger-sized models in the ads. Because women, more than men, are likely to generate these positive thoughts, it is expected that women will evaluate larger-sized models more positively than will men. Furthermore, this difference between men and women should interact with framing effects in that a frame that activates nontraditional stereotypes should provide a supportive setting that enables women to more freely self-reference with positive thoughts about the self.

H2: Women will evaluate larger-sized women models as more attractive than will males (regardless of instructional frame). This difference will be greater when information is presented in a frame that activates a nontraditional stereotype (a new magazine for larger-sized women) than when it is presented in a frame that activates traditional stereotypes (a traditional women's magazine).

Need for Cognition

Because individuals high in need for cognition engage in more issue-relevant thinking (Cacioppo, Petty, Kao, & Rodriguez, 1986), they are more likely to perceive the attractiveness of the larger-sized model as relevant to their own attractiveness. However, it is expected that the issue of portraying larger-sized women models in the media should be more relevant to women than to men. Therefore, women who are high in need for cognition should rate the larger-sized models as more attractive when they are preceded by an instructional frame that activates and supports nontraditional female stereotypes (relative to a traditional frame). In contrast, those women who are low in need for cognition should be less affected by instructional frame, because they are less apt to make self-relevant associations. Similarly, it is expected that neither high nor low need-for-cognition men would make self-relevant associations and consequently neither are expected to be influenced by instructional frame:

H3: Women high, but not low, in their need for cognition should rate the larger-sized models as more attractive in an instructional frame that

activates non-traditional beliefs (a new magazine with larger-sized models) than in an instructional frame that activates traditional beliefs (a traditional women's magazine with thin models). These differences in framing effects should not occur for men (who are either high or low in need for cognition).

METHODOLOGY

Study Overview and Participants

Participants were 132 students in undergraduate marketing courses. About 96% of the sample fell between the ages of 18 and 30. Because the ads and target models were directed toward a young audience, and to increase the homogeneity of the sample, individuals over the age of 30 were omitted from subsequent analyses. Additionally, the implications of the results will be more easily interpreted with a homogeneous population.²

Participants were told that their opinions of some print advertisements were desired. Each participant was shown four print ads, two of which were the stimulus ads with larger-sized female models. For each ad, participants were asked to rate the attractiveness of the model in the ad and to rate the ad itself.³ The two stimulus ads portrayed models that were larger sized (sizes 16–18), close to the average size of females in the United States. These two ads were embedded (presented second and third) within two other ads that had traditional (thin) models (presented first and fourth). Participants saw both thinner- and larger-sized models in both framing conditions in order to both draw comparisons across conditions and to approximate a realistic scenario for a magazine. A new magazine that uses larger-sized women would probably include some traditional thin models in the same magazine, since many product advertisements are created primarily for traditional magazines and ads with heavier models are less common.

Participants were randomly assigned to one of the two framing conditions. One framing condition was designed to activate traditional beliefs or stereotypes about women (a traditional women's magazine), and the other was designed to activate nontraditional beliefs about women (a non-traditional women's magazine focusing on larger-sized women). The specific instructions for the traditional frame stated that the participants would see some ads from popular women's magazines, and that they

² Three subjects in the traditional instructional frame were over 30 (1 male, age 31; 2 females ages 35 and 38) and two subjects in the nontraditional frame were over 30 (1 male, age 31 and 1 female age 37).

³ Evaluations of the ads were also analyzed and a few differences between genders and between traditional and nontraditional contexts were found, but the pattern of findings appeared to be somewhat tied to factors other than perceptions of the models. Since these findings are not central to the hypotheses, these data are not reported.

should answer some questions about each one. In contrast, the instructions for the nontraditional frame stated that “we will be showing you some ads from a new magazine for young women that uses ads with women who are heavier than the traditional model,” and “more reflective of average-sized women.” The latter statement was also included in order to enhance self-referencing and to facilitate a shift in prior norms.

After viewing the ads and evaluating the models, participants completed a few additional questions, including their age, gender, and the need-for-cognition scale. Participants were debriefed about the purpose for the experiment at the end of the term.

Measures

Attractiveness of the model in each print advertisement was measured on a 7-point scale with endpoints ranging from 1 (*not at all attractive*) to 7 (*extremely attractive*). The specific question was worded: “How attractive is the model in this ad with respect to all women in ads?”

Need for cognition was an 18-item scale derived from earlier research (Cacioppo & Petty, 1982). Examples of items include “I like to have the responsibility of handling a situation that requires a lot of thinking” and “The notion of thinking abstractly appeals to me.” For each item, a 7-point scale with endpoints *strongly agree* and *strongly disagree* was presented. High and low need for cognition were determined by a median split with those scoring less than 15 labeled low need for cognition, and individuals scoring 15 or greater labeled high need for cognition.

RESULTS

The analyses focused on the attractiveness ratings of the larger-sized models in the two ads shown to participants. Consistent with the first hypothesis, the two larger-sized models were rated as significantly more attractive in the frame that activated nontraditional beliefs (the new magazine with larger-sized models) than in the frame that activated the traditional stereotype (traditional women’s magazine with thin models). Specifically, the mean attractiveness ratings of the first larger-sized model were 3.37 and 3.82 [$t(125) = 2.16, p < 0.05$], for traditional and nontraditional frames, respectively. The mean attractiveness ratings of the second larger-sized model were 3.42 and 4.05 [$t(125) = 2.69, p < 0.01$], for traditional and nontraditional frames, respectively.

Consistent with the second hypothesis, gender differences were found in three of the four relevant comparisons of attractiveness ratings of larger-sized models. Recall that women were expected to draw more comparisons of the models to themselves since models in the ads were young women and were average in size, and as a result women participants should rate these models as more attractive (as compared to

men's ratings of the models). Within the nontraditional women's magazine frame, women rated the larger-sized models as more attractive than men for both models presented [M 's = 4.08 vs. 3.39, $t(58) = 2.33$, $p < .05$, for the first larger-sized model, and M 's = 4.43 vs. 3.43, $t(58) = 3.07$, $p < .01$, for the second larger-sized model]. Within the traditional women's magazine frame, women rated the larger-sized model as nonsignificantly different from men for the first larger-sized model [M 's = 3.30 vs. 3.43, $t(65) < 1$, *n.s.*] but as significantly more attractive than men for the second larger-sized model [M 's = 4.03 vs. 2.92, $t(65) = 3.80$, $p < .01$].

Consistent with predictions, the interaction effect between gender and instructional frame was significant for the first larger-sized model, $F(2, 185) = 3.71$, $p < .05$, but not significant for the second larger-sized model, $F(2, 185) = 1.74$, *n.s.* Treating the two ads as a within-subjects variable ($r = .68$) and collapsing across them yielded a significant effect for gender [$F(1, 119) = 13.23$, $p < .01$], and for instructional frame [$F(1, 119) = 4.36$, $p < .05$], but no interaction effect ($F < 1$).

It was also predicted that high need-for-cognition women would engage in more issue-relevant thinking and to perceive the attractiveness of larger-sized models as relevant to their own attractiveness, resulting in higher attractiveness ratings for larger-sized models. Consistent with this hypothesis, women who were high in need for cognition rated the larger-sized models as more attractive in the nontraditional magazine frame than in the traditional magazine context, for both the first larger-sized model rating [M 's = 4.26 vs. 3.05, $t(35) = 3.33$, $p < .01$] and the second larger-sized model [M 's = 4.63 vs. 3.89, $t(35) = 2.11$, $p < .05$]. In contrast, and also consistent with predictions, women who were low in need for cognition did not rate the larger-sized models differently depending on instructional frame [M 's = 3.89 vs. 3.67, $t(28) < 1$, *n.s.*, for nontraditional vs. traditional frames, for the first model, and M 's = 4.22 vs. 4.25, $t(28) < 1$, for the second model]. Also as expected, the attractiveness ratings for high and low need-for-cognition men did not depend on instructional frame [for high need-for-cognition men, M 's = 3.36 vs. 3.25, $t(28) < 1$, *n.s.*, for nontraditional vs. traditional frames for the first model, and M 's = 3.43 vs. 2.75, $t(28) = 1.31$, *n.s.*, for the second model; for low need-for-cognition men, M 's = 3.44 vs. 3.57, $t(28) < 1$, for the first model, and M 's = 3.44 vs. 3.05, $t(28) < 1$, *n.s.*, for the second model]. Collapsing across the two ads (treating them as a repeated measure), we find that, for women, the framing effect was significant [$F(1,63) = 4.70$, $p < .05$], the NFC effect was nonsignificant ($F < 1$), and the interaction of NFC and instructional frame approached significance [$F(1, 63) = 3.15$, $p < .10$]. That is, the non-traditional frame yielded a more positive attractiveness rating ($M = 4.26$) than the traditional frame ($M = 3.67$); and this effect was greater under HNF (M 's = 4.45 vs. 3.46 for nontraditional and traditional frames,

respectively) than under LNC (M 's = 4.06 vs. 3.96). For men, effects for gender, context and the gender \times context interaction were all non-significant.

DISCUSSION OF STUDY 1

As expected, presenting larger-sized women in a context of a nontraditional women's magazine (designed to portray women in a more supportive and diverse light) tended to heighten women's and men's perceptions of attractiveness of these women relative to presenting them in the context of a traditional women's magazine. As hypothesized, women were more likely than men to rate the larger-sized models as attractive, and high need-for-cognition women tended to be more affected than low need-for-cognition women by the traditional versus nontraditional frame. In a sense, then, the instructional frame was more effective for women who were likely to engage in more thinking (cf. Haugtvedt, Petty, & Cacioppo, 1992). Although Study 1 confirms these findings, further evidence concerning the process by which high and low need-for-cognition women view larger-sized models depending on frame is needed. In particular, it has been argued that women more than men are likely to think about the information concerning the model's attractiveness relative to themselves. Further, when larger-sized models are presented in a frame that both activates nontraditional beliefs about women and is supportive of larger-sized women, women should be more likely to generate positive thoughts about themselves in relation to the models. Women who are high in need for cognition are even more likely than women who are low in need for cognition to engage in issue-relevant thinking, and some of this issue-relevant thinking should pertain to the self.

STUDY 2

In Study 2 changes in self-referencing are examined under the same conditions as in Study 1. In addition, although prior research finds that self-referencing generally leads to a positive effect on thought processes (e.g., Burnkrant & Unnava, 1995; Debevec & Iyer, 1988), and this was predicted in Study 1, there also may be conditions under which negative self-referencing may occur. For example, with regard to body size and body attractiveness, women (and men) are generally known to have negative perceptions of their bodies. So, in measuring self-referencing in Study 2, a general measure of self-referencing was included, as well as measures that tapped whether the viewer engages in positive or negative thoughts while viewing the ads.

METHODOLOGY

Study Overview and Participants

The procedure for Study 2 was very similar to that of Study 1, with the exception of the dependent variables. In Study 2, participants were asked for their opinions regarding some print advertisements, as in Study 1. Again, each participant was shown two stimulus ads within a set of four print ads (the same ones presented in Study 1), the second and third of which had models that were average in size.

Participants were randomly assigned to one of two frame conditions, traditional or nontraditional, as in Study 1, such that ads in the traditional frame appeared supposedly in a traditional women's magazine, and the ads in the nontraditional frame appeared supposedly in a new magazine for young women that "uses ads with women who are heavier than the traditional model" and "more reflective of average-sized women."

The participants were 41 students in undergraduate marketing courses. Students participated in the research during class time, and were debriefed at the end of the term.

Measures

While viewing each of the ads, participants completed a measure of general self-referencing, a measure of the degree of positive self-referencing (positive thoughts), and a measure of the degree of negative self-referencing (negative thoughts).⁴ After viewing all four ads, individuals reported their need for cognition, their age, and their gender.

General Self-Referencing, Positive Thoughts and Negative Thoughts

Participants were asked to rate general self-referencing on two scales. The two measures (Krishnamurthy & Sujana, 1999) were "I could relate myself to the ad" and "I found the ad to be personally relevant." Seven-point scales were used with endpoints of *strongly disagree* and *strongly agree*.

Measures of both positive and negative self-referencing thoughts were administered. To measure positive self-referencing, subjects were asked "This ad made me think positive thoughts about myself" and for negative self-referencing the question stated "This ad made me think negative thoughts about myself." These were measured on 7-point scales with endpoints *strongly disagree* and *strongly agree*.

⁴ Attractiveness of the model in the ad was also measured, but the attractiveness ratings appeared later than in Study 1. Perhaps because of this methodological difference or, alternatively, due to smaller sample sizes in Study 2, effects of attractiveness were not significant. Therefore, these results are not reported here.

Need for Cognition

The 18-item need-for-cognition scale (Cacioppo & Petty, 1982) measured participants' need for cognition as in Study 1. High and low need for cognition were determined by a median split with those scoring 18 or less labeled low need for cognition, and individuals above 18 labeled high need for cognition. Unfortunately, the distribution of responses in need for cognition within the gender and context conditions was unequal, and, further, cell sizes in most of the cells was prohibitively small, so analyses of need-for-cognition data are only suggestive.

RESULTS

The purpose of this follow-up study was to examine the process by which attractiveness ratings of larger-sized models changed depending on gender and whether information was framed as supportive of a traditional women's magazine or as supportive of a new (nontraditional) women's magazine. It was expected that women would self-reference more than men when looking at the larger-sized models. This prediction was supported. Because the two scales of general self-referencing were highly correlated (0.82 for the first ad and 0.93 for the second ad) the two scales were averaged for one measure of general self-referencing for each ad.

As expected, self-referencing was significantly greater for women than for men [M 's = 3.08 vs. 1.66, $t(39) = 3.11$, $p < .05$, for the first larger-sized model, and M 's = 2.55 vs. 1.59, $t(39) = 2.17$, $p < .05$, for the second larger-sized model]. Collapsing across the two ads ($r = 0.72$), and analyzing them as a repeated measure, the effect of gender was significant [$F(1, 37) = 8.12$, $p < .01$, M 's = 2.82 vs. 1.62 for women and men, respectively].

Additionally, positive and negative self-referencing were examined. While women had significantly more positive self-referencing thoughts than men when viewing the two larger-sized models, there was no difference in the amount of negative self-referencing thoughts between men and women. Specifically, when viewing the first larger-sized model, the mean positive self-referencing was higher for women than for men [M 's = 4.63 vs. 2.45, $t(39) = 4.07$, $p < .05$, for the first model, and $M = 4.37$ vs. 2.32, $t(39) = 3.91$, $p < .05$, for the second model; collapsing across both ads, the effect was significant, $F(1, 37) = 18.76$, $p < .01$; $M = 4.45$ vs. 2.36]. Negative self-referencing when viewing the larger-sized models was not significantly different between men and women [for model 1, means of 2.16 and 2.27 for women and men respectively, $t(39) < 1$, $p > .05$; for model 2, means of 2.32 and 2.18 for women and men respectively, $t(39) < 1$, $p > .05$; collapsing across both ads, the gen-

der effect was not significant, $F(1, 37) = .02, p = .87, M's = 2.25$ vs. 2.18].⁵

It is also interesting to note the effect of context (traditional women's magazine vs. nontraditional context of portrayals of larger-sized models) on self-referencing by gender. Table 1 provides the means for general self-referencing as well as positive and negative self-referencing, by gender and context. When women were exposed to the nontraditional context they had significantly more positive thoughts about themselves than when they were exposed to the traditional frame [for model 1, $M's = 5.70$ vs. 3.44 for nontraditional and traditional frames, respectively, $t(17) = 3.80, p < .05$; and for model 2, $M's = 5.20$ vs. 3.44 , for nontraditional and traditional frames, $t(17) = 2.63, p < .05$; collapsing across both ads, means of 5.45 vs. $3.44, F(1, 17) = 11.0, p < .01$]. There were no significant differences in general self-referencing or negative self-referencing by instructional frame for women (all $t's < .90$, both $F's < .80$). However, as shown in Table 1, there appears to be a nonsignificant trend toward less negative self-referencing by women in the nontraditional context.⁶

Unfortunately, due to a small sample size, conclusions about the effect of need for cognition and self-referencing are merely suggestive. In particular, it seems that for women, the effect of instructional frame differs depending on whether the women are high or low in their need for cognition. For high need-for-cognition women, a nontraditional frame seems to increase the positive self-referencing [$M's = 5.67$ vs. $3.50, t(7) = 2.02, p < .10$ for nontraditional and traditional frames, respectively, for the first model, and $M's = 5.67$ vs. $3.33, t(7) = 2.06, p < .10$, for the second model]. Consistent with other predictions, none of the other differences for women or for men, by instructional frame and need for cognition, approached significance (all $t's < 1$).

DISCUSSION OF STUDY 2

Results of Study 2 shed further light on the underlying thought processes of women and men when they are exposed to advertisements with larger-sized models. The ads tended to generate more self-referencing and more positive thoughts for women than for men. An instructional frame that was nontraditional and supportive of larger-sized models further increased women's positive thoughts about themselves (although effects

⁵ As in the first study, women rated the larger-sized models as significantly more attractive than men [for the first model, mean attractiveness was 3.68 and 2.77 for women and men, respectively, $t(39) = 2.47, p < .05$; for model 2, mean attractiveness was 3.89 and 2.77 for women and men, respectively, $t(39) = 2.95, p < .05$].

⁶ The mean attractiveness ratings of larger-sized models were also nonsignificant, but in the same direction as predicted and found in Study 1. That is, mean attractiveness tended to increase (nonsignificantly) in the nontraditional context. Again, the sample size may have been too small to detect change. For men, no effects of context were suggested by the data (and were all nonsignificant).

Table 1. Study 2: Overall Self-Referencing, Positive and Negative Self-Referencing and Mean Attractiveness of Larger-sized Models by Gender and by Frame.

Type of Self-referencing	Women		Men	
	Traditional Frame N = 9	Non-traditional Frame N = 10	Traditional Frame N = 12	Non-traditional Frame N = 10
General self-referencing				
Larger-sized model 1	2.94	3.20	1.88	1.40
Larger-sized model 2	2.44	2.65	1.83	1.30
Positive self-referencing				
Larger-sized model 1	3.44 ^a	5.70 ^a	2.67	2.20
Larger-sized model 2	3.44 ^b	5.20 ^b	2.58	2.00
Negative self-referencing				
Larger-sized model 1	2.44	1.90	2.75	1.70
Larger-sized model 2	2.56	2.10	2.67	1.60

^a Significantly different $t(17) = 3.80, p < .05$.

^b Significantly different $t(17) = 2.63, p < .05$.

of general self-referencing were not significantly different for traditional and nontraditional frames). Finally, there is some suggestion that, for high need-for-cognition women, a nontraditional frame seems to further increase positive self-referencing.

GENERAL DISCUSSION

The research findings show that the context in which positive images of women are shown can have a significant positive effect on how these women are perceived, by both men and women. Study 1 found that larger-sized models were evaluated as more attractive when the instructional frame activated nontraditional stereotypes than when it activated traditional stereotypes. Furthermore, women evaluated larger-sized women models as more attractive than men, and particularly so when the instructional frame activated the nontraditional stereotype. It was hypothesized that viewing larger-sized models may encourage women to have more positive thoughts concerning their own body size, which may be reflected back to more positive ratings of the larger-sized models in the ads. The findings are consistent with this explanation. In Study 2, women engaged in more self-referencing and positive thoughts about themselves than men, and had more positive thoughts in the nontraditional frame condition. Men and women did not differ in the amount of negative thoughts they had while viewing

the ads. Finally, in Study 1, it was found that high need-for-cognition women rated the larger-sized models as more attractive in the non-traditional frame compared to the traditional frame. Although sample sizes were small, data from Study 2 showed limited support that for women high in need for cognition, a nontraditional frame seemed to increase positive self-referencing.

Implications for Research in Self-Referencing

In general, this research supports the conclusion of prior research that the effects of self-referencing on advertising are positive. That is, when differences occurred in self-referencing, they generally tended to be associated with higher attractiveness ratings of the models in the ads. Prior research has shown that not only does self-referencing tend to increase elaboration of information received, as demonstrated by greater recall of information (Klein & Loftus, 1988), but it also more favorably affects people's attitudes toward products when they self-reference about positive product information (cf. Burnkrant & Unnava, 1995; Petty & Cacioppo, 1986).

Nevertheless, the situation in which self-referencing was measured raises questions about the extent to which self-referencing necessarily activates positive, rather than negative, thoughts, in response to positive product information. It seems likely that certain types of ads might generate negative thoughts about the self. Ongoing research by the authors has examined, for example, whether the portrayal of thin models generates more negative thoughts about the self, and whether perceptions vary depending on whether the context is traditional or non-traditional.

Although not the focus of the present research, it was found that the thoughts generated by the ads with the thin models (in the two non-stimulus ads) tended to produce in women more negative thoughts about the self compared to men, regardless of instructional frame. Specifically, although for the larger-sized models, there was no difference in the negative self-referencing between men and women, for the thin models, women were significantly more likely than men to negatively self-reference [for the first thin model, means of 3.26 vs. 2.04 for women and men respectively, $t(39) = 2.14$, $p < .05$; for the second thin model, means of 3.21 vs. 1.91, for women and men, $t(39) = 2.78$, $p < .05$]. The findings are merely suggestive, and beyond the scope of the present study, but point to new directions for research that examine the specific cognitive processes that underlie positive and negative portrayals of women in advertising, by both women and men. Further, as the body types of male models in advertising become increasingly unrealistic, the same types of cognitive processes will need to be examined in men and women in response to ads that portray male models.

Implications for the Use of Larger-Sized Women in Print Media

This research identified positive consequences that may result from presenting larger-size women in the media. It is important to note, however, that although presenting more realistic, positive, larger-size models may increase both the attractiveness of those models and the degree of positive self-referencing (especially for women), just presenting these larger-size models (in the context of both thin and larger-sized women) may not be sufficient. This research suggests that these nontraditional larger-sized models should be presented in a context that increases media viewers' awareness of these nontraditional models. Portraying more realistic models in a manner that supports and accepts these differences may result in some positive effects for society in general and specifically for women. Recent anecdotal evidence supports this conclusion. The editor of *Vogue* magazine's April 2002 issue called "The Shape Issue," in which "the female form in all its glorious variety" was featured, reported that reader response was strongly positive. Heavier ("plus")-sized models were portrayed in a context that reinforced their use, and the layouts had an extremely favorable response. The present research suggests that if this same layout had been included in a magazine without this nontraditional instructional frame (e.g., the traditional *Vogue* layout), the response would not have been as positive.

Presenting larger-sized models in a supportive frame may allow consumers to positively self-reference (engage in more positive thoughts about themselves), presumably because they are able to relate more personally to these models. Whether self-referencing about the models has short-run or long-run effects on people's attitudes toward the products in the ads will need to be determined in future research. It is also important to note that, in the present study, the larger-sized models conformed to a cultural standard of beauty in their clothing, facial attractiveness, and general appearance. Yet it seems that consumers may relate more to this beauty if they believe it may be somewhat attainable. (In support of this, as noted above, the thin models seemed to increase negative self-referencing for women, whereas the larger-sized models did not.)

Finally, recent research and media attention on the rising number of overweight and obese Americans, and the health risks associated with obesity, pose the question of whether larger-sized models present an *unhealthy* role model. The current research, although it does not address this issue, suggests that, when larger-sized female models are presented in a supportive frame, women generate more positive self-thoughts in response to them. Although heavier models may present unhealthy role models, it may also be the case that increasing the range of body sizes (both thinner and larger-sized) in advertising could increase positive self-thoughts and even provide a buffer against unhealthy weight gain or loss. Future research that addresses these issues is important.

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