Highly Attractive Models in Advertising and the Women Who Loathe Them: The Implications of Negative Affect for Spokesperson Effectiveness

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The use of highly attractive women in advertising is certainly popular, though support for their effectiveness is somewhat mixed (e.g., Bower and Landreth 2001; Caballero, Lumpkin, and Madden 1989; Caballero and Solomon 1984). Other research has established that some women experience negative affect by comparing themselves with these beautiful models (e.g., Irving 1990; Martin and Gentry 1997; Richins 1991). The present research extends prior undertakings by investigating whether the negative affect stemming from comparisons with these highly attractive models may have a negative impact on advertising effectiveness. The pattern of results from two studies indicates that, when sufficient negative affect is generated as a consequence of comparison with beautiful models, evaluations of both the model as a spokesperson and the product argument may be affected adversely because of model derogation. Given the significant effect that evaluations of spokesperson and product argument can have on product evaluations and intentions, the importance of this finding of model derogation is discussed.

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Journal of Advertising, Volume XXX, Number 3 Fall 2001

Introduction

Marketers targeting their products toward women often include highly attractive models (henceforth HAMs) in their advertisements in the hopes of increasing the ad's effectiveness. The marketing literature is replete with evidence of the positive effects of using an attractive person in advertising on both ad and product evaluations (see Belch, Belch, and Villareal 1987; Joseph 1982 for reviews). However, the assumed advantages of HAMs have not always been supported (e.g., Bower and Landreth 2001; Caballero, Lumpkin, and Madden 1989; Caballero and Solomon 1984), leading some researchers to argue that the "application of the physical attractiveness stereotype in advertising must be approached with caution" (Caballero, Lumpkin, and Madden 1989, p. 21). The present research continues the search for the limiting conditions of the use of HAMs in advertising.

Although the practice of including HAMs may be effective from a marketing standpoint, physical attractiveness and the "thin ideal" is a very sensitive issue for many women (Gustafson, Popovich, and Thomsen 1999). The self-concepts of many female adolescents stem primarily from their sense of physical attractiveness (Lerner, Orlos, and Knapp 1976), and a woman's global self-esteem also seems to be related to her own physical attractiveness (e.g., Harter 1993; Rodin, Silberstein, and Striegel-Moore 1985; Striegel-Moore, Silberstein, and Rodin 1986). The importance of physical attractiveness prompts many women to compare themselves with the images of physical perfection, thinness, and beauty found in advertising (e.g., Martin and Gentry 1997; Martin and Kennedy 1993; Richins 1991). Researchers already have established that some women compare themselves with the idealized images in advertising and that some women who compare themselves with these HAMs may experience negative feelings as a result (e.g., Cash, Cash, and Butters 1983; Irving 1990; Martin and Gentry 1997; Martin and Kennedy 1993; Richins 1991).

Not only may the heightened self-relevance of beauty prompt comparisons with HAMs, but it also may increase the extent of the impact and emotionality of that comparison (e.g., Higgins, Kuiper, and Olson 1981; Wood 1989). Therefore, comparisons with beautiful others (i.e., HAMs) may lead to negative feelings such as frustration and anxiety (e.g., Richins 1991). Half of Richins's (1991) young adult female respondents reported that they compared themselves frequently with models in clothing, personal care, and cosmetics ads, and approximately one-third reported that these ads made them feel dissatisfied with their appearance. One study found that approximately 90% of white junior high and high school girls feel some level of dissatisfaction with their weight, leading to more than 60% of white teenagers dieting at least once in the past year (Ingrassia 1995). The editor-in-chief of *Shape* magazine even has acknowledged the possibility that HAMs on the cover of that magazine may leave women feeling inferior (Harris 1995).

Although some research has demonstrated variably the persuasive effectiveness of HAMs and other research has indicated that the negative affective responses to HAM comparisons may be widespread, little is known about the influence that a negative reaction to a HAM may have on the effectiveness of the ad containing that HAM. There is anecdotal evidence suggesting that some women not only may experience negative affect as a result of comparison with HAMs, but also may be critical of both the HAMs and the ads in which the HAMs appear. Many consumers are beginning to voice complaints about the use of HAMs in advertising, and marketers have responded to the overt and negative reactions of consumers to the use of HAMs. In the form of letters and focus groups, many women told officials at the Kellogg Co. of their dislike of and alienation from an ad campaign for Special K cereal that included HAMs with unrealistic bodies (Goodman 1998). In a more extreme example of consumer anger in response to HAM usage, outdoor advertisements for Calvin Klein featuring ultra-thin model Kate Moss were the target of vandalism. Skulls were drawn over Moss's face, and "Feed Me" was written over her body (Hamilton 1993).

The present research extends both the HAM usage and HAM comparison literature by investigating the effect that the negative affective consequences of comparison may have on ad processing and ad persuasiveness. Two main studies exposed young women to ads in which HAMs tacitly promoted beauty-enhancing products (either a treadmill or hair highlighter) and are used to demonstrate the negative effect that threatening comparisons may have on spokesperson and ad effectiveness.

The Influence of Negative Affect

Social Comparison Jealousy

As Salovey and Rodin (1984, p. 780) note, "When we compare ourselves to others and find that we do not measure up, we may experience envy and jealousy." Parrott and Smith (1993) distinguish the experiences of envy and jealousy by arguing that envy occurs when a person compares him- or herself to another person and finds that he or she is lacking in characteristics that are important to him or her. In contrast, jealousy pertains to the loss of a relationship to someone else or a fear of rejection in preference to someone else. Although conceptually distinct, the results of Parrot and Smith (1993) suggest that the experience of jealousy may create a feeling of envy to some extent. Specifically, the fear of losing an important relationship to another person (jealousy) inherently contains enviousness because the other person has something desirable. In fact, Parrott and Smith (1993, p. 917-918) note, "It may be that it is nearly impossible to describe a case of jealousy in which at least the possibility of envy is not present."

Both jealousy and envy may be felt in response to a comparison with a HAM. A woman who compares herself to a HAM may be jealous of that HAM because of her fear that the HAM may be better able not only to win attractive potential mates, but also to attract the potential mates that are of specific interest to the comparer (Dermer and Thiel 1975). The envy a comparer may feel can reflect discontent with her own physical characteristics accompanied by the desire for superior beauty, as well as by the desire to attract mates that might be of interest to her (Bryson 1977; Salovey and Rodin 1984). Envy also may occur because the comparer believes that the beauty of the HAM somehow reflects the lower status and lesser worth of the comparer and threatens her self-esteem (Parrott and Smith 1993; Salovey and Rodin 1984, 1991). Because feelings of both envy and jealousy may be experienced in HAM comparisons, the emotional reactions of both are of interest in this research. Henceforth, the combination of these experiences will be called "social comparison jealousy" (Salovey and Rodin 1984).

Social Comparison Jealousy and Derogation

The experience of social comparison jealousy has been associated with a variety of negative emotions, including depression, helplessness, desire for revenge,

anger, frustration, sadness, and anxiety (Bers and Rodin 1984; Bryson 1977; Jaremko and Lindsey 1979; Salovey and Rodin 1984). One of the behavioral consequences associated with the experience of the negative affect stemming from social comparison jealousy is the derogation of the comparison other (Cialdini and Richardson 1980; Dermer and Thiel 1975; Salovey and Rodin 1984; Silver and Sabini 1978). Salovey and Rodin (1984, p. 782) argue that "the defining quality of social comparison jealousy should be degrading of the comparison person" and that social comparison jealousy can be said to exist only when the injured comparer attempts to disparage the other person. The derogation of others may be an attempt the stop the erosion of self-esteem and the negative feelings that stem from a comparison by easing the pain associated with being "less" than the comparison other (Silver and Sabini 1978). Salovey and Rodin (1984) argue that people are motivated to reinflate, maintain, or even maximize their own self-evaluation and regain positive feelings that may have been injured in an unfavorable comparison by disparaging the superior comparison other (e.g., Salovey and Rodin 1984; Silver and Sabini 1978; Wood 1989). Similarly, Cialdini and Richardson (1980, p. 410) suggest that, to manage the negative affect experienced as a result of performing poorly in comparison with a rival, we may "systematically arrange for the denigration of others." For example, students who were told they had performed poorly on a "latent creativity" test were more likely to "blast" a cross-state rival school than were those who had been told they had done well (Cialdini and Richardson 1980).

Salovey and Rodin (1984) demonstrate that this derogation may not necessarily take the form of detracting from the comparison other's superior performance. Instead, the deprecation tends to take the form of belittling other, alternative characteristics of the comparison person. For example, Salovey and Rodin (1984) find that social comparison jealousy drove subjects to indicate they would not want the superior other as a friend and to reduce their evaluations of the superior other's character. Salovey and Rodin (1984) argue that belittling a comparison other on these alternative characteristics may be an attempt to reassert the comparer's positive affect by making the comparison other less relevant as an object of comparison.

The Derogation of Beautiful Others

Some researchers have investigated specifically the potential for derogation of beautiful comparison others. Dion, Berscheid, and Walster (1972) hypothesize that, though a more beautiful person may be believed to live a happier and more successful life than a less attractive person, the "what is beautiful is good" effect may be somewhat attenuated by the jealousy of a person who is of the same sex. They reason that a person of the same sex might experience jealousy of the greater attractiveness of the comparison other, thus motivating the comparer to derogate that comparison other. However, the interaction between subject gender and stimulus person gender was not significant.

Dermer and Thiel (1975) argue that the reason for Dion, Berscheid, and Walster's (1972) failure to support a jealousy effect is their failure to account for the subjects' own level of attractiveness relative to that of the beautiful model. Dermer and Thiel (1975) suggest that there is no reason all of the participants in Dion, Berscheid, and Walster's (1972) study would have reacted the same way to the attractive same-sex comparison. According to Dermer and Thiel (1975), only the subjects who were less attractive than the attractive target person would feel jealousy toward the attractive other and thus would be the only ones motivated to derogate the target persons.

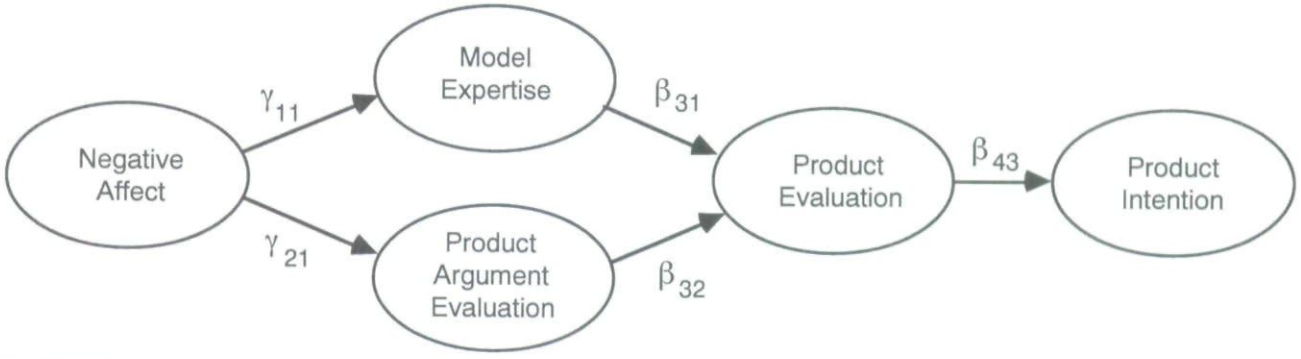
Dermer and Thiel's (1975, p. 1173) overall expected jealousy effect was significant but "not as robust as initially anticipated." One reason for this failure to find "robust" support for their expectation may be because Dermer and Thiel (1975) did not measure the extent to which the subject compared herself with the beautiful target person. As discussed previously, social comparison jealousy occurs as a result of comparison with a person whom the comparer believes is superior, not simply because of a person's exposure to that superior person. It is this comparison and the affective consequences of comparison that may drive this target derogation. Therefore, a better way to predict jealousy and derogation may be to consider specifically the extent to which a woman compares herself with a HAM.

HAM Derogation and Spokesperson and Advertising Effectiveness

The negative feelings of frustration and anxiety generated by social comparison jealousy may have a direct impact on the ability of that advertisement to persuade. Specifically, an increase in the negative affect experienced as a result of a comparison is predicted to be concomitant with heightened derogation of the HAM.

Although the derogation of the model may involve a general derogation of her as a person (as per Salovey and Rodin 1984), the negative impact on the charac-

Figure 1
Hypothesized Effects of Negative Affect Stemming from HAM Comparisons on Advertising Effectiveness



teristics of the model related to her persuasive effectiveness in the advertisement is of particular interest here. Threatening HAM comparisons may cause the comparer to belittle some of the characteristics that make the model a credible and effective element of the advertisement. Two methods by which a model can improve the persuasiveness of an advertisement are as a spokesperson and as an argument for product effectiveness. Spokesperson expertise has been one characteristic identified with credibility and associated with advertising effectiveness (e.g., Horai, Naccari, and Fatoullah 1974; Maddux and Rogers 1980; Mills and Harvey 1972; Ohanian 1990). In the process of derogating the HAM, the comparer may include the model's expertise and knowledge as a target for aspersion.

A HAM also may function as an argument for a beauty-improving product. If a viewer translates the visual image of the HAM into product information, the model's image may serve as an argument for product efficacy (Kahle and Homer 1985; Lynch and Schuler 1994; Miniard et al. 1991; Mitchell and Olson 1981; Rossiter and Percy 1980). Furthermore, if that viewer believes the model possesses a physical characteristic that indicates the model has improved her appearance with the product, a viewer may believe the associated advertised product is responsible for the model's appearance (Lynch and Schuler 1994). However, this additional function of a model in an advertisement may provide threatened comparers with another dimension on which to criticize the HAM. Therefore, the HAM's role as a product argument may be the focus of derogation.

As is typically assessed, this derogation can take the form of decreased positive evaluations of the superior comparison other (e.g., Cialdini and Richardson 1980; Salovey and Rodin 1984; Silver and Sabini 1978). Consequently, the derogation of the model as an expert spokesperson and product argument would be reflected by a negative relationship between negative affect and evaluations of HAM expertise and product arguments. Therefore, the following hypotheses are put forth:

H1: Among comparers, negative affect will be negatively related to evaluations of HAM expertise.

H2: Among comparers, negative affect will be negatively related to evaluations of the HAM as a product argument.

Proposed Model

Figure 1 is a representation of the expected relationships in this research. The hypothesized negative relationship between negative affect and HAM expertise, as well as the hypothesized negative relationship between negative affect and product argument evaluation, are included on the left-hand side of the model. Furthermore, prior research has established that a relationship may exist between the input variables of evaluations of spokesperson expertise and product arguments and the outcome variables of product evaluations and intentions (e.g., Brown and Stayman 1992; Fishbein and Ajzen 1975; Sternthal, Phillips, and Dholakia 1978). These previously established relationships are also contained in Figure 1, on the right-hand side, and are expected to be positive. Because of the potential that the derogation of HAMs ultimately may create less favorable product evaluations and subsequently lowered intentions and because of the importance of product evaluations and intentions to marketers, both product evaluations and intentions are included in this research to establish that a connection between HAM derogation and product

evaluations and intentions may exist (via effects on model expertise and product argument evaluations).

Two studies were performed to establish the relationship between the negative affect stemming from HAM comparisons and the resultant influences on evaluations of HAM expertise and product arguments.

Study 1

Study 1 exposed subjects to an advertisement that included a photo of a HAM. Because of the importance of body size and shape, a treadmill was used as the focal product to highlight the idealized physical form of the HAM.

Pretest

Thirty-eight undergraduate female subjects were shown five full-color photocopies of models to select a model for use with the treadmill. These photos were selected from more than 100 photos of models selected from the fashion layouts of women's magazines, none of them from advertisements. The selected photos were narrowed down on the basis of their ability to be paired with a treadmill (i.e., showed the model's figure). Furthermore, "ethnic" models were eliminated because ethnic beauty may not be considered the standard for typical beauty yet (as evidenced by the small number of ethnic supermodels). Photos that would be too difficult to modify for use in this experiment (e.g., too much writing on the model's body) also were eliminated. Two seven-point, Likert items assessed the model's beauty and whether her beauty would "stand out" in a magazine. A further concern was that there might be a variety of characteristics belonging to a potential comparison other that may influence the extent to which people are likely to compare themselves with that comparison other (Wood 1989). To ensure that the HAM selected would be one with whom a substantial portion of subjects would be likely to compare themselves, two seven-point, Likert-type items assessed the potential for subject comparison with the model (e.g., "I think most of my friends would compare themselves to this model if she were in an advertisement"). Items for each construct were summed, and repeated measures analysis was used to select a model for use in the study. The model selected for use in Study 1 had the highest beauty mean (9.13), which was significantly higher than the second highest mean (8.22, $p<.05$). Subjects also indicated that they were significantly more likely to compare themselves (7.97) with the selected model than with all but one of the other models (7.42). (Additional information on the analysis is available on request.) Given the pattern of results, the model was selected because she was sufficiently attractive to represent HAMs and was likely to be the target of comparison.

Subjects and Procedure

One hundred thirty undergraduate female subjects took part in the first study. Folders were given to women in the subject pool, who received course extra credits for their participation. Ninety-eight percent of the subjects were between the ages of 17 and 29 years. The majority of subjects were white (80.6%), with remaining ethnic groups being African-American (8.5%), Asian (7.7%), and Hispanic (3.1%; there was one nonrespondent). The majority of subjects (92%) were unmarried.

Subjects were presented with a full-color advertisement containing a HAM and a photo of a treadmill. Research materials were included in a folder and contained the advertisement and measures. A cover sheet attached to the front of the closed folder explained that the folder contained an advertising study. On the left-hand side of the opened folder was the advertisement, and the measurement instrument was on the right-hand side of the folder. Subjects were told in the cover sheet's instructions to open the folder, view the ad as they would normally view an advertisement in a magazine, and then respond to the questions on the right-hand side.

Measures

Measures for model beauty, subject comparison, negative affect, HAM expertise, product argument evaluation, product evaluations, and intentions were generated on the basis of prior operationalizations and researcher insight. All measures were on seven-point scales and were intermixed throughout the measurement instrument to lessen the potential for self-generated validity (Feldman and Lynch 1988).

Model Beauty. An assumption check for model beauty was included. Because the model was intended to reflect typical HAM beauty in advertising and magazine layouts, the three beauty items were written to reflect that standard (e.g., "Compared to the other female models I normally see in advertisements, this model's beauty is: far below average/far above average"). Consequently, the mean of the summed model beauty (11.45) scale should not be significantly different from the midpoint of the scale (i.e., 12), as is the case. Therefore, the evidence suggests that, overall, the subjects believed the model to be about as beautiful as the other HAMs in advertising. Coefficient α for the beauty construct was .80.

Subject Comparison with HAM. The extent of subject comparison with the model was assessed by three Likert-type items, two of which were written from a projective point of view (e.g., "I think most of my friends would compare themselves to the model in this advertisement" and "If you were to notice this advertisement in a magazine, how likely is it that you would compare yourself to the model?"). Coefficient α for the subject comparison scale was .71, and the items were summed for later use.

Negative Affect. Four Likert-type items, based on Folkman's (1984) work, assessed the extent of negative affect experienced by subjects. These items measured the extent to which they responded to the ad with feelings of frustration, resentment, and anxiety, as well as a general negative evaluation of themselves. Among these negative affect items were positively worded affect items (e.g., "This ad has made me feel hopeful about my appearance"). These positively valenced items were intended to "dilute" the negative affect questions, thereby reducing the likelihood of generating demand artifacts and hypothesis guessing. (These positively worded items constituted a construct that is unique from the negatively worded items [both theoretically and empirically], and their inclusion in the present analysis would be inappropriate, theoretically speaking. A subject who responds that she is experiencing less of a positive emotion does not necessarily mean that she is feeling more of a negative emotion; instead, she may simply be growing more apathetic. Therefore, only the negatively worded items, which were the items comprising the construct of theoretical interest, were included in the analysis.)

Derogation Assessment. As previously noted, derogation would be reflected by lower evaluations of the HAM's expertise and product arguments. Model expertise was evaluated using three semantic differentials (not an expert/expert, inexperienced/experienced, and unknowledgeable/knowledgeable) based on Ohanian's (1990) scale.

Evaluations of product arguments were assessed with three items that asked, for example, "How influential do you believe the advertised product was in improving the model's appearance?" (not at all influential/very influential) or "I believe that the advertised product positively affected the model's beauty" (strongly disagree/strongly agree).

Product Assessments. Four items assessed product evaluations. Three semantic differential items asked subjects to assess their beliefs about the extent of the improvement in their own beauty if they were to use the product (insignificant/significant, unachievable/achievable, and unnoticeable/noticeable). A fourth Likert-type item asked subjects to indicate the extent to which they agreed with the statement, "If used properly, this product could be responsible for a significant improvement in the user's beauty."

Finally, product intention items were assessed using three Likert-type items that assessed subjects' intentions to try the product, intention to purchase the product, and how eager they were to investigate the product. It is unlikely that most college students would develop a true intention to purchase a hypothetical and expensive treadmill on the basis of a single ad exposure. Consequently, two of the items reflect a subject's intentions and "movement toward" the product rather than a pure purchase intention.

Results

Measurement Model. Prior to testing the hypotheses, as per Anderson and Gerbing (1988), a five-factor, first-order correlated confirmatory factor analysis (negative affect, model expertise, product argument evaluation, product evaluation, and product intention) was used to specify the measurement model. The purpose of this analysis is to assess dimensionality, discriminant validity, and internal consistency among the hypothesized model's constructs prior to assessing the structural parameters (Anderson and Gerbing 1988). The results are in Table 1. The fit indices provide support for the fit of the measurement model (goodness-of-fit index [GFI]=.88, Tucker-Lewis index [TLI]=.93, confirmatory fit index [CFI]=.94, and root mean squared error of approximation [RMSEA]=.06; Browne and Cudeck 1993; Hu and Bentler 1995). All indicator loadings are significant at $p<.001$.

Internal consistency was assessed using Cronbach's alpha, composite reliability, and average variance extracted (AVE) estimates. Four of the construct reliabilities, as measured by coefficient alpha (α) and the composite reliability formula given by Wert, Linn, and Joreskog (1974), are between .76 and .89. The construct reliability of product argument evaluation is below the .70 level, at .68 for α and .67 for composite reliability. However, the questions assessing product argument evaluation require subjects to indicate the extent to which they attribute model beauty to the product. Because of the difficulty of obtaining high reliabilities with regard to attributional measurement (Howard 1987), the measurement was judged to be acceptable. All AVE estimates were above or relatively close to the .50 heuristic, which indicates internally consistent measures (Fornell and Larcker 1981).

The most stringent test of discriminant validity was used to assess whether the constructs were empirically

Table 1
Study 1: Measurement Model Results for All Subjects

Fit Statistics

	χ^2	*df*	*GFI*	*AGFI*	*CFI*	*TLI*	*RMSEA*
Five factors	163.30	109	.88	.83	.94	.93	.062

Internal Consistency

Factor	*Cronbach's Alpha*	*Composite Alpha*	*AVE*
Negative affect	.76	.76	.45
Model expertise	.89	.89	.73
Product arguments	.67	.68	.42
Product evaluations	.85	.87	.63
Product intention	.80	.81	.58

Measurement Model Correlation Matrix

	Negative Affect	*Model Expertise*	*Product Argument*	*Product Evaluation*	*Product Intention*
Negative affect	1.0				
Model expertise	-.20	1.0			
Product arguments	-.14	.65	1.0		
Product evaluation	.04	.17	.44	1.0	
Product intention	-.04	.38	.51	.42	1.0

Notes: df=degrees of freedom; GFI=goodness-of-fit index; AGFI=adjusted goodness-of-fit index; RMSEA=root mean square error of approximation; TLI=Tucker-Lewis index; CFI=comparative fit index; AVE=average variance extracted.

distinct (Anderson and Gerbing 1988; Fornell and Larcker 1981). Discriminant validity is supported when the average AVE estimate between each pair of constructs is greater than the squared correlation between the two constructs, and all the pairs of constructs met this criterion. Therefore, we have general evidence that the five scales measuring the constructs of interest are unidimensional, have acceptable reliabilities, and meet the convergent and discriminant validity criteria.

Comparers Versus Noncomparers. The assumption underlying the hypotheses is that subjects compared themselves with the model. Therefore, a midpoint split was performed on the summed comparison scale. Subjects who scored on average at the midpoint (i.e., 12 on the summed three-item, seven-point comparison scale) or below on the summed comparison items were not considered comparers, whereas subjects who scored on average above the midpoint were considered to have at least "somewhat" compared themselves with the HAM. Fifty-one percent of subjects were considered comparers, and the resulting comparison means are 16.68 for those judged to be comparers and 8.45 for those considered noncomparers (t=19.35, $p<.001$). (It is interesting to note that the midpoint of the scale is identical to the median of the responses.) Consequently, we have strong evidence that the comparers report relatively high levels of comparison with the model, whereas noncomparers report relatively low levels of comparison.

Comparers reported significantly more negative feelings (15.08) than did noncomparers (10.86; t=4.58, $p<.001$). This suggests that, on average, the comparers report relatively high levels of negative affect. In addition, comparers found the model to be more attractive (12.39) than did the noncomparers (10.49; t=3.30, $p=.003$). Although it is tempting to speculate post hoc as to whether there is a causal relationship between the tendency to compare and perceptions of model beauty, either causal relationship is as likely. Individuals may be more likely to compare themselves with models they consider beautiful. However, if a person has a greater innate tendency to compare, she may be more likely to judge other people as more beautiful. Regardless, the finding that the comparers find the model more attractive than do the noncomparers is not surprising.

Negative Affect and Spokesperson and Advertising Effectiveness. Using the subjects classified as

Table 2
Study 1: Structural Model Results

	Fit Statistics					
	χ^2	*df*	*GFI*	*AGFI*	*CFI*	*TLI*	*RMSEA*
Comparers	158.36	114	.79	.72	.91	.89	.077
Noncomparers	204.74	114	.75	.66	.80	.76	.11

Completely Standardized Path Estimates		
Path	*Comparers*	*Noncomparers*
H1: Negative affect → model expertise (γ_{11})	-.37 (t=-2.56)	.11 (t=.66) ns
H2: Negative affect → product argument (γ_{21})	-.45 (t=-2.37)	.08 (t=.45) ns
Model expertise → product evaluation (β_{31})	.20 (t=1.70)	.19 (t=1.42) ns
Product argument → product evaluation (β_{32})	.57 (t=2.88)	.19 (t=1.22) ns
Product evaluation → product intention (β_{43})	.50 (t=3.52)	.36 (t=2.56)
R^2 – Model expertise	.14	.01
R^2 – Product argument	.20	.01
R^2 – Product evaluation	.40	.07
R^2 – Product intention	.25	.13

Note: df=degrees of freedom; GFI=goodness-of-fit index; AGFI=adjusted goodness-of-fit index; RMSEA=root mean square error of approximation; TLI=Tucker-Lewis index; CFI=comparative fit index. Except where noted by "ns" (nonsignificant), t-values of 1.65 or greater are significant at the .05 level, and t-values of 1.96 or greater are significant at the .01 level.

comparers, a structural model was estimated to assess the fit and path estimates of the model in Figure 1. As Table 2 shows, the structural model fit the data well (CFI=.91, TLI=.89, and RMSEA=.077), and all five of the expected paths were significant in the predicted direction. Specifically, there is a significant and negative relationship between negative affect and perceptions of model expertise (γ_{11}=-.37, t=-2.56), thus supporting H1. Similarly, there is a significant and negative relationship between negative affect and product argument evaluations (γ_{21}=-.45, t=-2.37), providing support for H2. These findings support the expectation that increased negative affect is associated with decreased model expertise and product argument evaluations, suggesting model and product argument derogation.

To determine if the relationships between negative affect and evaluations of model expertise and product argument hold only for comparers, a similar analysis was conducted among the noncomparers. As evidenced in Table 2, there is no significant relationship between negative affect and evaluations of HAM expertise or product arguments. These findings support the assumption underlying H1 and H2 that a comparer's rising feeling of threat is associated with the derogation and decreased evaluation of the model's expertise and product arguments.

The results from Table 2 also suggest that comparers consider the HAM's expertise (β_{31}=.20, t=1.70, p<.05) and role as a product argument (β_{32}=.57, t=2.88, p<.002) when forming product evaluations. Furthermore, product evaluation is strongly and positively related to product intentions (β_{43}=.50, t=3.52, p<.001). These findings support the expectations that the evaluations of the HAM and product arguments play a role in product evaluations, which ultimately affects product intentions. Identical analysis of the noncomparers indicates that only one of these three paths (product evaluation to product intentions) is significant (β_{43}=.36, t=2.56, p<.01).

Discussion

The results from the first study generally support the expectations. Rising negative affect in a comparer is associated with decreased evaluations of the model as both a credible spokesperson and product argument. Furthermore, these results suggest that this decreased evaluation of the model as a spokesperson and as an argument is cause for concern because of the subsequent relationship between those evaluations and product evaluations and intention. In an effort to generalize the findings beyond the single product and single model used in the first study, a

Table 3
Study 2: Regression Analysis Results

Tested Relationships	*Comparison Group*	*F-value*	*p-value*	*Standardized β*
Negative affect → model expertise	Comparers	1.85	.183	-.238
	Noncomparers	.89	.349	.110
Negative affect → product argument evaluation	Comparers	.389	.537	-.110
	Noncomparers	1.55	.217	.143
Model expertise → product evaluation	Comparers	16.50	< .001	.589
	Noncomparers	.28	.599	.063
Product argument evaluation → product evaluation	Comparers	34.63	< .001	.726
	Noncomparers	12.92	.001	.390
Product evaluation → intention	Comparers	6.45	.016	.415
	Noncomparers	21.99	< .001	.484

Note: Comparers n=34, and noncomparers n=76.

second study was performed. The treadmill in the first study may have highlighted or made more salient the appearance of the model's body. Therefore, the decision was made to use a product (a hair highlighting kit) that emphasized a potentially more malleable part of a woman's physical appearance. The intention of selecting a non–body-oriented product was to determine if support for the influence of negative affect exists when the body is not as strongly emphasized as it was in the first study. A different model also was used, primarily because of her appropriateness for use with the product, as well as to improve the generalizability of the findings. The procedure and measures were identical to the first study.

Study 2

Results

One hundred eleven women participated in the second study. One of the questionnaires was thrown out due to incompleteness. Eighty-nine percent of the subjects were single, and 95% were between the ages of 18 and 29 years. With regard to ethnicity, 82.7% of the subjects were white, 12.7% were African-American, 2.7% were Asian, and 1.8% were of Hispanic origin. Coefficient α estimates for the measures were very similar and in some cases identical to the reliabilities in the first study. The only noteworthy exceptions were a lower α of .75 for the product evaluation measures and a higher α of .91 for the intention measures.

Beauty Assumptions. The mean beauty evaluation (10.88) was again at approximately the midpoint of the scale and was not significantly different from the HAM beauty in the first study. This mean beauty evaluation suggests that, again, the subjects viewed the model as representing the average beautiful model presented in advertising.

Comparers Versus Noncomparers. A midpoint split was again performed on the summed comparison scale, categorizing those who scored at the midpoint and below as noncomparers and those above the midpoint as comparers. Whereas in the first study, the scale midpoint and the median were identical, this is not the case in Study 2. Only 31% (n=34) of subjects were categorized as comparers according to this categorization rule. The comparison mean for comparers (15.47) suggests a relatively high degree of comparison with the model and is significantly greater than the noncomparer's extent of comparison (7.68; t=17.72, $p<.001$). As in the first study, comparers found the model to be more attractive (12.56) than did the noncomparers (10.11; t=3.47, $p=.001$). Also, comparers (12.44) felt significantly more negative affect than did noncomparers (7.70; t=4.72, $p<.001$). However, it is important to note that the mean level of negative affect reported by the comparers is not significantly different than the midpoint of the scale (i.e., 12; t=.48). This moderate level of negative affect may have consequences for the findings in Study 2, which will be discussed subsequently.

Negative Affect and Spokesperson and Advertising Effectiveness. Because of the relatively small sample size of the comparers, the expectations regarding the relationship between negative affect and evaluations of the model as expert and product argument were analyzed using a series of regressions, the results of which are contained in Table 3. Whereas the beta

scores were in the expected, negative direction, the relationships between negative affect and evaluations of model expertise and product argument were not significant. Comparers' evaluations of model expertise (β=.589, F= 16.50, p<.001) and product arguments (β= .726, F=34.63, p<.001) were significantly related to product evaluations. As in Study 1, the relationships between negative affect and evaluations of model expertise and product argument in the case of noncomparers were nonsignificant.

Discussion

There may be several reasons for the failure to find negative and significant relationships between negative affect and evaluations of model expertise and product arguments. First, the relatively small sample size of subjects who were considered to be comparers may be responsible for the null result. Second, the lack of a negative and significant relationship may be due to the moderate amount of negative affect reported by comparers. Comparers reported experiencing less negative affect in the second study than in the first study (12.44 versus 15.08; t=1.23, p=.028), and the extent of threat reported in the second study is not significantly different than the midpoint, which suggests that the average negative affect experienced by comparers in Study 2 is, at most, of a moderate level. This lower level of felt negative affect in the second study is another likely reason for the lack of derogation associated with increased negative affect. Negative affect may need to reach high enough levels to drive decreased model evaluations. The patterns of results from this second study in combination with the first suggest that negative affect must be felt sufficiently to cause derogation, an important limiting condition in the prediction of model derogation.

Discussion and Future Research

Review and Conclusions

The purpose of this research was to investigate the effect that threatening comparisons with the highly attractive images in advertising may have on the ability of an advertisement to persuade. Would the comparer's need to preserve her self-esteem lead to derogation of the HAM, resulting in decreased spokesperson effectiveness? The findings here generally suggest that comparisons with HAMs are associated with the experience of greater negative affect. Furthermore, the negative affect experienced by some women who compared themselves with HAMs was associated with lowered evaluations of the model as both an expert spokesperson and as a product argument if that negative affect was felt strongly enough. Results from both studies reiterated the importance of the role that the variables of spokesperson expertise and evaluation of product arguments play in product evaluations and product intentions.

Potential Influences on Negative Affect

As suggested previously, the failure to support the negative relationship between negative affect and evaluations of model expertise and product arguments in the second study may be due to the level of negative affect reported by comparers in the second study. Not only was comparer negative affect significantly lower in the second study than in the first, but negative affect in the second study also may be considered of moderate levels. This suggests that, though there may be a negative relationship between negative affect and spokesperson efficacy, the negative affect may need to reach high enough levels for the model derogation to occur. The patterns of results from these two studies suggest an interesting limiting condition. If derogation only results when negative affect reaches a certain magnitude, future research should investigate the antecedents of negative affect. The current research suggests several reasons for the differences in the experience of negative affect by comparers across the two studies.

Comparison Level. The reported level of comparison among comparers across the two studies is different. Comparers in the first study reported significantly greater extents of comparison with the model (16.68) than did the comparers in the second study (15.47; t=2.70, p=.008). However, the mean comparison level in the second study is still somewhat high, thus reducing the likelihood of this explanation.

Model Characteristics. Instead of simply looking at the extent of the relationship between comparison and negative affect, it may be more productive to look at potential moderators of that relationship. A second potential explanation for the difference in negative affect between the two studies may be the differences between the models in the two studies. Although there is no significant difference in the comparers' perceptions of the beauty of the models across the first (12.38) and second (12.56) studies, there may have been other, unmeasured differences. One potential HAM difference may have been the type of model beauty (e.g., sexy, classic, etc.; Solomon, Ashmore, and Longo 1992). However, the model beauty categories presented by Solomon, Ashmore, and Longo (1992) were created by beauty "gatekeepers" (e.g., fashion and beauty edi-

tors), not by consumers. Therefore, it remains to be seen whether consumers identify different beauty categories and whether the beauty categories influence whether a HAM comparison will lead to strong negative affect. In addition, the HAM's pose or clothing or the salience of certain HAM physical characteristics may influence the extent to which negative affect is experienced as a result of the comparison. Future research is clearly needed to improve our understanding of the HAM characteristics that may heighten negative affect.

Body and Product Characteristics. The moderate negative affect in the second study may have been due to the nature of the product and the body part that was highlighted in the advertisement. Richins (1991, p. 75) finds that some of her subjects were not as negatively affected by comparisons and expressed more optimism and motivation when the "look is considered attainable," particularly if the body part is perceived to be "readily alterable." The malleability of a dissatisfactory body part may moderate the relationship between comparisons and affect. Specifically, the more easily improved a body part is perceived to be, the less likely a comparer is to feel negatively as a result of the comparison. If the model's beauty is one that the comparer "may hope to inherit" (Brickman and Bulman 1977, p. 163), because the comparer perceives herself as progressing toward a superior state, the comparison can be uplifting and the affective reactions to the comparison not as negative (Brickman and Bulman 1977). A treadmill may serve to emphasize a body shape, whereas hair highlighters may draw attention to the model's hair. Although the body may be more alterable than, for example, the bone structure of a face (Richins 1991), changing body shape using a treadmill still may be somewhat difficult, particularly given other elements of the body aesthetic, such as body build. In contrast, changing hair color may be relatively easy to accomplish and not as constrained by the natural characteristics of hair. Consequently, the conditions in the second study may have influenced comparers to be more hopeful that the model's beautiful hair was something they might inherit, thus reducing the experience of negative affect stemming from the comparison. Future research may want to examine the influence of the malleability of a feature's attractiveness within an experimental approach to better determine which differences between two products or two models may lead to differences in negative affect.

Motivation to Compare. The role of motives for the comparison also may be responsible for the difference in negative affect between the two studies. Motives have been demonstrated to influence both when comparison with advertising models will occur, as well as what the differential affective consequences of those comparisons may be (Martin and Gentry 1997; Martin and Kennedy 1994). Martin and Gentry (1997) explore the effect of motivation for comparison on adolescents' and preadolescents' self-perception and self-esteem. By manipulating the comparison motive, they demonstrate that, in certain conditions, a HAM comparison motivated by self-evaluation might temporarily lower the self-perceptions and self-esteem of girls, whereas a motive of self-improvement may be associated with temporarily higher self-perceptions and self-esteem. Although Martin and Gentry (1997) note that social comparison theory does not necessarily address why one person may be more likely to be motivated by self-evaluation than by self-improvement (or vice versa) than another person, they suggest that the extent to which a young woman believes that she might be able to improve her appearance may prompt a self-improvement motivation (e.g., Major, Testa, and Bylsma 1991). As was discussed with regard to the malleability of body parts, perhaps an improvement to the hair (as in the second study) was perceived to be more possible than an improvement to the body shape (as in the first study), thus prompting more self-improvement motives in the second study. As per Martin and Gentry (1997), this may be associated with an improvement in self-esteem and self-perceptions, which may in turn influence the extent to which a comparer experiences negative affect as a result of her comparison. This suggestion, that motives may moderate the relationship between the extent of comparison and the resultant affect, is supported elsewhere (Wood 1989).

Comparers Versus Noncomparers

Comparisons of the results across comparers and noncomparers must be made with some caution, particularly with regard to the differences between comparers and noncomparers in their use of the model in forming product evaluations. Because of the limited knowledge as to why a subject is a comparer or noncomparer, it is difficult to draw conclusions as to why comparers and noncomparers were different with regard to advertisement processing analysis. For example, neither study incorporated an involvement measure, thus making it difficult to determine if any differences in advertisement processing between comparers and noncomparers was due to higher or lower levels of involvement.

One possible influence on the extent to which a subject compared herself with the model may have been the extent to which the subject perceived the

HAM to have been similar to herself and therefore relevant for comparison (Wood 1989). For example, the comparison rates of subjects who did not share the same (apparent) racial heritage of the HAM suggest that dissimilarity in race may have influenced comparison rates. Although the total numbers are small, only two of the eleven African-American subjects and three of the ten Asian-American subjects were categorized as comparers in the first study. Therefore, evidence suggests that the racial differences between these subjects and the HAM stimuli may have decreased the extent to which non-Anglo subjects compared themselves. Nevertheless, if these subjects were presented with and compared themselves with a HAM of their own ethnicity, there is no theoretical reason to believe that the effects of negative affect and derogation would be different than the effects found in the present research.

The primary purpose for including the analysis of the comparers and noncomparers is to support the assumption underlying the negative relationships between negative affect and evaluations of model expertise and product arguments, that is, that a HAM comparison has occurred. Furthermore, regardless of the causes of comparison or the influences on the negative affect experienced as a result of a HAM comparison, the primary concern and contribution of this research is "further downstream" from these antecedents of negative affect and instead involves the consequences of that negative affect. Specifically, this research suggests that, when the negative affect (whether resulting from a given model characteristic, body/product characteristic, or motive for comparison) stemming from a HAM comparison is felt sufficiently, increased negative affect may be associated with the decreased effectiveness of a model in an advertisement. These findings with regard to HAMs, in combination with other research suggesting that a model of a more moderate, realistic level of attractiveness may be equally as effective as a HAM in certain conditions (Bower and Landreth 2001), calls into question the value of the extensive use of HAMs, particularly given the harm to some women that may occur as a result (e.g., Cash, Cash, and Butters 1983; Irving 1990; Martin and Gentry 1997; Martin and Kennedy 1993; Richins 1991; Rodin, Silberstein, and Striegel-Moore 1985).

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