The Role of Self in Third-Person Effects About Body Image

by Prabu David and Melissa A. Johnson

This study examines the perceived effect of idealized media images on self and classmates for three levels of outcome undesirability: perception of ideal body weight, effect on self-esteem, and likelihood of developing an eating disorder. A significant third-person effect was observed, which widened as the outcome increased in social undesirability. Those with high self-esteem exhibited stronger third-person effect than those with low self-esteem. The overall pattern of findings suggests that two related but distinct processes might be involved in the third-person effect: (a) a general process associated with self-esteem, which explains perceived effect of media both on self and others; and (b) a specific process tied to situational personal vulnerability, which explains perceived effect on self, but does not explain perceived effect on others.

The perception that others are more vulnerable to negative media effects than oneself is referred to as the third-person effect by communication scholars. Since Davison’s (1983) seminal article, the robustness of the third-person effect has been demonstrated across a broad range of media effects using both survey and experimental research methods (e.g., Cohen, Mutz, Price, & Gunther, 1988; Gunther, 1991, 1992, 1995; Gunther & Mundy, 1993; Gunther & Thorson, 1992; Lasorsa, 1989, 1992; Mason, 1995; McLeod, Eveland, & Nathanson, 1997; Mutz, 1989; Perloff, 1989; Salwen & Driscoll, 1997; Tiedge, Silverblatt, Havice, & Rosenfeld, 1991).

In a review article, Perloff (1993) suggested that, although the third-person effect is well documented in the literature, the cognitive processes underlying this phenomenon are not clear. Drawing from attribution theory (Heider, 1958; Nisbett & Ross, 1980), two competing explanations have been offered. The first explanation, termed self-serving bias, is based on the reasoning that downward comparison of others is motivated by the need to maintain or enhance self-esteem (Arkin, Appelman, & Burger, 1980; Gunther, 1991). Therefore, the self-serving bias is a...
motivational explanation (Tetlock & Levi, 1982). The alternative cognitive explanation of third-person effect is based on the idea that downward comparison of others is simply a specific instance of the social judgment bias (Nisbett & Ross, 1980; Tversky & Kahneman, 1974; Tyler & Cook, 1984). The cognitive bias explanation also involves the self, albeit indirectly, because it is believed that media effects on self are softened when they are filtered through self-schema, personal vulnerability, and other situational factors. We decided to focus on the role of self in third-person effects because the self is critical to both explanations.

In the work reported here, we first began by extending the third-person media effect to three undesirable body image outcomes: perceptual (influence of idealized media images on women’s perceptions of ideal body weight), psychological (influence on self-esteem), and behavioral (the likelihood that repeated exposure to idealized media images could lead to an eating disorder). Second, we examined the interaction between the respondent’s self-esteem and the third-person effect (TP effect) for these outcomes. Third, we evaluated the role of situational personal vulnerability, and its relationship to perceived effect on self and others.

**Primary Hypotheses**

To examine the role of self in third-person media effects, the primary hypothesis was derived from Davison’s (1983) basic finding.

H1: Perceived effect of media on others will be greater than perceived effect of media on oneself.

Moreover, it has been demonstrated that the gap between perceived effect on self and others widens as social distance between self and comparison group increases (e.g., Cohen et al., 1988; Gunther, 1991). To understand the relationship between TP effect and social distance, the perceived effect of the media was evaluated for three comparison groups: female classmates, other female students on campus, and U.S. women in general. For increments in social distance evaluated here, a linear trend has been found (e.g., Cohen et al., 1988). Perloff (1993) cautioned, however, that the relationship between TP effect and social distance could be complex. This led to the following hypothesis and research question:

H2: As social distance increases, perceived effect of media on others will increase.

RQ1: As social distance increases, is the third-person trend linear, or of a higher order?

**Idealized Media Images and Body Image Dissatisfaction Among Young Women**

The ubiquitous ultrathin ideal female body image presented as the norm in the media has drawn sharp criticism from academics, media critics, feminists, and even from women’s fashion magazines, which are partly responsible for perpetuating the highly unrealistic ideal (e.g., Cain, 1996; Hey, 1996; Ingrassia, 1995; Kilbourne, 1995). In addition to thinness, critics have argued that the tall, slender,
and yet curvaceous body type that is offered as the ideal in the media is relatively rare in the population (Kilbourne, 1995). This sets an impossible standard for many women.

The mismatch between the ideal media image and the actual body image could have serious consequences. At the simplest level, the mismatch could lead to body image dissatisfaction (Richins, 1991; Stice, Schupak-Neuberg, Shaw, & Stein, 1994), dissatisfaction with one’s attractiveness (Martin & Kennedy, 1993; Richins, 1991; Stormer & Thompson, 1996), and a drive for thinness (Harrison & Cantor, 1997). Body image dissatisfaction or physique anxiety could, in turn, hurt one’s self-esteem or self-concept (Lerner, Orlos, & Knapp, 1976) and lead to behavioral consequences, such as an eating disorder (Brownell & Fairburn, 1995; Thompson, 1995).

Researchers in public health and medicine have noted that, with other sociocultural factors, the media are responsible, in part, for the increase in body image dissatisfaction and eating disorders in Westernized countries (Agras & Kirkley, 1986; Akan & Grilo, 1995; Boskind-White, 1985; Mangweth, Pope, & Hudson, 1995; Schwartz, Thompson, & Johnson, 1985; Stice et al., 1994; Stormer & Thompson, 1996; Striegel-Moore, Silverstein, & Rodin, 1986; Wifley & Rodin, 1995; Zerbe, 1993).

In support of the arguments advanced by researchers in other fields, communication scholars have found some corroborating evidence suggesting that media effects can be tied to body image factors. For example, Myers and Biocca (1992) found that brief exposure to idealized media images led to elasticity in body image perceptions among college-age women. In a more recent study, Harrison and Cantor (1997) reported a significant correlation between media exposure and drive for thinness. In general, although there is some evidence that the media play a critical role in shaping women’s perceptions of body images, knowledge about the cognitive processes underlying body image media effects is only beginning to emerge.

In an effort to extend research in this area, we studied how various attributes of the self influence perceived effects of the media. The subject of body image is ideal for a theoretical investigation of third-person effects because the self is deeply intertwined with body image variables. In addition, by examining the degree of disassociation between the perceived effect of media on self and the perceived effect on others, we attempted to evaluate the unrealistic optimism associated with risky behavior, such as excessive dieting.

The study was limited to college-age women because health researchers have noted that this population is particularly vulnerable to body image pressures (Hesse-Biber, 1989; Pyle, Halvorson, Neuman, & Mitchell, 1986). Even if the preoccupation with weight among many college-age women does not meet the clinical definition of an eating disorder, the problem is insidious and deserves scrutiny. College-age men were not included in this study because eating disorders are relatively rare among males. Moreover, eating disorders among males are usually motivated by factors such as a drive to excel in sports. This is conceptually different than the drive for thinness among women that is imposed by sociocultural values of ideal body image (Hesse-Biber, Clayton-Matthews, & Downey, 1987). In summary, we evaluated the perceived impact of the media on three body image outcomes (perceptions of ideal body weight, impact on self-esteem, and eating disorder likelihood) among college-age women.
Interaction Between Undesirability of Body Image Outcome and TP Effect

One of the important criteria in eliciting the TP effect is the undesirability of the outcome. The third-person effect disappears or even reverses to a first-person effect when the outcome is socially desirable, such as prosocial behavior advocated in public service announcements (Gunther & Thorson, 1992), or making a smart choice by wearing seat belts or using suntan lotion (Gunther & Mundy, 1993). For the purposes of this study, however, our goal was to manipulate the degree of social undesirability of the outcome systematically.

First, media images could lead to distortions in one’s perception of ideal body weight. At the next level, media images could have an effect on psychological or attitudinal factors, such as self-esteem and physique anxiety. Finally, idealized media images could lead to highly undesirable behavioral consequences, such as an eating disorder.

Besides the hierarchy-of-effects categorization of the three outcomes, the degree of undesirability was driven by speculation about how these outcomes are treated in our culture. Because remarks such as “I should really watch my weight” are socially acceptable, ideal body weight was placed at the low end of the undesirability continuum. Eating disorder was placed at the high end because it is considered a social taboo with undesirable behavioral consequences, especially among college-age women. Effect on self-esteem, a psychological consequence, was operationalized as the middle level of the continuum because it is more serious than a perceptual outcome but less serious than a clear behavioral outcome. By drawing from earlier research (Gunther & Mundy, 1993; Weinstein, 1980), we predicted that the perceived effect of media on self will decrease as undesirability of the outcome increased.

H3: As degree of social undesirability of the outcome increases, perceived effect on self will decrease.

As noted earlier, the inverse relationship between social undesirability of the media effect and perceived impact of media on self can be explained as a self-preservation bias. It can also be explained as a cognitive bias related to impersonal impact (Tyler & Cook, 1984). Tyler and Cook found that, although perceived effect of media on self was sensitive to the base rate of occurrence of the outcome, perceived effect on others was not sensitive to the base rate information. This resulted in a widening of the TP gap. In short, both explanations suggest an increase in TP effect with an increase in social undesirability of the outcome.

H4: As degree of social undesirability of the outcome increases, the third-person effect will increase.

Role of Self-Esteem and Third-Person Effect for Body Image Factors

Before examining the role of self-esteem in explaining the TP effect, it might be beneficial to define self-esteem. In this study, the definitions of high and low self-
esteem were drawn from Fitch (1970). According to Fitch (1970), a person with high self-esteem is conceptualized as “liking or valuing himself, as well as seeing himself as competent in dealing with the world he perceives” (p. 311). The person with low self-esteem is “seen as disliking, devaluing himself, and in general perceiving himself as not competent to deal effectively with his environment” (p. 311). Fitch’s definitions succinctly capture the construct of self-esteem as defined by Rosenberg (1965).

Using these definitions, one can predict that those with high self-esteem would estimate a small effect of media on self. Conversely, those with low self-esteem would estimate a large effect of media on self. The relationship between self-esteem and perceived effect of media on others is less transparent. The tendency to compare oneself with others has been found to be greater among those with lower self-esteem, lower self-perception of attractiveness (Martin & Kennedy, 1993), and lower body satisfaction (Harris, 1995). How these comparisons translate into perceived effect of media on others is not very clear. One possibility is that those with low self-esteem consider themselves more vulnerable than others in a manner that is consistent with their self-esteem. The other possibility is that they consider themselves less vulnerable than others in an effort to enhance or maintain self-esteem.

In the absence of conclusive findings from previous studies, we hypothesized that the TP effect would be greater in the high self-esteem group than in the low self-esteem group. The next two hypotheses were based on the reasoning that those with low self-esteem are more vulnerable to negative media effects than those with high self-esteem, and that those with high self-esteem are likely to exhibit stronger downward comparison of others than those with low self-esteem.

H5: The perceived effect of media on self will be greater among those with low self-esteem than among those with high self-esteem.

H6: The third-person effect will be greater among those with high self-esteem than among those with low self-esteem.

Combining H4 and H6, we predicted that as social undesirability of the outcome increased, the TP gap would widen more for the high self-esteem group than it would for the low self-esteem group. Essentially, the next hypothesis can be captured as a three-way interaction among self-esteem, outcome undesirability, and TP effect.

H7: As degree of undesirability of the outcome increases, the third-person effect will be more pronounced for the high self-esteem group than for the low self-esteem group.

**Message Variables, Media Priming, and the Third-Person Effect**

The TP effect has been demonstrated for a variety of messages and message variables. A robust TP effect has been found for defamatory messages (Cohen et
al., 1988; Gunther, 1991), pornographic messages (Gunther, 1995; Thompson, Chaffee, & Oshagan, 1990), antipatriotic messages (Lasorsa, 1989), disaster news (Atwood, 1994), and persuasive advertising messages (Gunther & Thorson, 1992). The manipulative intent of the message, the credibility of the source, and the perceived undesirability of the media effect have been the common threads. Essentially, the TP effect surfaces when conceding to a message implies gullibility (e.g., being influenced by an advertisement) or social undesirability (e.g., being influenced by pornography). On the other hand, the TP effect disappears, or even reverses to a first-person effect, when the outcome advocated in the message is socially desirable (Gunther & Mundy, 1993; Gunther & Thorson, 1992).

Our goal was to examine whether media priming affects the TP effect. Priming was conceptualized using the spreading-activation theory of semantic processing (Collins & Loftus, 1975; Taylor & Fiske, 1978; Wyer & Srull, 1981). The spreading-activation model suggests that information is stored in memory as a network of ideas or concepts connected by links. Priming activates a specific area of the network, which then acts as a contextual framework or filter for incoming information. Therefore, we expected that priming would increase overall salience, which in turn would result in an increase in the perceived effect of media on self and others.

In addition to an overall increase in the perceived effect of the media, we expected a narrowing of the third-person gap for two reasons. First, we felt it was possible that the respondent would feel more vulnerable after watching an informational video with vivid images. Second, after hearing arguments on how other college-age women are affected by these images, perhaps the respondent would feel less inhibited to concede to a strong effect on self. Although a subtler priming manipulation would have had more ecological validity, in pilot tests it was hard to elicit a priming effect with weaker manipulations.

The prediction that priming would narrow the TP effect is contrary to a key finding in the literature (Tyler & Cook, 1984). Tyler and Cook found that media priming accentuated perceived effects on others but had little impact on perceived effects on self. This led to an exacerbation of the TP effect. They attributed the lack of perceived effect on self to at least three factors: lack of similarity between victims portrayed in the story and study participants, lack of dramatic and convincing evidence, and the low base rate of the suggested outcome. By using a stimulus and study design that were sensitive to the conditions highlighted by Tyler and Cook, we expected a priming effect on self and others, and a narrowing of the TP effect with priming.

RQ2: Will priming increase perceived effect of media on self and others, and will the third-person gap become smaller with increased salience?

Situational Personal Vulnerability, Self-Esteem, and the Third-Person Effect

When evaluating the perceived effect of ideal media images on self, it is important to consider the role of situational personal vulnerability factors. For example,
when evaluating perceived effect of media on body image factors, someone who is enrolled in a weight management program is situationally more vulnerable than someone who is naturally thin. Although situational personal vulnerability is clearly tied to self-schema and self-discrepancy (Higgins, 1987), it is different than self-esteem, which is an overall personality trait.

In this study we defined social physique anxiety (Hart, Leary, & Rejeski, 1989) as one of three indicators of situational personal vulnerability. Besides physique anxiety, two other situational personal vulnerability factors were included: physique monitoring (a self-reported behavioral measure) and the weight-to-height ratio. In contrast to self-esteem, an overall personality attribute, situational personal vulnerability factors were more closely tied to the media effect that was examined. Although self-esteem and situational personal vulnerability factors are theoretically independent, it is likely that they are negatively correlated. Here we focused on the conjoint role of self-esteem and situational personal vulnerability factors on third-person effects.

RQ3: What is the relationship between self-esteem, situational personal vulnerability factors, and perceived effect of media on self and others?

Method

Measures
The psychological constructs, self-esteem (Rosenberg, 1965) and social physique anxiety (Hart, Leary, & Rajeski, 1989), were measured using 10-item scales. Both scales have been tested for construct validity and are widely accepted. We introduced a 4-item scale to tap physique monitoring. On a scale of 1 (little attention) to 10 (close attention), study participants evaluated the attention they paid to their height, diet, physical appearance, and physical exercise. Weight-to-height ratio was calculated by dividing each participant’s weight (in pounds) by height (in inches).

To avoid confusion, it should be emphasized that we conceptualized self-esteem in two ways. First, self-esteem was evaluated as an explanatory mechanism for the self-serving or motivational bias in the TP effect, and was measured using Rosenberg’s (1965) self-esteem scale. Second, we also used self-esteem as one of the three levels of outcome undesirability, a dependent variable. To differentiate the two, the former is referred to as general self-esteem and the latter as perceived influence on self-esteem. The other two outcome undesirability measures were

1 Rosenberg’s (1965) self-esteem scale has 10 statements, which are rated on a 4-point scale ranging from 1 (strongly agree) to 4 (strongly disagree): I feel that I am a person of worth, at least on an equal plane with others; I feel that I have a number of good qualities; All in all, I am inclined to feel that I am a failure; I am able to do things as well as most other people; I feel I do not have much to be proud of; I take a positive attitude toward myself; On the whole, I am satisfied with myself; I wish I could have more respect for myself; I certainly feel useless at times; At times I think I am no good at all. The social physique anxiety scale also has 10 statements, which are rated on a 5-point scale ranging from 1 (not at all) to 5 (extremely). The scale is presented in Hart et al. (1989).
Subjects and Study Design

Female students in journalism and communication participated in the study for class credit. A total of 144 students were recruited from two U. S. universities, one in the Midwest, another in the South.

We began with a 2 x 2 between-subjects design, with two levels of priming (video, no video) and two levels of order of evaluation (effect of media on self first, effect of media on self last). Given the discussion in the literature on order effects (Gunther, 1995; Mason, 1995; Perloff, 1993; Price & Tewksbury, 1996; Tiedge et al., 1991), the order of evaluation of self and others was counterbalanced between subjects.

In addition to the between-subjects factors, two within-subject factors were evaluated. The first within-subject factor was outcome undesirability, a 3-level factor (influence of the media on ideal body weight, influence of the media on self-esteem, likelihood that media influence could lead to eating disorders). The second within-subject factor was social distance, which had four levels (effect of media on self, female classmates, other female students on campus, American women in general). A summary of the design and variables is presented in Figure 1.
Stimulus
The priming stimulus was a clip from a video titled *Slim Hopes*, featuring media critic Jean Kilbourne (1995). In this video, Kilbourne presents various renditions of the idealized female body found in the popular media and discusses the potential effects of these images on body weight, self-esteem, and eating disorders. The introductory segment was a music video set to the lyrics of “It’s Your Duty to Be Beautiful” and illustrated with a collage of idealized media images of fashion models. The musical introduction was followed by a lecture, with vivid media examples, delivered to a group of college students. The lecture was divided into topical segments. The students were shown the first four segments (Music Video, Introduction, Impossible Beauty, and the Waif Look), which lasted approximately 8 minutes.

The intended effect of the video prime was to heighten salience and draw students’ attention to the impossible standards of thinness and attractiveness portrayed in media images. The stimulus met the important criteria outlined by Tyler and Cook (1984) for eliciting perceived effect on self. The similarity criterion was clearly met because the lecture was directed toward college-age women, with relevant images and examples. The examples used in the video were vivid and dramatic. More important, Kilbourne presented data on the proportion of college-age women vulnerable to body image distortions, lowered self-esteem, and eating disorders.

Procedure
When students arrived, they were given the self-esteem and social physique anxiety scales. Then they were read the following instructions:

Now think about television programs such as *Baywatch*, the *Sports Illustrated Swimsuit Program*, or commercials for beer, cosmetics, underwear, body lotions, and other products that portray extremely attractive women, who are thin and have great bodies. Critics argue that such television programs and commercials set impossible standards for thinness and beauty, which distort women’s perceptions of their body weight and attractiveness. These distortions in turn can cause damage to self-esteem among women and in some cases create an obsession with thinness that could lead to eating disorders.

After the instructions, subjects were assigned to the video (prime) or no-video (no-prime) conditions. Those in the video condition were shown the stimulus tape. Then, students were given a questionnaire in which they evaluated the effect of the media on self and others for the three undesirable outcomes. Each

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2 Outcome undesirability and social distance were operationalized as follows: How much influence do you think these types of programs and commercials have on your perception of your ideal body weight? 0 (no influence at all) to 10 (very great influence); How confident are you of your above evaluation? 0 (not at all confident) to 10 (extremely confident). The questions were repeated for female classmates, other women on campus, and U.S. women in general. The same set of questions was rephrased to assess influence of idealized media images on self-esteem and likelihood of developing an eating disorder.
evaluation was followed by a confidence assessment. Those in the self-first condition began by evaluating media effect on self first and progressed outward to media effect on U.S. women. Those in the self-last condition began by evaluating media effects on U.S. women first, and progressed inward to media effects on self. Finally, students provided some demographic and physical information and filled out the physique monitoring scale.

Results

Average weight of the study participants was 137 lbs., average height was 5 ft. 6 in., and the average age was 22 years. Approximately 27% of the students said that at some time they were enrolled in a weight management program, such as Weight Watchers or Jenny Craig.

Primary Hypothesis: TP Effect and Social Distance

Given the complexity of the overall design, we decided to examine in detail only the difference between effect on self and the effect on classmates. Before dropping the other two levels (other women on campus and U.S. women in general), however, the main effect for social distance was tested using all four levels. Main effect for social distance was significant, $F(3, 402) = 37.79, p < .001,$ with an increase in perceived effect with distance. The characteristic third-person pattern was evident. To examine RQ1, trend analysis using polynomial contrasts was performed. The results were inconclusive, with significant linear trends, $F(1, 135) = 50.51, p < .001,$ and quadratic trends, $F(1, 135) = 24.65, p < .001.$ In sum, H1 and H2 were supported, although the order of the trend with social distance was inconclusive.

At this point, the analysis was narrowed to the difference between the perceived effect on self and classmates. Classmates were chosen over the other two groups because it was interesting to observe a TP effect for a comparison group that is very similar to the respondent. Moreover, the choice of the nearest group was conservative because TP effect widened with social distance.

Analysis

The data were analyzed using a 2 (high self-esteem, low self-esteem) x 2 (video, no video) x 2 (evaluating effect on self first, evaluating effect on self last) x 3

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3 To encourage deeper processing during evaluation, students were asked to estimate their confidence in their evaluations. The confidence data are not presented in this paper, but can be obtained from the authors.

4 Enrollment in a weight management program was not used as a control in the analysis of variance, but a related construct, physique monitoring, was used as a covariate in the regression analysis presented at the end of this section.

5 The ANOVA results from the overall 2 (high self-esteem, low self-esteem) x 2 (video, no video) x 2 (evaluating effect on self first, evaluating effect on self last) x 3 (influence on ideal body weight, self-esteem, eating disorder) x 4 (effect on self, effect on female classmates, effect on other female students on campus, effect on U.S. women in general) mixed design can be obtained from the authors.
Self in Third-Person Effects

(media influence on ideal body weight, self-esteem, eating disorder likelihood) x 2 (effect on self, effect on female classmates) mixed design. The first three factors (general self-esteem, video priming, and order of evaluation) were between-subjects factors, whereas undesirability of the outcome and the third-person effect were within-subjects factors.

Students were assigned to high and low general self-esteem groups based on a median split (\(Mdn = 3.30, M = 3.23, SD = 0.45\)) of the self-esteem score, which was obtained by reverse coding some questions and summing all items on the self-esteem scale. All items were significantly correlated (Cronbach’s \(\alpha = .84\)). Following the median split, general self-esteem in the high (\(M = 3.64, SD = 0.20\)) and low (\(M = 2.92, SD = 0.32\)) groups were significantly different, \(t(141) = 15.80, p < .001\).

Main effects for four out of the five experimental factors were significant: question order, \(F(1, 135) = 13.48, p < .001\); general self-esteem, \(F(1, 135) = 22.46, p < .001\); outcome undesirability, \(F(2, 270) = 84.77, p < .001\); and TP effect, \(F(1, 135) = 92.05, p < .001\). The main effect for video was not significant.

There were four significant 2-way interactions: General self-esteem x TP effect, \(F(1, 135) = 40.21, p < .01\); Outcome undesirability x TP effect, \(F(2, 270) = 60.45, p < .001\); Outcome undesirability x Video, \(F(2, 270) = 4.13, p < .05\); and Outcome undesirability x Question order, \(F(2, 270) = 3.84, p < .05\). There was one significant 3-way interaction: Outcome undesirability x TP effect x Question order, \(F(2, 270) = 9.10, p < .001\). None of the other higher order interactions was significant. A summary of means is presented in Table 1.

### Interaction Between Outcome Undesirability and Third-Person Effect

As undesirability of the outcome increased from ideal body weight to eating disorders, perceived effect of media on self fell sharply (from 6.83 to 3.40). In contrast, the corresponding drop for perceived effect on classmates was from 7.35 to 6.42. When the TP effect was evaluated for all three outcomes, the difference between effect on self and effect on classmates was significantly different at \(p < .05\). Whereas the TP gap was 0.52 for effect on ideal body weight, it was 1.07 for the effect on self-esteem, and was a dramatic 3.02 for the effect on eating disorder likelihood. Mean comparisons confirmed that the TP gap was significantly wider for higher levels of undesirability at \(p < .05\). See Table 1. Therefore, H3 and H4 were supported.

The interaction between outcome undesirability and the TP effect was telling when the data were analyzed by grouping respondents into two categories: those who rated effect on self less than effect on classmates, and those who rated effect on self equal to or greater than effect on classmates. Whereas only 49.3% of the respondents displayed a TP effect for body weight, the proportion was 63.1% for perceived effect on self-esteem, and 80.6% for eating disorder likelihood. The distribution of respondents in the self-esteem (low, high) x TP effect (self ≥ classmates, self < classmates) cells was tested using \(\chi^2\) analysis. Separate tests were run for each outcome undesirability level. A significant effect was found for perceived effect on self-esteem, \(\chi^2(1, N = 142) = 5.44, p < .05\), and for eating disorder likelihood, \(\chi^2(1, N = 142) = 4.59, p < .05\).
General Self-Esteem and Third-Person Effect
In support of H5, the perceived effect of media on self was consistently higher for the low self-esteem group than for the high self-esteem group (see Table 1 and Figure 2). As predicted in H6, the interaction between general self-esteem and TP gap was significant, with a wider TP gap for the high self-esteem group than for the low self-esteem group. However, the three-way interaction among general self-esteem, undesirability of the outcome, and TP effect was not significant. Therefore, H7 was rejected.

Media Priming and Third-Person Effect
The statistically significant interaction between video and undesirability of outcome was not examined, because there was no straightforward explanation. The absence of a main effect for video priming, however, was troubling. The effect of media priming was reexamined after accounting for individual differences. The results of this analysis are presented later.

Question Order and Third-Person Effect
The significant main effect for question order offered some insights. When self was evaluated first, perceived effect on self and others was consistently lower than when self was evaluated last. Although question order moved the anchor, for two of the three outcomes it did not actually change the size of the TP effect (see Table 1 and Figure 3). Interestingly, question order did interact with TP effect for

### Table 1. Perceived Effect of Media on Self and Classmates as a Function of Undesirability of the Outcome, Media Priming, Question Order, and General Self-Esteem

<table>
<thead>
<tr>
<th>Priming</th>
<th>Question Order</th>
<th>Self-Esteem Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall</td>
<td>No video</td>
</tr>
<tr>
<td></td>
<td>n = 144</td>
<td>n = 72</td>
</tr>
<tr>
<td>Ideal body weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>6.83</td>
<td>7.04</td>
</tr>
<tr>
<td>Classmates</td>
<td>7.35</td>
<td>7.31</td>
</tr>
<tr>
<td>TP effect</td>
<td>0.52</td>
<td>0.26 rs</td>
</tr>
<tr>
<td>Self-esteem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>5.73</td>
<td>5.50</td>
</tr>
<tr>
<td>Classmates</td>
<td>6.80</td>
<td>6.46</td>
</tr>
<tr>
<td>TP effect</td>
<td>1.07</td>
<td>0.96</td>
</tr>
<tr>
<td>Eating disorder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>3.40</td>
<td>3.03</td>
</tr>
<tr>
<td>Classmates</td>
<td>6.42</td>
<td>6.06</td>
</tr>
<tr>
<td>TP effect</td>
<td>3.03</td>
<td>3.03</td>
</tr>
</tbody>
</table>

Note. Ideal body weight, self-esteem, and eating disorder are the levels of outcome undesirability. TP effect = Third-person effect (effect on classmates less effect on self). TP effect was significant in all cells at $p < .05$, except the ones with subscript rs.
eating disorder, leading to a three-way interaction among question order, outcome undesirability, and TP effect. For the eating disorder outcome, when effect on self was estimated first, the size of the TP effect was 2.31. It was 3.73 when effect on self was evaluated last.

**Situational Personal Vulnerability, Self-Esteem, Media Priming, and Third-Person Effect**

The three measures of situational personal vulnerability (social physique anxiety, physique monitoring, and weight-to-height ratio) were examined next. The correlations among the 10 items in the physique anxiety scale were quite high ($\alpha = .94$), as were the correlations among the four items in the physique monitoring scale ($\alpha = .81$). Summary scores for physique anxiety ($M = 2.58$, $SD = 0.91$) and physique monitoring ($M = 6.77$, $SD = 1.98$) were obtained by summing the items in each scale. The weight-to-height ratio was determined by dividing the weight (in pounds) by height (in inches) ($M = 2.10$, $SD = 0.40$). As expected, general self-esteem was negatively correlated with physique anxiety ($r = -.49$) and with physique monitoring ($r = -.19$). Physique anxiety and physique monitoring were positively correlated ($r = .29$). Weight-to-height ratio was positively correlated with physique anxiety ($r = .27$), but not with general self-esteem or physique monitoring. Reported correlations were significant at $p < .05$.

In the next phase of the analysis, perceived effect of media on self was predicted by entering general self-esteem and the three situational personal vulnerability factors (social physique anxiety, physique monitoring, and weight-to-height ratio) in one step. Separate regressions were run for each of the three undesirable outcomes. For all three outcomes, physique anxiety and physique monitoring emerged as positively correlated predictors of media effect on self. General self-
esteem emerged as a negatively correlated predictor of effect on self, although the beta was not statistically significant for the ideal body weight outcome (see Table 2).

Using the same predictors, we then switched to media effect on classmates as the dependent variable. When predicting media effects on classmates, general self-esteem emerged as a significant predictor for two of the three outcomes. The beta for self-esteem was not significant for the ideal body weight outcome. Physique anxiety and physique monitoring were not significant predictors of media effect on classmates, although they were significant predictors of media effect on self.

In the final step of the regression analysis, after factoring out the effect of general self-esteem and the situational personal vulnerability factors, the impact of video priming on perceived effect of media on self and classmates was estimated. In essence, the four variables introduced in the first step were treated as covariates. Our decision to focus on video was driven by the absence of a main effect for video priming in the ANOVAs. Moreover, all the other factors from the experimental design were incorporated in the regression analysis. Self-esteem was introduced as a covariate. Outcome undesirability and TP effect were addressed through separate regression equations, and the order of presentation of the questions was treated as a methodological precaution.

When video was entered as a dummy variable in the regression equations, the effect of video priming was significant for perceived effect on self and others in

6 The absence of an effect of general self-esteem on the ideal body weight outcome might be related to the low level of social undesirability associated with this outcome. Given the current cultural environment and emphasis on weight control, it is possible that students did not recognize the concession to media effect on self as a threat to general self-esteem. Moreover, because the study participants were from journalism, they could have exhibited a social desirability bias in conceding to a small media effect on self so as not to seem arrogant or uninformed about the literature on media effects.
two of the three outcomes (self-esteem and eating disorder). There was no effect of video priming for the ideal body weight outcome.

In summary, several interesting findings emerged from this phase of the analysis. Although the findings were not as clear for media impact on ideal body weight, the findings were generally directional. Therefore, the results are discussed in general terms, across all three levels of outcome undesirability. Respondents’ general self-esteem and two of the three situational personal vulnerability factors were significant predictors of media impact on self. In contrast, none of the situational personal vulnerability factors added much to the prediction of perceived effect on others, after accounting for the respondents’ general self-esteem. Finally, although the main effect for priming was not significant in the analysis of variance, a statistically significant priming effect was evident for perceived effect on self and classmates after controlling for self-esteem and other situational personal vulnerability variables.

### Discussion

When college-age women were asked to evaluate the effect of media on three socially undesirable body image outcomes, a robust third-person effect was ob-
served. There was a widening of the TP gap with social distance. We examined in detail the relationships between the various experimental factors and the perceived effect of media on self and classmates. The findings are discussed below.

Scale Dynamics: Social Undesirability, Question Order, and the Third-Person Effect

As the undesirability of the outcome increased from perceptual (perception of ideal body weight) to psychological (effect on self-esteem) to behavioral (likelihood to lead to an eating disorder), perceived effect of media on self and others decreased. The more interesting result was the widening of the third-person gap with outcome undesirability. As the social undesirability of the outcome increased, there was a sharp decline in perceived effect on self, but only a modest decline in perceived effect on classmates.

The order in which the respondents rated the effect of media on self and others also had a significant effect. The effect of question order can be interpreted as an anchoring bias (Tversky & Kahneman, 1974) and a subtler manifestation of the TP effect. Because media influence on others is generally perceived to be greater than effect on self, when asked about others first, the respondent begins with a high rating. Using this high anchor, the respondent marks down the media effect on self. The opposite pattern is true when effect on self is evaluated first. Here the respondent starts with a low anchor for effect on self, and, based on this low initial anchor, moderates the effect of media on others.

Although the role of question order might not be discernible for low undesirability outcomes, it plays an important role in high undesirability outcomes. For example, when evaluating media effects leading to an eating disorder, the effect of question order was more pronounced. This may have been due to the apparent tension between impersonal-impact and self-serving bias.

In keeping with the impersonal-impact hypothesis, even for a highly undesirable outcome, such as an eating disorder, with a relatively low likelihood of occurrence, the respondent starts out with a high rating for effect on others. When stepping down from this high anchor by making proportional cuts with social distance, the respondent suddenly finds herself in a position of having to admit to a large effect on self for a highly undesirable outcome. At this point, the respondent is forced to make a sharp reduction to make the perceived effect on self reflect what one actually believes. When asked to estimate the perceived effect of media on self first, the respondent admits only to a small effect on self for the highly undesirable outcome. Using the small effect on self as the initial anchor, the subject projects only a moderate effect on others. Perhaps this is because it defies logic to expect the media to have an enormous impact on a very serious outcome.

For less undesirable outcomes, the step down from effect on classmates to self is not too drastic, because one is willing to concede a moderate effect of the media on self. In the case of ideal body weight and self-esteem, although there was no significant difference in the TP gap with question order, the data were quite clear in that all the ratings moved down the scale when effect on self was evaluated first. We urge other researchers to examine the role of question order in TP effects, especially when dealing with socially undesirable outcomes.
Self in Third-Person Effects

Self-Esteem and the Third-Person Effect
Because self-serving bias is one of the common motivational explanations offered for the TP effect, we examined the difference in TP effect between those with high and low self-esteem. First, those with low self-esteem perceived a greater effect of media on self and others than did those with high self-esteem. Second, the third-person gap was wider for the high self-esteem group than for the low self-esteem group. Third, when outcome undesirability was low (ideal body weight), there was no evidence of a TP effect in the low self-esteem group, but for higher levels of outcome undesirability (effect on self-esteem and eating disorder likelihood), the TP effect was evident for the low self-esteem group. For the high self-esteem group, TP effect was significant for all three outcomes. Fourth, the predicted three-way interaction among TP effect, self-esteem, and outcome undesirability was not significant.

It appears that the TP phenomenon can be traced in both the high and low self-esteem groups, although the effect is more pronounced in the high self-esteem group. One interpretation of the data is that people with high self-esteem are highly motivated to preserve their self-esteem and have more to lose by conceding a large effect on self. People with low esteem, on the other hand, have little to lose by conceding comparable media effects on self and classmates, especially for a low undesirability outcome (ideal body weight).

Clearly, there was no evidence of a reversal of the TP effect in the low self-esteem group. One limitation of this study was the median split that we used to assign respondents to the low and high self-esteem groups. Instead of using the median split, if those with very low self-esteem had been examined separately, there might have been a reversal of the TP effect. Because we had a small sample, the very low self-esteem group was not analyzed separately.

The interaction between self-esteem and the TP effect observed in this study provides associational evidence, but does not establish any causality between self-esteem and the TP effect. Although the introduction of self-esteem in this study extends previous research on the TP effect, future research could attempt to isolate the role of self-enhancement by experimentally manipulating self-esteem. Attribution theorists have been successful with this approach (Arkin, Appelman, & Burger, 1980; Fitch, 1970), although they have not been able to clearly pinpoint self-enhancement as the motivational cause.

Self-Esteem, Situational Personal Vulnerability, and Perceived Effect on Self and Others
Finally, situational personal vulnerability variables yielded some significant findings. It was a conscious decision to differentiate general self-esteem, which is an overall personality trait, and situationally relevant personal vulnerability factors, such as physique anxiety, physique monitoring, and weight-to-height ratio. The relationship between general self-esteem and the TP effect was confirmed in the regression analysis. Self-esteem was negatively correlated with perceived effect on both self and classmates. On the other hand, after controlling for general self-esteem, situational personal vulnerability factors were positively correlated with perceived effect on self, but did not add to the prediction of perceived effect on classmates.
The pattern of results from the regression analysis suggests that two distinct but related processes might be at play when evaluating perceived effect on self and others. At one level, a general individual trait, such as self-esteem, appeared to mediate the perceived effect of the media on self and others. Presumably, the role of self-esteem was heightened when there was a serious threat to self in the form of a highly undesirable outcome. When the undesirability of the outcome was not serious, as in ideal body weight, the role of general self-esteem diminished.

In addition to general self-esteem, a specific, situationally bound personal vulnerability process appears to be involved. These situational personal vulnerability factors, which were significant predictors of perceived effect on self, did not contribute to the prediction of perceived effect on others, after taking into account the explanatory role of general self-esteem. Self-esteem and situational personal vulnerability, taken together, offer an interesting dynamic that might help explain the TP effect. Whereas self-esteem can be associated better with the motivational component of the third-person bias, the personal vulnerability factors align themselves more closely to the cognitive bias component.

**Implications for Research on Body Image Perceptions**

Besides advancing research on the TP effect, the findings have implications for studying media effects on body image perceptions. As the outcomes moved up the effects hierarchy, from perceptual (perception of ideal body weight) to psychological (effect on self-esteem) to behavioral (likelihood of leading to an eating disorder), students tended to differentiate more between social and personal risk. For researchers interested in communicating the health risks of excessive dieting, it might be important to take into account the distinctions between personal and social risk that are entrenched in the audience. Especially for highly undesirable outcomes, it is possible that an information campaign that is very effective in increasing the salience of a particular issue at the aggregate social level could have little consequence at the individual level. Therefore, despite some criticism that the media reduce social health problems into individual dramas, personalizing messages might be effective in communicating personal risk. The results from this study highlight the importance of a two-tiered campaign that clearly addresses both social and individual risks.

Perhaps the undesirability of the outcome or the taboo associated with eating disorders deterred students from admitting to a large media effect on self. To communicate more effectively, it might be necessary first to penetrate the taboo or social undesirability associated with highly undesirable issues. For example, it appears that students automatically applied a narrow and extreme definition of eating disorder. Efforts focused on moving the definition away from its clinical roots, and redefining an eating disorder to include excessive concern about diet and weight control, might be a step in the right direction.

The findings also reinforce the importance of psychological constructs, such as general self-esteem, social physique anxiety, and physique monitoring, to the study of media effects on body image factors in college-age women. A better understanding of these psychological risk factors might help communicators design more effective health messages.
Limitations and Directions for Research

As with any experiment involving university students, one of the limitations of this study was the sample. It was drawn from a population that included only college-age women. However, the choice of college-age women was based on findings that this population is at high risk for eating disorders. Another limitation was the use of a convenience sample that was not drawn randomly. The study should be replicated with a random sample drawn from the overall population to enhance the credibility of the results. It should be emphasized that the tradeoff in external validity was compensated by rich and exhaustive data collection, which would be both expensive and challenging to replicate with a real-world population.

The role of media priming deserves further attention. One of the reasons for the weak priming effect could be the instructions used in the no-prime condition. In this study, subjects in both the prime (video) and no-prime (no-video) conditions were instructed that, according to critics, there is a strong media effect on body image factors. With more subtle instructions in the no-prime condition, we could have established a lower baseline, thereby indirectly heightening the priming effects in the video condition.

Future researchers can examine the relationship between media consumption patterns and perceived health risks on self and others. It would be interesting to see if exposure to a certain genre of programming exacerbates the TP effect. Although a strong correlation between self-esteem and TP effect was demonstrated, differential effects of a self-esteem manipulation on TP effect will be more rigorous. Moreover, a path model identifying the relationship among self-esteem, personal vulnerability factors, and perceived effect on self and others might advance research in this area.

Conclusions

The purpose of this study was to examine the role of third-person effect on body image perceptions among college-age women. We examined the perceived effect of idealized media images on self and classmates for three outcomes with different degrees of undesirability: effect on ideal body weight, effect on self-esteem, and effect on likelihood to lead to an eating disorder. For all three outcomes, a significant TP effect was observed, and the third-person gap widened with undesirability. The third-person gap was wider among those with high self-esteem than among those with low self-esteem. The order in which the perceived effect on self and others was evaluated also had an effect, especially for the highly undesirable eating-disorder outcome.

This study adds to the existing body of research on third-person media effects for socially desirable outcomes. The findings suggest that there might be a continuum of media effects along which TP effect varies with the social undesirability of the outcome. For three outcomes on the undesirability continuum, the role of self-esteem and situational personal vulnerability factors were examined using regression analysis. Findings suggest that two distinct but related processes might be involved in the TP effect. One is a general process associated with self-esteem, which explained perceived effect of media on both self and others. The other
process related to situational personal vulnerability explained perceived effect of media on self, but did not explain perceived media effects on others.

References


