

ADVERTISING-INDUCED SOCIAL COMPARISON AND BODY-IMAGE SATISFACTION: THE MODERATING ROLE OF GENDER, SELF-ESTEEM AND LOCUS OF CONTROL

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ABSTRACT

The impact of advertising-induced social comparison on two measures of body-image satisfaction (fitness satisfaction and attraction satisfaction) and purchase intent was examined using a 2 (gender) x 2 (self-esteem) x 2 (comparison direction) X 2 (locus of control) factorial ANOVA design. The results support previous findings on adverse impact of social comparisons but suggest that the effect depends on the type of satisfaction measured. Gender differences were also found, with females being more affected by upward comparisons. Purchase intent was dependent on locus of control, with internal locus subjects responding more favorably to the product.

INTRODUCTION

Physical attractiveness is considered to be an asset in North American society (Dion, Berscheid and Walster 1972). The rapid growth of the multi-billion dollar cosmetic and personal care industry (Chandler 1995; Wurdinger 1996) is a testimony to the importance of physical appearance in this culture. The pursuit of beauty through beauty-enhancing products is well documented (see Vacker and Key 1993). It is also known that individuals strive to enhance their self-concept and self-esteem through the use of certain products (Domzal and Kernan 1993; Rook 1985). Advertising that promotes the use of beauty-enhancing products has been criticized for the unrealistic expectations they set in the minds of young people (Martin and Kennedy 1993; Pollay 1986). Such advertising, it has been argued, has had a demonstrable negative effect, especially on young women (e.g., Garner et al. 1980; Zellner, Harner and Adler 1989) and has been cited as the cause of eating disorders (Peterson 1987; Stice

and Shaw 1994).

The images seen in television or in magazines often serve as the basis for comparing and evaluating our own position, be it with respect to the material possessions we own or with respect to our physical appearance (Richins 1991, 1995). Advertising is seen as a factor in determining beauty standards for young people (e.g., Elliott 1994; Englis, Solomon and Ashmore 1994; Peterson 1987), and the often unrealistically high comparison standards set by advertising can lower our satisfaction with our physical appearance (cf. Pollay 1986; Richins 1991).

For young adult females, Richins (1991) found that exposure to idealized body images in advertising lowered their satisfaction with their own body image. Martin and Kennedy (1993), however, found that for pre-adolescent and adolescent females, exposure to images of attractive people raised their comparison standards but did not lower their self-perception of physical attractiveness. These two studies, taken together, suggest that perhaps the negative impact of advertising (in terms of lowering body-image satisfaction) occurs in later teen years and early adulthood. Our research focuses on young males and females (late teens to early twenties).

While these previous studies in consumer behavior have focused on females and their body-image satisfaction, so far there has been no examination of how males and females may differ from each other with respect to such social comparison effects. Further, Richins (1991) considered only upward comparisons to highly attractive professional models, while Martin and Kennedy (1993) incorporated a comparison target of moderate or average attractiveness in addition to that for an upward comparison. In this research, we also have considered the direction of social comparison (very good looking versus average looking) and its impact on body-image

satisfaction for both males and females.

Past studies have shown the impact of advertising on the comparison standards and/or body-image satisfaction but have not linked the advertising-induced dissatisfaction to any behavior or behavioral intent (e.g., Martin and Kennedy 1993; Richins 1991). For instance, if the idealized images seen in advertising lowers one's body-image, does that mean that one is likely to purchase clothes, diet products, and cosmetics that may enhance one's body image? It is not clear if and when the dissatisfaction induced by advertising will lead to purchase or purchase intent. In this context, this research examines the role of locus of control (LOC) (Rotter 1966). We consider LOC as an individual characteristic that may moderate the behavioral intent.

Thus, this research is intended to further our understanding of advertising-induced social comparisons. We specifically address the impact of both upward and average/same-level social comparisons and examine the role of LOC in determining behavior. We include both genders in our investigation.

LITERATURE AND HYPOTHESES

Social Comparison

According to the original social comparison theory (Festinger 1954), human beings have a drive to evaluate their opinions and abilities through comparisons with others, especially in the absence of objective standards. Studies in social comparison, such as Buunk et al. (1990), have found that upward comparison (comparison with someone who is superior to oneself on the comparison dimension) leads to lowering of satisfaction, whereas a downward comparison (comparison with someone who is in an inferior position) leads to a higher satisfaction.

Festinger's theory has been extended to include comparison with respect to personal traits (Wood 1989). In line with this extension, Richins (1991) has shown that very attractive fashion models used in magazine ads can be a comparison target for young women. Such social comparisons induced by ads seem to increase one's comparison

standards (Martin and Kennedy 1993; Richins 1991).

While Richins (1991) reported that in young adult women, such comparisons also lowered their body-image satisfaction, Martin and Kennedy (1993) reported that the effect on satisfaction (or self-perception of attractiveness) was similar following exposure to highly attractive versus average-looking models. It is plausible that the different results in these two studies could be explained by the age of the subjects who participated in the two studies. Martin and Kennedy (1993) did report a negative correlation ($r=-0.34$, $p<0.01$) between age of the girls and their self-perception of attractiveness. This suggests that the importance of physical appearance increases in later teen and early adulthood years, and thus, any adverse comparison (i.e., comparison with a very good-looking model) is likely to lower one's satisfaction more than a comparison with an average-looking target. We extend our investigation to both genders and propose the following:

Hypothesis 1: Body-image satisfaction will be lower for those exposed to the pictures of the very attractive models as compared to those who were exposed to the average-looking models.

Moderating Variables

The social comparison effect, as proposed in Hypothesis 1, is moderated by other factors. There is evidence suggesting that gender (e.g., Furnham and Greaves 1994) and self-esteem (e.g., Lennon et al. 1999; McAllister and Caltabiano 1994) play a moderating role. For instance, women are more susceptible than men to social comparison of the physical attractiveness dimension (Furnham and Greaves 1994). Those with a lower self-esteem are similarly more susceptible than those with a higher self-esteem (Lennon et al. 1999).

There is also evidence linking LOC to body-image satisfaction (e.g., Furnham and Greaves 1994; Monteath and McCabe 1997). LOC is an individual-difference variable, which measures

whether an individual believes that he/she is in control of his/her life (internal locus) or that events in life happen due to external forces beyond one's control (external locus). Those with an external LOC seem to be less satisfied with their bodies than are those with an internal LOC (cf. Adame, Johnson and Cole, 1989). This link between body-image satisfaction and LOC raises an interesting question in the context of this study. Are those with an internal LOC (who feel more in control and possess higher body-image satisfaction) less susceptible to advertising that induces body-image comparison than to those with an external LOC (who possess lower body-image satisfaction)? This question, coupled with the fact that LOC has not been previously examined in an advertising context, led to the inclusion of LOC as the third moderating variable. Each variable and the hypothesized effects are described in the following sections.

Gender

It has been shown that females have a lower level of satisfaction with their bodies than do males of a comparable age (e.g., Furnham and Greaves 1994). The literature in sex-role socialization suggests that the socialization process in western culture is a contributing factor to the lower body-image for women (e.g., Striegel-Moore, Silberstein and Rodin 1986). Sex-role socialization also leads to different choice of toys for boys and girls. It has been shown that young boys like to play with action figures that denote power, success and domination, whereas girls seem to prefer dolls, which symbolize beauty and charm (e.g., Pereira 1994; Schwartz and Markham 1985). Fashion magazines promote the "thin ideal." This stereotype suggests that superslim women are more fashionable, desirable, and successful (Garner et al. 1980, Gustafson, Popovich and Thomsen 1999). Exposure to thin-ideal images of models featured in media, images which represent unattainable an beauty standard for most women, does seem to affect women's satisfaction with their bodies (e.g., Lin and Kulik 2002).

There is some evidence that changing gender

roles in the society is turning men into objects of desire. Increasing attention is being paid to men's appearance and grooming in media and magazines as a result (e.g., Neimark 1994; Neff 2002). Unrealistic male beauty standards seem to be emerging (cf. Whitsel-Anderson 2002). At the same time, it is also known that women are more likely to engage in same-sex social comparisons of their bodies than men are, and are also more likely to have their bodies noticed and criticized by others (Murray, Touyz and Beumont 1995). There is ample evidence that such social comparison of body images, especially comparisons with professional models, adversely affects women's body-image satisfaction (e.g., Richins 1991). Men are not immune to social comparison effects (Whitsel-Anderson 2002), but the literature suggests women are more susceptible to such influence (e.g., Hargreaves and Tiggemann 2002; Lin and Kulik 2002). Hence, we propose the following hypothesis:

Hypothesis 2a: After exposure to the test ads, females will have a lower level of satisfaction with their body-image than will males.

Hypothesis 2b: Females will have a lower satisfaction after exposure to upward comparison than will males, while average comparison will not affect either gender.

Self-esteem

Self-esteem is linked to body-image satisfaction, where lower/higher self-esteem is associated with lower/higher body-image satisfaction (e.g., Furnham and Greaves 1994; McAllister and Caltabiano 1994). Further, self-esteem has been shown to moderate the effect of advertising images on female body-image satisfaction (Richins 1991). Lennon et al. (1999) found support for the role of self-esteem. They found, among women exposed to advertising, that those with higher self-esteem reported less social comparison and less dissatisfaction with their appearance than those with low self-esteem.

It has been shown that self-esteem is linked to body image satisfaction/attitudes more so for

women than men (Furnham and Greaves 1994). Hence, we expect that men will focus less on body image, irrespective of their self-esteem level, when compared to women. For women, there should be a much more significant difference in body-image satisfaction between high and low self-esteem individuals after exposure to the test ads. Hence, we propose the following hypotheses:

Hypothesis 3a: Subjects with high self-esteem will be less affected by social comparisons than subjects with low self-esteem.

Hypothesis 3b: For females, there will be a significant difference in the body-image satisfaction of high versus low self-esteem subjects, whereas for males the satisfaction between two levels of self-esteem will not be significantly different.

Locus of Control (LOC)

Rotter (1966) conceptualized LOC as a construct that identifies the extent to which an individual perceives that he/she is in control of his/her life. According to Rotter (1966), some people have an internal LOC and perceive a greater ability to control the events in their lives. Other people have an external LOC and perceive a lack of control, attributing most occurrences in their lives to luck or chance.

In the area of body-image satisfaction, LOC has been shown to affect activities such as exercising and eating behavior (Furnham and Greaves 1994). For instance, Adame et al. (1990) found that those with an internal LOC engaged in more fitness-related activities and had a good body image.

Further evidence linking LOC and body-image satisfaction comes from Garner et al. (1976) and Mable, Balance and Galgan (1986), where females with external LOC were found to overestimate their body sizes to a greater degree than those with an internal LOC. Women with an external LOC seem to be less satisfied with their bodies than are women with an internal LOC (cf. Adame, Johnson and Cole 1989; Mable et al,

1986). Monteath and McCabe (1997) argue that

... women possessing an external LOC feel powerless to alter the appearance of their bodies and thus experience distorted perceptions of and negative feelings about their bodies. In contrast, women with an internal LOC perhaps believe that the appearance of their bodies is within their control. Their feelings of empowerment may result in more positive views of their bodies.

Extending this argument further, it seems that those with an internal LOC are more likely to feel that they can control their physical appearance. They are likely to feel that changing their body shape and making themselves more attractive to others is attainable through effort. Thus, when they are exposed to an upward comparison, they are less likely to be threatened or less likely to report a lower satisfaction. On the other hand, those with an external LOC, who do not feel empowered, are less likely to feel in control and are more likely to be vulnerable to advertising messages. Hence, an upward comparison will seem like an unattainable dream, leading to lower body-image satisfaction. Thus, we propose the following:

Hypothesis 4: Satisfaction levels of those with internal LOC will be less affected by upward comparisons than those with external LOC.

Purchase Intent

Given the greater perceived control felt by the internal LOCs, they are more likely to engage in actions, be it purchasing a product or participating in physical activities, designed to change their appearance, if they so desire. Thus, under higher dissatisfaction with body image, internal LOCs are more likely to purchase the advertised product. Hence

Hypothesis 5a: For subjects experiencing higher dissatisfaction with their body image, purchase intent will be greater if they have an internal, as opposed to an external LOC.

Alternatively, it is conceivable that those with an internal LOC may feel that the cause lies within, and may seek an internal solution. In other words, those with an internal LOC who are also low in their satisfaction may feel that the cause of their dissatisfaction is internal.

Consequently, internal LOC individuals may be indifferent to any external attempts (such as advertising) to solve their problems. On the other hand, those with an external LOC, when dissatisfied, may be more willing to embrace external solutions to their problems (such as consuming diet products or cosmetics), as they may be less likely to believe in themselves. There is also some evidence suggesting that those with an internal locus may have better body images than those with an external locus (Adame et al. 1990). It has also been suggested that externals may be overly concerned with their body shape compared to internals (Jones, Halford and Dooley 1993) and may, hence, be more susceptible to ads that promote beauty products. This leads to the following:

Hypothesis 5b: Purchase intent for internal LOC subjects will be unaffected by their satisfaction levels, whereas external LOC subjects will be more likely to purchase the product when their current body-image satisfaction is low.

METHODOLOGY

Overview

The first step consisted of selection of pictures to be used in this study. Six pictures were selected in each gender category through the process described below, in which three pictures represented very attractive targets (upward comparison) and three represented average-looking targets (same-level or downward comparison). Following this, the study was conducted in two phases. Phase one involved measuring certain independent and potential covariate items such as LOC, self-esteem, and fashion consciousness. A week later, phase two, which involved an experiment, was conducted. In

the experiment, a 2 (gender: male,female) x 2 (comparison direction: upward,downward) x 2 (self esteem: high,low) x 2 (LOC: internal,external) factorial ANOVA was employed. Subjects saw ads featuring either a very attractive or an average-looking person, who was the same sex as the viewer. After viewing the ads, the subjects responded to a series of questions. These included the dependant variables, body-image satisfaction and intent to purchase the product. Details of the picture selection process and the two phases of the study are described below.

Selection of Pictures

A variety of pictures was selected from various sources. These included magazines, catalogues, pictures from a local modeling agency, and a number of pictures supplied by the head office of Wal-Mart, which uses its employees in all its promotional materials. Wal-Mart pictures featured average-looking people. In the first phase, a series of in-depth interviews was conducted with five male and five female undergraduate students. Their age ranged from 19 to 28.

Each subject was given a set of same-sex pictures, and allowed to browse for as long as they wished during the interview. After they had browsed through the folder containing the pictures, a series of open-ended questions was asked. Information sought included whether they paid attention to pictures, whether they discussed the pictures with their friends/peers, whether they wished to have modified their behavior after seeing the pictures, and whether they affected their feelings about themselves. These interviews were useful in determining the pictures to be used in the experiment.

From the first phase, 13 male pictures and 13 female pictures were selected. They were a variety of body and head pictures with no effort to control for hairstyle, clothing, makeup or jewelry. The pictures were then shown to same-sex subjects. A total of 10 females and nine males participated in this phase. Each subject was given a folder containing 13 pictures. The pictures did

not contain any product names, logos, or slogans. After seeing each picture once, the subjects were allowed to go back to the picture again, if necessary, before responding to the questionnaire. The questionnaire included attractiveness ratings of the models, as well as an item that asked subjects if they wanted to be like the model.

Based on the same-sex ratings of the pictures, a composite score of perceived attraction was computed for each picture. The top three and the bottom three, in both the male and the female categories, were chosen for the experiment and ranged in attractiveness rating (as the sum of five 7-point scales) from 8.4 to 24.4. The three pictures rated the most attractive in each of the gender categories were significantly higher in mean attractiveness ratings (males $t(8)=6.24$, $p<.001$; females $t(9)=5.45$, $p<.001$) than those rated least attractive.

Design

A 2 (sex: male/female) x 2 (comparison direction: attractive/average) x 2 (self-esteem: high, low) x 2 (LOC: internal/external) between subjects full factorial design was used. The experiment was done in two stages. First, levels of self-esteem, LOC, fashion consciousness, and demographic information were gathered on 144 undergraduate students in an east coast university. Each subject was given a number and asked to write it down in a place where he or she would be able to refer to it a week later.

In the second stage, a week later, the subjects were divided into males and females, and then into high and low self-esteem groups. Within these groups, the subjects were randomly assigned the treatments. They were given three same-sex mock advertisements and then a questionnaire to measure a number of variables related to how satisfied they were with their appearance.

Stimulus Material and Procedure

The stimulus material consisted of mock advertisements for a cologne. The pictures used in the ads were selected based on the pretest results. Three ads for the same fictitious brand of cologne

named Sahara were created. We used cologne as the test product because the product could be used by both genders, and the product does not physically alter one's appearance (as in the case of hair-care and cosmetic products). Each advertisement contained the picture of a model (male or female) combined with the slogan, "Sahara! The Cologne for Today." The product was not shown in the ads, nor was any other information about the product provided. The picture of the model was the most prominent feature of each ad. Four groups of mock print advertisements were created, consisting of the following combinations: male/female model and very attractive/average looking. The mock ads were reproduced with a high quality color photocopier.

The subjects were informed that they were participating in a test of mock advertisements and that they would be asked to rate several ads. First, each subject was given a folder containing three different ads for the same product. The gender of the subjects was matched to that of the models in the ads. No specific time limit was set for this task. After they had seen the ads, subjects were asked to close the folders and respond to the questionnaire.

Measures

In the first phase of the experiment, self-esteem and LOC were measured. To measure self-esteem, eight items were adapted from Rosenberg (1965). The locus of control measure consisted of 12 items. These were selected from Rotter's (1966) Locus of Control Scale. From the 24 items in this scale, based on the highest combined-sex biserial correlation, the 12 items with the highest item-to-total correlation were selected. Several potential explanatory variables were measured as well. These included a three-item measure of fashion consciousness (e.g., "keeping up with styles and fashions is very important to me") and a three-item measure of the subject's tendency to compare (e.g., "I do not compare my height or weight to that of models in ads"). These measures were taken using 5-point scales. The tendency to compare scale is similar

to the Attention to Social Comparison Information (ATSCI) scale (Bearden and Rose 1990) but is specific to social comparison of body image (see Appendix A for independent variable measures).

In the second phase of the study, after the subjects had seen the mock advertisements, several measures were taken. The dependent variable was satisfaction with the subjects' own appearance. Eight satisfaction items were used. These included satisfaction in terms of body weight and shape, and perceived physical attractiveness of oneself. Also, interest in the product and intention to purchase were measured. Seven-point scales were used for all these measures (see Appendix B for dependent variable measures).

RESULTS

Mortality

In the second phase of the study, 31 respondents either failed to return or lost their identification numbers and were excluded. The remaining 78.4% consisted of 53.2% male and 46.8% females. The mean age was 21.8 years with a standard deviation of 4.2.

To check for mortality bias, t-tests were conducted on the variables measured in the first stage of the study (age, self-esteem, fashion consciousness, LOC, and tendency to compare) by comparing respondents in the second stage to non-respondents. No significant difference ($p > 0.10$) was found on any variable. The subjects were primarily full-time (96%) domestic (92%) students.

Manipulation Check

A manipulation check for perceived attractiveness of the models in the advertisements was included in the second phase. The sum of three items was used to measure attractiveness on 7-point scales (e.g., "all the models in the pictures I saw were very good looking", "each of the models I saw can be considered physically attractive"). The attractiveness rating under upward comparison was significantly higher for

both males and females (Males: $t(56)=9.34$, $p < 0.001$; Females: $t(50)=6.33$, $p < 0.001$), confirming the effectiveness of the social comparison manipulation.

Factor Analysis

Factor analysis was performed on the eight satisfaction items using Varimax rotation. Two factors emerged: the first factor contained items that measured satisfaction with body weight and shape ("fitness satisfaction"); the second contained items that measured perceived attractiveness to others ("attractiveness satisfaction"). The two factors explained 81.9% of the variance.

Reliability

The reliability scores (Cronbach's alpha) for the measures are as follows: self-esteem (0.81), LOC (KR-20=0.60; Split-half=0.67), fashion consciousness (0.74), tendency to compare (0.73), fitness satisfaction (0.88), and attractiveness satisfaction (0.91).

Distributions of Dependent Variables

In a range from 6 to 28, the mean self-esteem score was 12.7 (sd 3.97) out of a possible 56. Mean LOC was 17.0 (sd 2.4) on a possible range from 12 to 24 where a high score represents internal LOC.

Hypotheses Tests

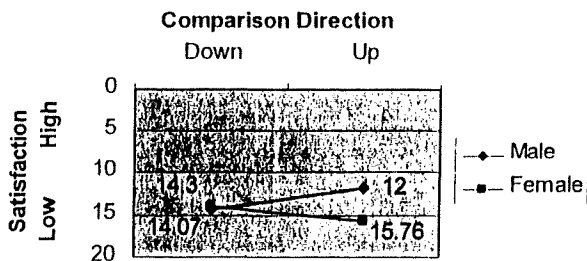
For the satisfaction variables, two indices were calculated using equal weighting of each of the variables that loaded on each of the factors above. One item, (item #3 in the satisfaction items of Appendix B) which loaded relatively evenly on each factor, was not used. Separate ANOVAs were conducted on each of the satisfaction factors using SPSS. Subjects were assigned to groups on the basis of a median split on the variables LOC and self-esteem. A four-way ($2 \times 2 \times 2 \times 2$) factorial ANOVA was conducted twice, once with each satisfaction measure as the dependent variable; each with self-esteem (high/low), gender

(male/female), locus (internal/external), and social comparison information (upward/average) as the independent variables. Since the hypotheses dealt with main effects and first-order interactions (but not any higher level interactions), the sample size per cell was higher than 22 for each result reported below. This cell size gives a power value for large effect size of approximately 0.90.

Hypothesis 1, which predicted a main effect for social comparison information (SCI), whereby upward comparison will lead to lower satisfaction, was not supported for either type of satisfaction ($F(1,105)=1.634, p=.204$ for fitness satisfaction; $F(1,105)=.032, p=.858$ for attractiveness satisfaction).

Hypotheses 2a, which predicted a gender main effect, was supported for "fitness satisfaction" [$F(1,105)=6.19, p<0.05$] but not "attractiveness satisfaction." For "fitness satisfaction", as anticipated, females had a lower level of satisfaction than males. A significant Gender x SCI interaction was obtained for "attractiveness satisfaction" [$F(1,105)=4.89, p<0.05$], but not "fitness satisfaction." As anticipated in Hypothesis 2b, satisfaction level (i.e., "attractiveness satisfaction") for females was lower under upward comparison as compared to males [$t(51) = 2.69, p<0.01$] (see Figure 1).

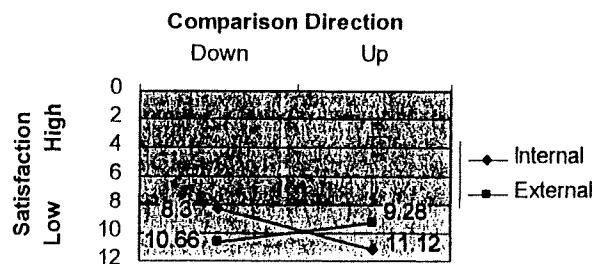
Figure 1
Gender by Direction of Comparison
Interaction on Attractiveness Satisfaction
 (Note: Low scale scores = high value)



Hypothesis 3a, which predicted a self-esteem x SCI interaction was not supported for either satisfaction measure. Hypothesis 3b, which suggested a self-esteem effect only for females and not males, was also not supported for both satisfaction measures. A strong self-esteem main effect was obtained for fitness satisfaction [$F(1,105)=10.03, p<0.005$] and attractiveness satisfaction [$F(1,105)=6.74, p<0.01$], where high self-esteem subjects reported higher satisfaction than those with low self-esteem.

A first-order, SCI x LOC, interaction was found for the fitness factor [$F(1,105)=4.43, p<0.038$] (see Figure 2), and a similar effect was noted, that approached significance, for the attractiveness factor [$F(1,105)=3.83, p=.053$] (see Figure 2). This effect was not as hypothesized in H4, however. Subjects with an internal LOC reported a traditional social comparison response, in accordance with the hypothesis, while those with an external LOC reported a reverse effect.

Figure 2
Locus of Control by Direction of Comparison
Interaction on Fitness Satisfaction



Hypotheses 5a and 5b concerned purchase intention. Using purchase intention (sum of two items) as the dependent variable, a 2 (high/low satisfaction) x 2 (internal/external LOC) factorial ANOVA was conducted for each of the fitness and

attractiveness satisfaction variables. Subjects were divided into high/low satisfaction on each of these variables based on median splits. Results for both hypotheses were not significant (Hypothesis 5a: $F(1,107)=1.435, p>0.1$; Hypothesis 5b: $F(1,107)=0.14, p>0.5$).

The lack of support for either of these hypotheses raised questions regarding the effectiveness of the ads. Did the ads really work if satisfaction level did not affect purchase intent? It is worth noting that the experiment produced different satisfaction effects for males and females - males expressed higher satisfaction after being exposed to the upward comparison, whereas females expressed lower satisfaction after exposure to upward comparison. The conflicting satisfaction effects for males and females, combined with lack of support for either 5a or 5b, led to some additional exploration. Could the ad have directly influenced purchase intent without satisfaction playing a role?

Additional Results

A further 2 (upward/downward comparison) x 2 (internal/external LOC) x 2 (gender) factorial ANOVA was also conducted with purchase intent as the dependent variable. A significant social comparison main effect [$F(1,105) = 10.37, p<0.005$] was observed, suggesting that in the upward comparison condition there was a higher purchase intent. Also, a second-order interaction, closely approaching significance [$F(1,106)=3.89, p=0.51$], was observed.

Separate 2 (up/down social comparison) x 2 (internal/external LOC) ANOVAs were conducted on male and female sub-samples. Males showed a significant SCI main effect [$F(1,56)=7.29, p<0.01$] where downward comparison resulted in a lower purchase, while females displayed a SCIxLOC interaction [$(1,48)=3.65, p<0.05$], where internal LOC subjects were more likely to purchase the product under upward comparison (see Figures 3a and 3b).

The results for the female sample suggest that those with internal LOC, who feel empowered and in control of their lives, are the ones who are likely to purchase a product in the light of upward

comparison information. It is worth noting that women were dissatisfied with their body-image after being exposed to upward comparison. These results clearly indicate that the effects of social comparison of body images are different for males and females, both with respect to body-image satisfaction as well as intent to purchase the product.

Figure 3a
Locus of Control by Direction of Comparison Interaction on Purchase Intent for Males

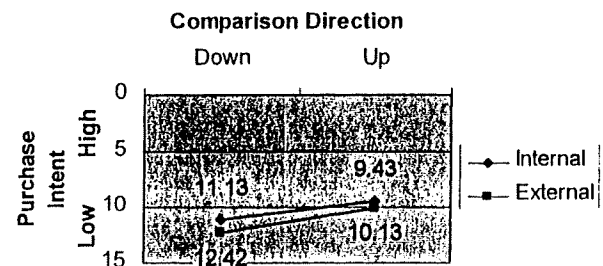
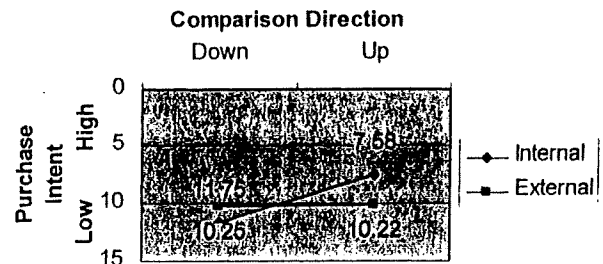


Figure 3b
Locus of Control by Direction of Comparison Interaction on Purchase Intent for Females



Relationships between some of the dependent measures, not hypothesized previously, were also explored. Pearson's correlation was computed using the measures from both phase 1 and phase 2 of the study. "Tendency to compare" and "fashion consciousness" were positively correlated ($r = 0.24$, $p < 0.005$), and so were "fashion consciousness" and "attractiveness satisfaction" ($r = 0.29$, $p < 0.005$). Interestingly, neither "tendency to compare" nor "fashion consciousness" was significantly correlated to "fitness satisfaction" ($r = -0.06$, and $r = 0.13$, respectively). Purchase intent was strongly correlated with "attractiveness satisfaction" ($r = 0.61$, $p < 0.001$) but not with fitness satisfaction, suggesting that the advertised product category (perfume) is seen as something that enhances one's appeal to others rather than improving one's fitness.

Self-esteem was correlated with both fitness satisfaction ($r = 0.34$, $p < 0.001$) and attractiveness satisfaction ($r = 0.32$, $p < 0.001$); thus, those with high self-esteem had higher satisfaction on both factors. Self-esteem had a marginal negative correlation with purchase intent ($r = -0.16$, $p < 0.10$), meaning that those with higher self-esteem are less likely to purchase image-enhancing products. And finally, LOC and self-esteem were correlated ($r = 0.29$, $p < 0.001$), implying that those with higher self-esteem were also likely to have internal LOC.

DISCUSSION

The results provide some insights into the social comparison effect. Advertising images that the subjects saw seemed to affect their body-image satisfaction. The results show gender differences as well as differences between the two LOC groups.

Gender

As suggested by the literature, females seemed to be more susceptible to social comparisons. However, interestingly, the gender main effect seemed to hold only for the "fitness satisfaction" and not for the "attractiveness satisfaction." This raises several questions. Why do females and

males differ on one of the satisfaction measures but not the other? The socialization process conditions young women to focus on body weight and shape, whereas there is far less pressure on young males to achieve an "ideal" body weight or shape (cf. Akande 1993). Also, as noted earlier, women seem more likely to engage in same-sex social comparisons of body shape than are men (Murray, Touyz and Buemont 1995). Women are known to be more body-focused than men (Beebe 1995). As a consequence, women seem to be less satisfied with their body shape (or "fitness satisfaction") than males are (cf. Furnham and Greaves 1994).

Interestingly, when males and females were asked to rate their perceived self-attractiveness, we did not find a significant difference. Thus, it seems that while women may feel less satisfied about their body shape and weight than are males, women do not perceive themselves to be any less attractive than males do.

The significant Gender x SCI interaction showed that women were more negatively affected by the upward comparison than males, as was predicted. Males, on the other hand, had an unexpected reverse reaction. They responded to the upward comparison by responding with a higher reported satisfaction. It has been found that although exposure to ideal images may activate appearance schema for men, it does not necessarily lower their body-image satisfaction (Hargreaves and Tiggemann 2002). It is possible that men and women have different cognitive schemas for body image comparison (Fisher 1995).

Further, the beauty standards for females, exemplified by the models featured in our upward comparison condition, is fairly well established in this culture (cf. Gustafson, Popovich and Thomsen 1999). However, the same is not true for men; even though a standard of beauty for men is emerging (cf. Neimark 1994), there is far less consensus on what constitutes good looks. This was borne out in the qualitative interviews we did earlier, and also in our pretests. Lastly, since women are more likely to engage in social comparisons of body-shape (Murray, Touyz and Beumont 1995), women are, perhaps, more

susceptible to social comparison influence.

Self-Esteem

Unlike some previous studies (e.g., Brenner and Cunningham 1992), ours did not find any differences in the self-esteem of males and females ($p > 0.25$). The main effect obtained for self-esteem was expected, whereby those with higher self-esteem felt more satisfied with their appearance/attractiveness. Contrary to our expectations, however, the self-esteem x gender interaction was not significant. The self-esteem x gender interaction was proposed based on evidence in the literature that self-esteem was linked to body image more so for women than men (Furnham and Greaves 1994). This could be interpreted to mean that men, irrespective of their self-esteem level, seem to place less emphasis on body image. Our results, however, suggest that young males with lower self-esteem are likely to have a lower body-image satisfaction level, just as young females do.

Locus of Control

As was expected, subjects with an internal LOC who were confronted with attractive ads reported lower satisfaction with their own appearance than those who saw the ads featuring average-looking models. External LOC subjects, on the other hand, showed a reverse effect, where upward comparison resulted in higher satisfaction than did downward comparison. Possibly, this was the result of making an unfavorable comparison of themselves to the model in the ad. According to Rotter's (1966) conception of LOC, those with an internal LOC are more likely to blame themselves when they fare badly and are also likely to take the credit when they succeed. When the internals were confronted with an upward comparison, they were presumably willing to accept that they were less attractive looking. On the other hand, when they were exposed to the average-looking comparison target, they saw themselves as better looking, hence the reported higher satisfaction. The external LOC subjects, on the other hand, reacted quite differently. The

exposure to the attractive ad tended to increase satisfaction with their own appearance. Based on Rotter's view of external LOC, one could argue that the external LOC subjects are likely to attribute other people's success (or good looks, in this case) to chance or luck. Such an attribution could potentially inoculate oneself from the negative effects of an adverse/upward social comparison (Venkat and Ogden 1995). In other words, when the cause of a failure or a deficiency is seen as internal, one is more likely to be dissatisfied than when the situation is attributed to luck.

Purchase Intent

LOC also had a key role in determining purchase intention for women, but not men. For men, there was a simple SCI main effect for purchase intent, where those exposed to upward comparison expressed a greater purchase intent than those exposed to a downward comparison. This is also consistent with the "beauty is good" stereotype (Dion et al. 1972). LOC did not have any effect on purchase intent. For women, as revealed in the additional results, the results were more complex with SCIXLOC interaction being significant. It is interesting that women who had an internal LOC (i.e., feel empowered and in control of their lives) had a greater inclination to buy the advertised product than those with an external LOC. Internal LOC women, when dissatisfied with their appearance (i.e., upward comparison condition), seem to be more willing to, presumably, take corrective action. External LOC women, on the other hand, do not seem to have higher purchase intent when dissatisfied (i.e., upward comparison condition). This effect may be connected to the fact that external LOC individuals sense that everything in life is due to chance or luck and that they can do nothing to change their present condition. Internal LOC individuals feel empowered, and when they are dissatisfied with something, they are willing to take corrective action.

Managerial Implications

The results support the general norm in advertising of using very attractive models. In this study, purchase intent was higher when attractive models were used. However, such a pattern was evident only for female subjects. Therefore, for products aimed at women, advertisers are likely to be successful when using attractive models.

Male subjects seemed to react adversely when exposed to pictures of attractive male models. In the case of males, the greater persuasiveness of the average-looking model is consistent with the similarity effect reported in advertising as well as social comparison studies (cf. Wood 1989). According to this effect, a similar person is more persuasive than a dissimilar person. A highly attractive fashion model may be perceived as dissimilar, whereas an average-looking person may be perceived to be similar to oneself. Advertisers may be more successful using average-looking models when appealing to a male audience.

This study found that body-image satisfaction is not a unidimensional construct. There are two distinct dimensions: fitness satisfaction and attractiveness satisfaction. While consumption of different products such as exercise machines and cosmetics may be related to one's body-image satisfaction, certain products are likely to affect fitness satisfaction and certain others attractiveness satisfaction. Exercise products and health products may be related to fitness satisfaction, while cosmetics and hair products are likely to be related to attractiveness satisfaction. While further study using multiple products is required to fully comprehend the differences between these two types of satisfaction, the results of this study suggest that different products may trigger a different type of satisfaction.

The results suggest that the use of attractive models in advertising is effective, the ads worked differently for men and women. When advertisers sell to men, using attractive models is likely to produce results. For women, attractive models (upward comparison), combined with their LOC, will determine their purchase intent. Advertisers may have to create different ads for internal LOCs

(who had higher purchase intent under upward comparison) and external LOCs (whose purchase intent did not vary by LOC level). For internal LOCs, featuring attractive models may by itself be a sufficient motivator, along with emphasis on self-fulfillment. External LOCs, who are likely to believe that they cannot change their present condition, may require an information-oriented approach to convince them that the product will work. Alternatively, advertisements focusing on external LOC consumers could portray social acceptance and social success. External LOC subjects do look for such external cues to guide their purchase decisions.

Last, but not least, businesses interested in pursuing ethical practices should also find the results of this study useful. Advertising using attractive models generally works with people of low self-esteem or external LOC. Often, these people are young, and their self-concept may not be fully developed. They may see physical attractiveness as a way to gain peer acceptance and popularity. Ethical marketers should examine the pros and cons of targeting such advertisements to such a vulnerable audience.

CONCLUSION

The results support the findings of previous studies (Kennedy and Martin 1993; Richins 1991) and also offer further insights into areas unexplored in the past. Satisfaction with one's body seems to consist of two factors: one dealing with body shape/weight, and the other dealing with perceived self-attractiveness. The results indicate that exposure to social comparison information (picture of a very attractive or average-looking person) can have different effects depending on whether one is measuring "fitness satisfaction" or "attractiveness satisfaction." Past studies have not made this distinction.

For both measures of satisfaction, the impact of social comparison information (picture of attractive or average-looking person) was dependent on other factors, such as gender and LOC. Clearly, female subjects seemed to be more affected by the comparison. Perceived control over one's life seems to define the response to the

stimuli. Those with internal LOC seemed to be less affected by the social comparison process. The role of individual difference variables such as LOC should be explored further.

Satisfaction has often conceptualized in the marketing literature in terms of expectation-disconfirmation or variations of such a model (e.g., Anderson and Sullivan 1993; Oliver 1993) and the focus has primarily been on product or service satisfaction. In this paper, we have explored the impact of social comparison in another domain of satisfaction, namely, body-image satisfaction. The findings of this study as well as other studies examining the social comparison – satisfaction link (e.g., Venkat and Ogden 1995), suggest that satisfaction judgments could be altered by social comparisons.

The findings of this study suggest several interesting avenues for future research. First, the differing impact of social comparison on the two types of satisfaction measures is interesting and should be examined further. Second, purchase intent was seen to vary across levels of LOC for women but not for men. It would be interesting to further explore why some people are influenced by advertising that promises beauty, while others seem less susceptible to such influence. Third, clearly LOC emerged as an important variable in this study and seemed to moderate satisfaction judgments as well as purchase intent. LOC deserves greater attention in this regard, perhaps using the Body Shape Belief locus scale developed by Furnham and Greaves (1994). Fourth, the cognitive processes triggered by the social comparison process also should be studied to further understand the process which leads to body-image satisfaction. Finally, from a managerial perspective, it would be interesting to see if different product types contribute to fitness versus attractiveness satisfaction. Testing with different product types will also increase the generalizability of the results. Advertising researchers have focused on end results (attitude, awareness, purchase intent etc.) and not sufficiently on the process through which advertising works. This study and the proposed research directions address this gap.

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Appendix A Independent Variables

Locus-of-Control Scale (R=reversed)

For each of the following pairs of statements, subjects were asked to choose either a or b, which best represented their feelings.

1. (R)
 - a. Many of the unhappy things in people's lives are partly due to bad luck.
 - b. People's misfortunes results from the mistakes they make.
 2.
 - a. In the long run, people get the respect they deserve in this world.
 - b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he/she tries.
 3. (R)
 - a. Without the right breaks, one can not be an effective leader.
 - b. Capable people who fail to become leaders have not taken advantage of their opportunities.
 4.
 - a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
 - b. Getting a good job depends mainly on being in the right place at the right time
 5.
 - a. The average citizen can have an influence on government decisions.
 - b. The world is run by a few people in power, and there is not much the average man or woman can do about it.
 6.
 - a. When I make plans, I am almost certain that I can make them work.
 - b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune.
 7.
 - a. In my case, getting what I want has little or nothing to do with luck.
 - b. Many times we might just as well decide what to do by flipping a coin.
 8.
 - a. Many times I feel that I have little influence over the things that happen to me in my life.
 - b. It is impossible for me to believe that chance or luck plays an important role in my life.
 9. (R)
 - a. As far as the world is concerned most of us are the victims of forces we can neither understand, not control.
-

b. By taking an active part in political and social affairs, people can control world events.

10. (R)

- a. Most people do not realize the extent to which their lives are controlled by accidental happenings.
- b. There really is no such thing as luck.

11. (R)

- a. It is hard to know whether or not a person really likes you.
- b. How many friends you have depends on how nice a person you are

12. (R)

- a. Sometimes I can not understand how teachers arrive at the grade they give.
- b. There is a direct connection between how hard I study and the grades I get.

Self-Esteem Scale

Subjects were asked to respond by choosing a number between "1" and "5", where 1 meant strong agreement with the statement on the left side and 5 meant strong agreement with the statement on the right side.

1. I am happy with myself most of the time -- I am often not happy with myself.
2. I like the kind of person I am -- I often wish I were someone else.
3. I feel I am a person of worth at least on an equal plane with others -- Sometimes I have doubts about my self-worth.
4. I am proud of myself -- Sometimes I feel I have little to be proud of.
5. Sometimes I do not do things that well -- I am able to do things as well as most others. (reverse)
6. Compared to others in my age group, I consider myself to be a very successful person -- Compared to others in my age group, I do not consider myself to be very successful.
7. When I answer questions in the class, I am very confident and self-assured -- When I answer questions in the class, I am often unsure and nervous.
8. I feel very comfortable when I am the team leader for group projects in my class -- I am not very comfortable in the role of a group leader.

Tendency to Compare Scale

Subjects were asked to respond by choosing a number between "1" and "5", where 1 meant strong agreement with the statement on the left side and 5 meant strong agreement with the statement on the right side.

1. When looking through magazines, I tend to compare my body to the bodies of the models in the ads -- I rarely compare my body to those of the models in ads.
2. I do not compare my height or weight that of models in ads -- I often compare my height and weight to those of models in ads.
3. I often compare my physical appearance with that of other people -- I do not compare my appearance with that of others.

Fashion Consciousness Scale

Subjects were asked to indicate their level of agreement on a five-point scale, where five (5) represented "strongly agree" and one (1) represented "strongly disagree."

1. Keeping up with the styles and fashions is very important to me.
 2. When out in public, I always try to look my best.
 3. I spend a lot of money on fashionable clothes.
 4. I spend a lot of money on products that improve my appearance.
 5. I am regular reader of lifestyle magazines (e.g., Female: Vogue, Cosmopolitan, Mirabella. Male: GQ, Men's Health).
 6. I actively engage in sporting or fitness activities.
 7. I watch my diet carefully.
 8. I regularly use diet products.
-
-

Appendix B
Dependent Variables

Seven-point scales were used for all of the dependent measures, where "7" represented "strongly agree" and "1" represented "strongly disagree" and "4" represented a neutral opinion with respect to the statement.

Manipulation Check Measures

1. All the models in the picture I saw are very good looking.
2. Each of the models I saw can be considered physically attractive.
3. Each of the models I saw in the mock ads would be attractive to the opposite sex.

Purchase Intent

1. If this product is marketed in this city, I would be interested in trying it.
2. If the product is in the acceptable price range, I would purchase a bottle.

Satisfaction

(F=fitness satisfaction, A=attractiveness satisfaction)

1. I am very content with my body weight. (F)
 2. I am very satisfied with my physical appearance. (F)
 3. I consider myself to be very attractive. (not used)
 4. I am often told that I am good looking. (A)
 5. I think I am good looking. (A)
 6. Members of the opposite sex find me attractive. (A)
 7. I feel I am sexy. (A)
 8. Physically, I am in good shape. (F)
-