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*Pers Soc Psychol Bull* 2007; 33; 490 originally published online Mar 15, 2007;

DOI: 10.1177/0146167206296301

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# Appearance-Based Rejection Sensitivity: Implications for Mental and Physical Health, Affect, and Motivation

**Lora E. Park**

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*Appearance-Based Rejection Sensitivity (Appearance-RS) is a personality-processing system characterized by anxious concerns and expectations about being rejected based on one's physical attractiveness. People differ in their sensitivity to rejection based on appearance, with consequences for mental and physical health, self-esteem, affect, and feelings of belonging. Study 1 describes the development and validation of the Appearance-RS scale, its relation to personality variables and to health-related outcomes. Study 2 provides experimental evidence that high Appearance-RS people feel more alone and rejected when asked to think about negative aspects of their appearance. Finally, Study 3 tests ways to reduce the negative effects of receiving an appearance threat among high Appearance-RS participants. Specifically, high Appearance-RS participants who engaged in self-affirmation (thought of their personal strengths) or received a secure attachment prime (thought of a close, caring relationship) were buffered from the negative effects of an appearance threat on subsequent state self-esteem and mood.*

**Keywords:** *appearance; attractiveness; rejection; self-esteem; motivation*

Physical attractiveness is a powerful predictor of self-esteem and interpersonal attraction. Physically attractive people tend to have higher self-esteem, are liked more, and are perceived by others to be more interesting, socially skilled, and successful than those who are physically unattractive (Dion, Berscheid, & Walster, 1972; Eagly, Ashmore, Makhijani, & Longo, 1991; Langlois et al., 2000; Snyder, Tanke, & Berscheid, 1977). Given the central role that physical attractiveness plays in

everyday life, it is not surprising that many people invest a great deal of time, energy, and resources into looking attractive. But what is it about physical attractiveness that makes it so captivating and motivating?

For some people, appearance is motivating because it is a basis of self-esteem—an Appearance Contingency of Self-Worth (CSW; Crocker, Luhtanen, Cooper, & Bouvrette, 2003). From this perspective, people are concerned about their appearance because feeling attractive boosts self-esteem and feeling unattractive diminishes self-esteem. Concerns about self-esteem, however, may not be the only reason people care about their appearance. A more interpersonal explanation is that people possess anxious expectations of being rejected by others based on their appearance, or Appearance-Based Rejection Sensitivity (Appearance-RS). Individuals vary in their sensitivity to appearance-based rejection, with implications for mental and physical health, feelings of rejection, self-esteem, affect, and motivation. The purpose of the present research was to develop and validate a measure of Appearance-RS, to examine its associations with other personality variables, and to document its unique effects on health-related outcomes and feelings of loneliness and rejection following appearance-based threats

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**Author's Note:** I thank Erin McCarthy, Nee Phichit, Steve Ram, Kristina Russell, and Jeff Thomas for their assistance with data collection. I also am grateful to Geraldine Downey, Amy Kiefer, Sandra Murray, and Kathleen Vohs for their helpful comments on an earlier draft and to Brady West for statistical advice. Please address correspondence to Lora Park at University at Buffalo, State University of New York, Park Hall, Buffalo, NY 14260; e-mail: lorapark@buffalo.edu.

*PSPB*, Vol. 33 No. 4, April 2007 490-504

DOI: 10.1177/0146167206296301

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(Studies 1 and 2). The present research also examined ways to attenuate the negative effects of experiencing appearance threats among high Appearance-RS participants by using self-affirmation and secure attachment priming—two strategies that have been used in past research to reduce negative effects of self-threat on state self-esteem and mood (Study 3). Throughout, I examined whether Appearance-RS uniquely predicted the outcomes of interest or whether other constructs, such as Appearance CSW, predicted the outcomes.<sup>1</sup>

### APPEARANCE-RS: THE CONSTRUCT

Appearance-RS is conceptualized as a dispositional personality processing system characterized by anxious concerns and expectations about being rejected based on one's physical appearance. Anxious concerns represent the affective (or "hot") component, and expectations represent the cognitive (or "cold") component of this dynamic processing model (Metcalf & Mischel, 1999). Together, anxious expectations of rejection represent hot cognitions, with anxiety amplifying the effects of cognitions on subsequent thoughts, feelings, and behavior.

Appearance-RS is modeled after Downey and Feldman's (1996) more general construct of personal Rejection Sensitivity (personal-RS): the tendency to anxiously expect, readily perceive, and overreact to rejection. In Downey and colleagues' research, personal-RS is conceptualized as anxious expectations about rejection across a variety of situations in which participants are asked to imagine themselves making requests of others, such as family members, friends, and romantic partners. For each situation, participants indicate their anxiety and concern about each outcome and their expectations of rejection. Whereas personal-RS assesses people's sensitivity to rejection in general, Appearance-RS is a specific application of this construct, assessing sensitivity to rejection based on one's physical attractiveness.

### APPEARANCE-RS AND RELATED CONSTRUCTS

A large body of research has documented the effects of physical attractiveness among children, adolescents, and adults. These findings provide suggestive evidence for predicted links among Appearance-RS and related constructs, most notably insecure attachment styles, low self-rated attractiveness, personal-RS, low trait self-esteem, basing self-esteem on appearance (Appearance CSW), and neuroticism.

*Insecure attachment styles and socialization experiences.* According to Bowlby (1969), early interactions

with caregivers influence the quality of child-caregiver attachment, providing a relational template for interacting with others throughout life. People with a secure attachment style are likely to have had consistent, positive interactions with their caregivers, leading them to feel safe and worthy of others' love and care. In contrast, people with insecure attachment styles (i.e., preoccupied, fearful) are likely to have had inconsistent, rejecting experiences with caregivers who did not instill feelings of security (Levy, Blatt, & Shaver, 1998).

Of relevance to the present research, the attractiveness of infants has been shown to affect caregivers' responsiveness. Specifically, research by Langlois and colleagues showed that attractive newborn infants were rated more positively and received more affection, attention, and care from their mothers than infants who were less attractive (Langlois, Ritter, Casey, & Sawin, 1995; Ritter, Casey, & Langlois, 1991). Children who develop an insecure attachment with their caregivers may eventually come to attribute their insecurity to specific aspects of themselves, such as feeling unattractive. Indeed, research has shown that insecurity of attachment is related to basing self-worth on appearance (Park, Crocker, & Mickelson, 2004). Thus, having an insecure attachment style may later manifest as other indices of insecurity, such as low self-esteem, Appearance CSW, and anxious expectations of rejection based on appearance.

**L**ow self-rated attractiveness. According to Cooley's (1902) looking-glass self, people learn through social interactions to distinguish the self from others and to see the self as reflected in the eyes of others. Extending these ideas to appearance, people's perceptions of their own attractiveness are likely to reflect how attractive they think they are in the eyes of others, rather than objective levels of attractiveness. Indeed, Park and Pelham (2006) found that college students' self-ratings of attractiveness were significantly correlated with their perceptions of how they thought others would rate their attractiveness ( $r = .88, p < .001, N = 73$ ); however, objective ratings of attractiveness were not significantly correlated with self-ratings of attractiveness ( $r = -.15, p > .22, N = 71$ ). In sum, because people who feel unattractive also think they are unattractive in the eyes of others, perceiving oneself as unattractive should be associated with greater sensitivity to rejection based on appearance, whereas perceiving oneself as attractive should be associated with less Appearance-RS.

*Personal-RS and Appearance-RS.* Negative social experiences, such as harsh disciplining; conditional love by parents; and experiences of neglect, abuse, and abandonment have all been linked to greater personal-RS in adulthood (Feldman & Downey, 1994). Whereas personal-RS has been shown to develop from a variety of rejection

experiences, Appearance-RS is likely to develop from rejection based specifically on attractiveness. Although the social development of Appearance-RS was not assessed in the present research, I expected Appearance-RS to be positively related to personal-RS because of its overall similarity in developmental precursors. However, whereas personal-RS reflects sensitivity to rejection in general, Appearance-RS reflects sensitivity to rejection based specifically on one's attractiveness.

*Low self-esteem.* Research has shown that physically unattractive people have lower self-esteem than those who are attractive (Harter, 1993). Furthermore, people with low self-esteem doubt their worth and are highly concerned about acceptance versus rejection (Baldwin & Sinclair, 1996; Leary & Baumeister, 2000). Similarly, high Appearance-RS people are very concerned about being rejected based on their appearance and are likely to doubt their worth, especially when they feel unattractive. Because attractive people are perceived favorably and experience positive interactions with others, such experiences are likely to contribute to high self-esteem. Furthermore, people with insecure attachment styles tend to have low self-esteem, consistent with their negative model of self (Bartholomew, 1990). Thus, extant evidence suggests that Appearance-RS should be related to low self-esteem.

*Appearance CSW.* In addition to studying whether self-esteem is high or low, researchers in recent years have begun examining more nuanced aspects of self-esteem, such as the domains on which people base their self-worth, or contingencies of self-worth (Crocker et al., 2003; Crocker & Wolfe, 2001). Individuals differ in their bases of self-worth and are motivated to protect and enhance their self-esteem in domains of contingency (Crocker & Park, 2004; Crocker, Sommers, & Luhtanen, 2002; Park & Crocker, 2005). These findings suggest that people who are sensitive to rejection based on their appearance also are likely to invest their self-esteem in appearance.

Although Appearance-RS and Appearance CSW both reflect concerns about appearance, the core of Appearance-RS is concerns about rejection, whereas the core of Appearance CSW is concerns about self-esteem. The Appearance-RS scale explicitly asks participants to report their anxious expectations of rejection based on appearance; in contrast, the Appearance CSW scale does not at all mention looking attractive to others or concerns about what others might think of one's appearance. Rather, the Appearance CSW scale measures the importance of attractiveness for one's own self-esteem (e.g., "My sense of self-worth suffers whenever I think I don't look good"; "When I think I look

attractive, I feel good about myself"). Thus, the primary difference between Appearance-RS and Appearance CSW is the relative emphasis on concerns about rejection versus concerns about self-esteem based on one's attractiveness.

## EFFECTS OF THREATS TO APPEARANCE

So far, I have discussed the interpersonal bases of Appearance-RS and its relations to other constructs. A further feature of Appearance-RS is that anxious expectations of rejection should be exacerbated under conditions of appearance threat, such as when a negative aspect of one's appearance is made salient. Accordingly, in Study 2, participants high or low in Appearance-RS were asked to list negative aspects of their appearance (threat condition) or objects they saw in the room (no threat). Under threat, high Appearance-RS participants were expected to feel more alone and rejected than low Appearance-RS participants. Under no threat, differences in feelings of loneliness and rejection between high and low Appearance-RS participants were expected to be attenuated.

In Study 3, I examined whether negative effects of an appearance threat could be attenuated for high Appearance-RS people via a self-affirmation, a secure attachment prime, or a neutral prime. I expected that following an appearance threat, high Appearance-RS participants would experience lower state self-esteem, greater feelings of rejection, less positive affect, and more negative affect if they received a neutral prime (which does nothing to alleviate the threat), but would be buffered if they were reminded of their strengths or asked to think of a close, caring relationship, as both of these strategies have been shown in past research to repair self-esteem and mood following self-threat.

## STUDY 1

### Study Overview

The purpose of Study 1 was to develop and validate a measure of Appearance-RS and examine its relation to personality constructs and to mental and physical health. Extending Downey and Feldman's (1996) general model of personal-RS to the appearance domain, Appearance-RS was operationalized as anxious concerns and expectations about being rejected based on one's physical attractiveness. The Appearance-RS scale presents 15 situations developed by the author in which people may feel rejected based on their appearance. Those who are highly anxious about being rejected

based on appearance and expect this to occur are characterized as high in Appearance-RS.

### Appearance-RS and Other Personality Constructs

Appearance-RS was predicted to be positively related to insecure attachment styles (i.e., preoccupied, fearful), personal-RS, and Appearance CSW and negatively related to secure attachment, self-esteem, and self-rated attractiveness. In addition, Appearance-RS should be positively related to neuroticism because people high in Appearance-RS also may be dispositionally anxious.

### Gender and Appearance-RS

Appearance-RS is conceptualized as a personality processing system that both men and women possess. Accordingly, the scale items reflect concerns relevant to both genders (e.g., “You are leaving your house to go on a first date when you notice a blemish on your face”), concerns that may be more relevant to one gender than another (e.g., weight, hair thinning), and concerns based on appearance in general (e.g., not being asked to dance). In sum, because the Appearance-RS scale was designed to measure the extent to which both men and women anxiously expect to be rejected based on their appearance, significant gender differences on this measure were not expected to be found.

### Appearance-RS and Mental and Physical Health Outcomes

Based on existing literature, I hypothesized that Appearance-RS would predict greater eating disorder symptoms and appearance-based social comparisons. Furthermore, if Appearance-RS is a unique construct, then these effects were expected to be found even after controlling for factors related to these outcomes, such as gender, self-esteem, Appearance CSW, attachment styles, self-rated attractiveness, personal-RS, and neuroticism.

*Eating disorders.* Because high Appearance-RS people associate physical flaws with rejection, they are likely to be preoccupied with their bodies and be motivated to engage in behaviors to appear attractive and avoid rejection by others. Higher Appearance-RS scores were therefore expected to be related to greater symptoms of disordered eating, above and beyond effects of personality variables that have been associated with eating disorders, such as low self-esteem, Appearance CSW, and neuroticism.

*Social comparisons.* Engaging in social comparisons with peers can be a useful strategy for learning about

standards that are likely to lead to acceptance and popularity (Jones, 2001). Making frequent appearance-based comparisons may enable high Appearance-RS people to monitor how well they are meeting standards of attractiveness and avoid the possibility of being rejected based on appearance. Accordingly, I expected high Appearance-RS people to engage in frequent appearance-based social comparisons with others.

## METHOD

### Participants and Procedure

Participants were 242 college students (180 women, 60 men, 2 did not indicate gender) ranging from 18 to 35 years of age ( $M = 19.19$ ,  $SD = 2.29$ ). The racial composition was 61% White, 22% Asian, 5.7% African American, 5.3% Hispanic, 5% of other races, and 1% who did not indicate any racial category. Participants came into the lab and completed the Appearance-RS scale, various personality measures, and questionnaires pertaining to mental and physical health.<sup>2</sup> Participants received psychology course credit for their participation. To examine test-retest reliability, a randomly selected subsample of 53 participants (43 women, 10 men) completed the Appearance-RS scale approximately 6 to 8 weeks after administration of the first survey.

### Measures

*Appearance-RS scale.* Items for the Appearance-RS scale were modeled after Downey and Feldman's (1996) Rejection Sensitivity Questionnaire (RSQ), which measures personal-RS. In Downey and Feldman's scale, participants are presented with 18 interpersonal situations in which they imagine making a request of a significant other. Respondents indicate their anxiety or concern about the outcome and their expectations of rejection. RS in each situation is calculated by multiplying the degree of anxious concern with rejection expectation. RS scores are then calculated by averaging the total ratings of anxious expectations of rejection across the 18 situations for each participant.

In the present study, the personal-RS scale was adapted to reflect rejection sensitivity based specifically on physical attractiveness. Participants were given the following instructions: “Each of the items below describes different scenarios that people might find themselves in. Imagine yourself in each situation and circle the number that best indicates how you would feel.” Participants were presented with 15 scenarios developed by the author to assess anxious concerns and expectations of rejection based on

**TABLE 1:** Factor Loadings and Psychometric Properties of the Appearance-RS Scale

| Item   | Factor Loading |
|--|----------------|
| 1. You are leaving your house to go on a first date when you notice a blemish on your face.  | .57            |
| 2. You are trying on clothes at a department store and notice that you are a few pounds heavier than last week.                                | .69            |
| 3. You are at a party and are shorter than everyone there.   | .43            |
| 4. You post a photo of yourself on an Internet dating service.   | .57            |
| 5. Your new boyfriend/girlfriend bought you a gym membership for your birthday.  | .57            |
| 6. During dinner at a restaurant, you notice your date looking at an attractive person across the room.  | .63            |
| 7. You are waiting in line at a club and others in line behind you are being let in before you.  | .52            |
| 8. You met someone at a coffee shop and gave him or her your phone number. Three days have passed and you still have not heard anything.       | .65            |
| 9. Your boyfriend/girlfriend of 3 months is considering breaking up with you.  | .57            |
| 10. You are at a dance club and all of your friends have been asked to dance except for you.   | .72            |
| 11. You are set up on a blind date. The date goes well and you like the person but he or she has not called you for several days.              | .71            |
| 12. You are taking dance lessons that involve dancing with partners. When the instructor tells everyone to find a partner, no one chooses you. | .67            |
| 13. Your significant other makes a comment about your weight.  | .68            |
| 14. Your hair is looking thin lately.  | .48            |
| 15. You look at yourself in the mirror and notice that your gut is getting larger.   | .71            |
| <i>M</i> score on Appearance-RS  | 11.88          |
| <i>Mdn</i>   | 11.20          |
| <i>SD</i>  | 5.71           |
| Minimum score  | 1.13           |
| Maximum score  | 34.67          |
| <i>N</i>   | 242            |

NOTE: Appearance-RS = Appearance-Based Rejection Sensitivity.

appearance (see Table 1), for example, “You are leaving your house to go on a first date when you notice a blemish on your face.” Participants indicated their anxiety/concern about being rejected based on their appearance (e.g., “How concerned or anxious would you be that your date might be less attracted to you because of the way you looked?”) using a 6-point scale (1 = *very unconcerned*, 6 = *very concerned*) and their expectation of rejection based on appearance (e.g., “I would expect that my date would find me less attractive”; 1 = *very unlikely*, 6 = *very likely*). Participants were considered high in Appearance-RS if they scored high on both the anxiety and expectation of rejection dimensions across situations. Appearance-RS was calculated in each situation by multiplying the degree of anxious concern with the degree of rejection expectation. Individual Appearance-RS scores were then computed by averaging the total ratings of anxious expectations of rejection for each participant across the 15 situations. Ratings were multiplied because I was interested in the interaction between anxious concerns and expectations in the same way that Downey and Feldman (1996) calculated personal-RS scores in previous studies.

*Appearance CSW.* The Contingencies of Self-Worth Scale (Crocker et al., 2003) measures seven domains on which college students are likely to base their self-esteem. Of interest were the five items assessing how much people base self-esteem on appearance (e.g.,

“When I look good, my sense of self-esteem tends to be higher”;  $\alpha = .66$ ). Participants rated their agreement with each statement using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

*Rosenberg Self-Esteem Scale.* Trait self-esteem was measured using the Rosenberg Self-Esteem Inventory (RSE; Rosenberg, 1965). Participants indicated (1 = *strongly disagree*, 7 = *strongly agree*) their agreement with items such as “On the whole, I am satisfied with myself.” The RSE has high internal consistency ( $\alpha = .88$ ), test-retest reliability, and has been shown to be a generally reliable and valid measure of self-esteem.

*Personal-RS.* An eight-item version of the personal-RS scale was administered to participants to examine its relation to the Appearance-RS scale.<sup>3</sup> As described earlier, the RSQ measures the extent to which people anxiously expect, readily perceive, and overreact to rejection across various interpersonal scenarios. The RSQ has good internal reliability ( $\alpha = .72$  in this sample) and test-retest reliability (Downey & Feldman, 1996).

*Attachment style.* Participants’ attachment style was measured using Bartholomew’s (1990) four-category conceptualization of attachment. Participants rated four different paragraphs on 7-point scales (1 = *doesn’t describe me at all*, 7 = *describes me very well*) reflecting

secure attachment (e.g., “It is easy for me to become emotionally close to others”); preoccupied attachment (e.g., “I want to be completely emotionally intimate with others but I often find that others are reluctant to get as close as I would like”); fearful attachment (e.g., “I want emotionally close relationships but I find it difficult to trust others completely, or to depend on them); and dismissing attachment (e.g., “I am comfortable without close emotional relationships”).

*Big Five Personality Inventory.* Of the five personality dimensions measured in the Big Five Personality Inventory (John, Donahue, & Kentle, 1992), the neuroticism dimension was of interest in the present study because people high in Appearance-RS also may be high in neuroticism. Participants indicated how self-descriptive various traits were using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). The traits were “anxious, easily upset” and “calm, emotionally stable” (reversed,  $\alpha = .61$ ).

*Eating disorder symptoms.* Nine questions were adapted from existing eating disorder measures (Williamson, Anderson, Jackman, & Jackson, 1995). Participants indicated how often they behaved in certain ways during the past 3 months. Sample questions included “How often did you avoid eating when you were hungry?” and “How often were you preoccupied with your weight and/or body shape or about gaining weight?” scored from 0 (*never*) to 5 (*always*). Participants also answered, “How often did you try to control your weight by eating little or no food for a day or longer?” and “How often did you rapidly eat a very large amount of food (binge)?” on a scale from 0 (*never*) to 5 (*more than twice a week*). They also were asked, “How often did you exercise vigorously and for long periods of time in order to burn calories or to counteract the effects of eating?” and “How often did you use laxatives, diuretics (water pills), and/or suppositories to help control your weight or to lose weight?” on a scale from 0 (*never*) to 5 (*once a day or more*). Finally, they were asked, “How often did you intentionally vomit after eating?” which was on a scale from 0 (*never*) to 5 (*2 or more times a week*). All scores were standardized and averaged to create a composite index of eating disorder symptoms ( $\alpha = .81$ ).

*Social comparisons based on appearance.* Three items were developed by the author to assess participants’ tendency to make social comparisons based on appearance using a scale from *virtually never* to *several times a day*. The items were as follows: “How often did you notice whether you are more or less attractive than other people?” “How often did you compare your attractiveness with other people?” and “How often did

you feel bad about yourself from comparing your looks with other people?” ( $\alpha = .91$ ).

*Demographic information and self-rated attractiveness.* Participants reported their gender, age, race, and self-rated attractiveness (1 = *not at all attractive*, 7 = *very attractive*).

## RESULTS

### Data Analysis Strategy

I first examined the internal consistency and test–retest reliability of the scale. Next, I conducted a factor analysis on the Appearance-RS items to examine the factor structure of the scale. Then, I examined the Appearance-RS scale in relation to other personality measures. Finally, I ran hierarchical regression analyses to test the unique effects of Appearance-RS on eating disorder symptoms and tendency to make appearance-based comparisons.

### Internal and Test–Retest Reliability

The Appearance-RS scale has high internal consistency ( $\alpha = .90$  at Time 1;  $\alpha = .90$  at Time 2) and test–retest reliability ( $r = .69$ ,  $p < .001$ ) in a 6- to 8-week period.

### Factor Analysis

A factor analysis was conducted using principal-axis factoring and oblique rotation on the scores for each situation of the Appearance-RS scale to determine whether a single factor across situations could be extracted from the data.<sup>4</sup> The analysis revealed three factors with eigenvalues greater than 1. However, only one factor was retained by the scree test; this factor had an eigenvalue of 6.23 and accounted for 41.5% of the variance, compared with the second and third factors, which had eigenvalues of 1.3 and 1.2, respectively, and accounted for 8.7% and 7.8% of the variance, respectively. Table 1 presents the factor loadings of the items on the first factor for the full sample. All 15 items loaded at greater than .40 and ranged from .43 to .72. Appearance-RS was not significantly related to age,  $r(239) = .09$ , *ns*, or gender,  $r(237) = -.08$ , *ns*.

### Correlations With Personality Measures

Next, I examined the correlations among Appearance-RS and self-esteem, Appearance CSW, personal-RS, attachment styles, self-rated attractiveness, and neuroticism. Table 2 presents the zero-order correlations among these variables. As predicted, Appearance-RS

**TABLE 2:** Study 1: Correlations Among Appearance-RS and Personality Variables

|    | 1. Appearance-RS | 2. Appearance CSW | 3. Self-Esteem   | 4. Personal Rejection Sensitivity | 5. Secure Attachment | 6. Dismissing Attachment | 7. Preoccupied Attachment | 8. Fearful Attachment | 9. Neuroticism Attractiveness | 10. Self-Rated Attractiveness |
|----|------------------|-------------------|------------------|-----------------------------------|----------------------|--------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|
| 1  | —                |                   |                  |                                   |                      |                          |                           |                       |                               |                               |
| 2  | .35***           | —                 |                  |                                   |                      |                          |                           |                       |                               |                               |
| 3  | -.42***          | -.20**            | —                |                                   |                      |                          |                           |                       |                               |                               |
| 4  | .29***           | .16*              | -.39***          | —                                 |                      |                          |                           |                       |                               |                               |
| 5  | -.19**           | -.15*             | .28***           | -.21**                            | —                    |                          |                           |                       |                               |                               |
| 6  | -.09             | -.19**            | .11 <sup>†</sup> | .04                               | .05                  | —                        |                           |                       |                               |                               |
| 7  | .19**            | .15*              | -.29***          | .08                               | .01                  | -.24***                  | —                         |                       |                               |                               |
| 8  | .21**            | .24***            | -.27***          | .25***                            | -.36                 | -.01                     | .15*                      | —                     |                               |                               |
| 9  | .23***           | .18**             | -.47***          | .24***                            | -.16*                | -.15*                    | .18**                     | .21**                 | —                             |                               |
| 10 | -.31***          | -.09              | .43***           | -.34***                           | .21**                | -.06                     | -.06                      | -.15*                 | -.12 <sup>†</sup>             | —                             |

NOTE: Appearance-RS = Appearance-Based Rejection Sensitivity; Appearance CSW = Appearance Contingency of Self-Worth.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

was positively related to Appearance CSW, personal-RS, insecure attachment styles, and neuroticism and negatively related to self-esteem, secure attachment, and self-rated attractiveness.

#### Appearance-RS and Mental and Physical Health Outcomes

Finally, I examined the unique effect of Appearance-RS on mental and physical health outcomes. A series of hierarchical regression analyses were conducted with centered Appearance-RS scores entered at Step 1. At Step 2, control variables for gender (dummy coded: -1 = female; 1 = male), centered self-esteem, Appearance CSW, personal-RS, attachment styles, self-rated attractiveness, and neuroticism were entered simultaneously into the regression equation.<sup>5</sup>

*Eating disorder symptoms.* Results of regression analyses revealed a significant main effect of Appearance-RS at Step 1 ( $\beta = .38, p < .001$ ), which remained significant at Step 2 ( $\beta = .31, p < .001$ ), controlling for all other variables. Appearance CSW also predicted greater symptoms of eating disorders at Step 2 ( $\beta = .17, p < .02$ ). In sum, higher Appearance-RS scores predicted greater symptoms of disordered eating, as did Appearance CSW.<sup>6</sup>

*Social comparisons based on appearance.* Results of regression analyses revealed a significant main effect of Appearance-RS at Step 1 ( $\beta = .55, p < .001$ ) and at Step 2 ( $\beta = .33, p < .001$ ), controlling for all other variables. In addition, Appearance CSW predicted more appearance-based social comparisons at Step 2 ( $\beta = .28, p < .001$ ). In sum, both Appearance-RS and Appearance CSW uniquely predicted making more appearance-based comparisons.

## DISCUSSION

The results of Study 1 show that the Appearance-RS scale is a reliable, valid scale for both genders. The scale has high internal consistency and test-retest reliability, reflecting a relatively enduring and coherent personality processing system. Furthermore, Appearance-RS correlated, as expected, with dispositional measures of self-esteem, Appearance CSW, attachment styles, personal-RS, neuroticism, and self-rated attractiveness. Moreover, Appearance-RS predicted greater symptoms of disordered eating and tendency to make social comparisons based on appearance. Importantly, Appearance-RS predicted these outcomes even after controlling for gender, self-esteem, Appearance CSW, attachment styles, self-rated attractiveness, personal-RS, and neuroticism. Thus, Appearance-RS has unique predictive power in relation to eating disorders and appearance-based comparisons.

Because behaviors are multiply determined, it is not surprising that both Appearance-RS and Appearance CSW independently predicted the outcomes. The results suggest that one reason people engage in disordered eating behaviors and appearance-based comparisons is because of belongingness concerns (e.g., to avoid rejection by others); another unique explanation is that people engage in these behaviors because of concerns about self-worth. Other personality constructs, such as personal-RS, did not significantly predict eating disorder symptoms or appearance-based comparisons. These findings are consistent with the idea that specific predictors are better predictors of specific outcomes, whereas general personality constructs may not necessarily predict specific behaviors.

In Studies 2 and 3, I extended these findings to examine the unique predictive utility of Appearance-RS under appearance threat conditions to determine whether

certain situations differentially threatened people who scored high versus low in Appearance-RS.

## STUDY 2

The goal of Study 2 was to examine the effects of Appearance-RS on reactions to an appearance threat. Specifically, I hypothesized that merely listing negative aspects of one's appearance would be sufficient to make high Appearance-RS people feel more alone and rejected than those low in Appearance-RS. Specifically, high Appearance-RS participants were expected to feel more alone and rejected following the appearance threat, whereas low Appearance-RS participants were expected not to be as affected by the threat. In contrast, in the no-threat condition, in which participants listed objects they saw in the room, differences in emotional reactions between high and low Appearance-RS participants were expected to be attenuated because listing objects in a room is not an inherently threatening experience.

Furthermore, because the core feature of Appearance-RS is concerns about rejection, I expected that reminders of negative aspects of one's appearance would lead to feelings of loneliness and rejection among participants who anxiously expected rejection based on their appearance but not necessarily among those whose self-worth was highly contingent on appearance because belongingness concerns are not a central feature of the Appearance CSW construct.

## Method

### *Participants and Procedure*

One hundred participants (66 women, 34 men) came into the lab for a study on "The Self and Motivation," for which they received psychology course credit. Participants ranged from 18 to 30 years of age ( $M = 19.45$ ,  $SD = 2.30$ ) and consisted of 58% White, 22% Asian, 8% African American, 7% Hispanic, and 5% from other racial backgrounds.

Upon arrival at the lab, participants completed a questionnaire assessing demographics, Appearance-RS, attachment styles, self-esteem, and Appearance CSW, in that order. Afterward, participants were randomly assigned to one of two experimental conditions. In the appearance threat condition, participants were given a form with the following instructions:

We all have parts of our body or physical appearance that we are dissatisfied with or feel insecure about. Please take a moment to think about the aspects of your body or physical appearance you do not like about yourself and list them in the spaces below.

In the no-threat condition, participants were given a form with the following instructions:

If you look around, there are many objects in the room you are in. Please take a moment to think about all the objects you see in the room and list them in the spaces below.

Afterward, all participants were asked to indicate how rejected, unwanted, lonely, and isolated they felt at the moment. Finally, participants were debriefed, thanked, and dismissed.

### *Pretest Measures*

*Demographic information.* Participants indicated their gender, age, and race for descriptive purposes.

*Appearance-RS scale.* Participants completed the 15-item scale as described in Study 1 ( $\alpha = .92$ ).

*Attachment style.* Participants completed the four-item measure of attachment style as described in Study 1.

*Rosenberg self-esteem scale.* Participants completed the 10-item measure of trait self-esteem described in Study 1 ( $\alpha = .90$ ).

*Appearance CSW.* Participants completed the five items of the Appearance CSW subscale described in Study 1 ( $\alpha = .63$ ).

### *Posttest Measure*

*Feelings of rejection.* Participants indicated how lonely, rejected, unwanted, and isolated they felt using a 7-point scale (1 = *not at all*, 7 = *very much*;  $\alpha = .82$ ).

## Results

Table 3 presents descriptive information and zero-order correlations among the pre- and posttest measures. Multiple regression analyses were then conducted to examine the effects of thinking about negative aspects of one's appearance versus objects in the room as a function of Appearance-RS and Appearance CSW on feelings of loneliness and rejection. Centered scores for Appearance-RS, Appearance CSW, experimental condition (dummy coded: 1 = appearance threat, -1 = no threat), and the two-way interactions of Appearance-RS  $\times$  Condition and Appearance CSW  $\times$  Condition were entered simultaneously into a regression equation. In addition, control variables for gender (dummy coded: 1 = male, -1 = female), centered self-esteem, and attachment styles (secure, dismissing, preoccupied, fearful) also were entered simultaneously into the model.

**TABLE 3:** Study 2: Correlations Among Appearance-RS and Study Variables

|   | 1. Appearance-RS | 2. Appearance CSW | 3. Self-Esteem | 4. Feelings of Loneliness and Rejection |
|---|------------------|-------------------|----------------|---|
| N | 99               | 99                | 97             | 99                                      |
| 1 | —                |                   |                |   |
| 2 | .48***           | —                 |                |   |
| 3 | -.36***          | -.05              | —              |   |
| 4 | .23*             | .08               | -.49***        | —                                       |

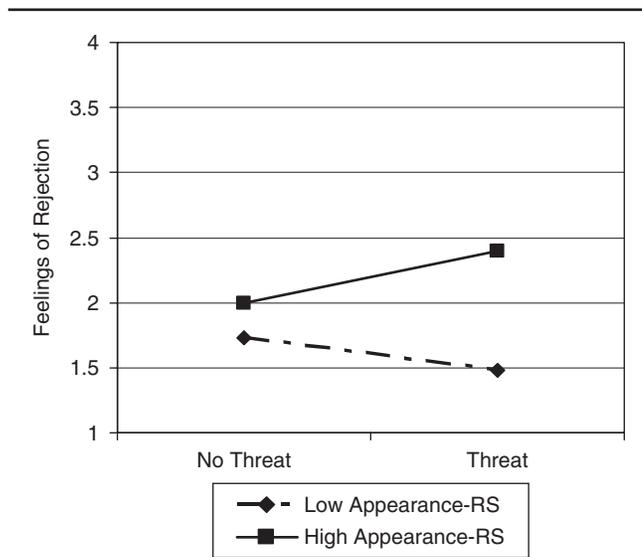
NOTE: Appearance-RS = Appearance-Based Rejection Sensitivity; Appearance CSW = Appearance Contingency of Self-Worth. \* $p < .05$ . \*\* $p < .001$ .

Results revealed a significant Appearance-RS  $\times$  Condition interaction ( $\alpha = .20$ ,  $p = .05$ ), controlling for all other variables. The Appearance CSW  $\times$  Condition interaction was not significant ( $\alpha = -.13$ ,  $p < .23$ ). Examining the simple effect of Appearance-RS in the threat and no-threat conditions separately revealed that in the threat condition, participants with higher Appearance-RS scores tended to feel more alone and rejected ( $\alpha = .26$ ,  $p < .15$ ), whereas this was not the case under no threat ( $\alpha = -.09$ ,  $p > .53$ ). Figure 1 illustrates the pattern of results. Overall, the results suggest that the more sensitive to rejection participants were based on their appearance, the more lonely and rejected they tended to feel when reminded of negative aspects of their appearance.

## Discussion

Taken together, the results of Study 2 show that sensitivity to rejection based on appearance influences feelings of loneliness and rejection following an appearance threat. Specifically, being reminded of negative aspects of one's appearance tended to increase feelings of loneliness and rejection among high Appearance-RS participants. Under no threat, there was no significant difference in feelings of loneliness and rejection. Of importance, these effects were found even after controlling for effects of demographic and personality variables. Moreover, only Appearance-RS significantly interacted with threat condition to predict feelings of loneliness and rejection. These findings support the idea that concerns about rejection lie at the core of Appearance-RS, but not of Appearance CSW. The findings also provide further evidence that Appearance-RS and Appearance CSW are distinct constructs.

One limitation of Study 2 is that simply listing negative aspects of one's appearance may not have been strong enough of a manipulation to significantly decrease feelings of loneliness/rejection. Thus, in Study 3, I used a more potent manipulation in which participants wrote an essay about an aspect of their appearance with which



**Figure 1** Expected value of feelings of rejection as a function of Appearance-RS and threat condition.

NOTE: Means are plotted at 1 SD above and 1 SD below the mean of Appearance-RS.

they were dissatisfied. Furthermore, I examined ways to attenuate the negative effects of writing about a negative aspect of one's appearance among high Appearance-RS participants.

## STUDY 3

Past research has shown that self-affirmation and secure attachment priming can attenuate responses to self-threat (Fein & Spencer, 1997; Mikulincer & Shaver, 2001). Self-affirmation involves affirming valued, important aspects of the self to restore a sense of adequacy following a self-threat (Steele, 1988). In the standard self-affirmation manipulation, participants are reminded of their values or strengths in a domain unrelated to the threat. Self-affirmation alleviates the threat and reduces people's need to enhance their self-esteem. For example, self-affirmation following threat has been shown to reduce defensiveness and prejudice toward out-groups (Fein & Spencer, 1997) and increase openness to threatening information (Sherman & Cohen, 2002). In the present study, participants who were randomly assigned to the self-affirmation condition following an appearance threat were asked to think of their greatest personal strength. Thinking about one's strength was expected to reduce the negative effects of the appearance threat on state self-esteem and feelings of rejection and mood, especially among high Appearance-RS participants, who were expected to be most negatively affected by the threat.

Another way to attenuate the negative effects of threat is to prime people with a secure attachment—a close, unconditionally caring relationship. According to Bowlby (1969), having a secure base regulates anxiety and fear in threatening situations. A secure base can be contextually activated by real or imagined interactions with responsive others and can even occur among those who chronically doubt their attachments with others. Priming people with a sense of a secure base, such as, exposing people to the name of a close, supportive other, leads to positive self-evaluations and attenuates negative reactions toward outgroups (Mikulincer & Shaver, 2001). In the present study, participants who were randomly assigned to the secure attachment prime condition following an appearance threat were asked to think of a close, supportive person in their life. Being primed with a secure attachment was predicted to attenuate negative responses to threat, particularly among high Appearance-RS participants who were expected to feel highly insecure following threat compared to low Appearance-RS participants. These priming manipulations were compared to a neutral prime condition in which participants wrote about an object they saw in the room, which was not expected to alleviate the negative effects of threat.

## Method

### *Participants and Procedure*

One hundred thirty students (90 women, 40 men) participated in this study for psychology course credit. One female participant was excluded from analyses because in her essay she wrote that there was nothing about her appearance with which she was dissatisfied. The final sample consisted of 129 students ranging from 18 to 39 years of age ( $M = 19.13$ ,  $SD = 2.41$ ) who were 60% White, 26% Asian, 4.7% African American, 7.0% Hispanic, and 2.3% of other racial backgrounds.

Participants came into the lab for a study on “Aspects of the Self” and completed the same set of pretest questionnaires used in Study 2 assessing demographics and personality variables. After completing this packet, all participants received a form with the following instructions:

We all have parts of our body or physical appearance that we are dissatisfied with or feel insecure about. Please take a moment to think about one aspect of your physical appearance/body/face that you do not like about yourself and write a brief essay about it in the space provided below.

The manipulation was similar to Study 2 but was expected to be even more threatening because participants would be writing about a negative aspect of their

appearance rather than just listing a negative aspect of their appearance.<sup>7</sup> After writing the threatening essay, participants were randomly assigned to one of three experimental conditions. Specifically, participants were given a form that asked them to list either an object they saw in the room (neutral prime), their greatest strength (self-affirmation), or the initials of their closest relationship partner—“someone who loves you unconditionally and to whom you feel you can turn in times of need” (secure attachment). After the prime, participants completed postmeasures of state self-esteem, feelings of rejection, and positive and negative affect. Finally, participants were debriefed, given course credit, thanked, and dismissed. The study was thus a 2 (high vs. low Appearance-RS)  $\times$  3 (prime: neutral vs. self-affirmation vs. secure attachment) between-subjects design.

### *Materials*

The same pretest measures used in Study 2 were included in the current study: a demographic form, Appearance-RS scale ( $\alpha = .92$ ), Appearance CSW scale ( $\alpha = .66$ ), trait self-esteem scale ( $\alpha = .90$ ), and the attachment style measure. To more thoroughly examine the effects of the priming manipulation following the appearance threat, I included more dependent measures in this study, described below.

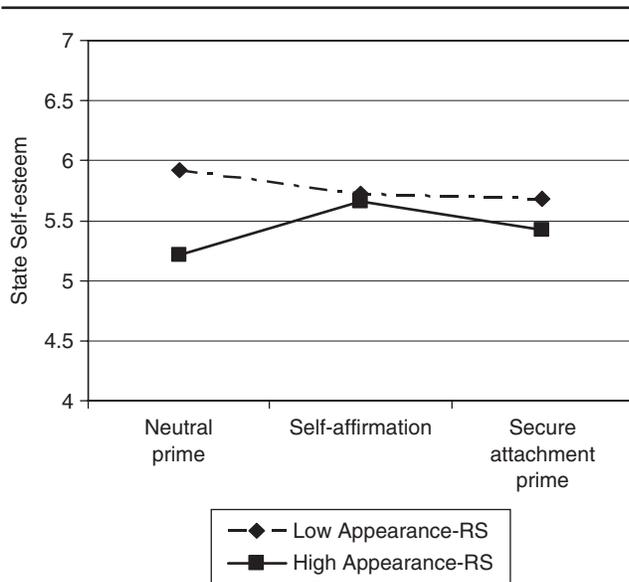
*State self-esteem.* The state self-esteem scale was adapted from the Rosenberg self-esteem scale to measure participants’ self-esteem at the moment. Participants indicated their agreement with statements such as “Right now, I feel that I am a person of worth, at least on an equal basis with others” (10 items;  $\alpha = .91$ ) using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

*Feelings of rejection.* Feelings of rejection were assessed with the four loneliness/rejection items used in Study 2, along with 10 items developed by the author to assess current feelings of rejection—“Right now, I feel rejected” and “I feel like nobody cares about me right now”—which were answered on a 7-point scale (1 = *not at all*, 7 = *very much*; 14 items,  $\alpha = .94$ ).

*Positive and negative affect.* Finally, participants rated how much they felt positive affect (e.g., happy, pleased, cheerful, proud, content; 5 items,  $\alpha = .88$ ) and negative affect (angry, mad, sad, hopeless, blue, irritated;  $\alpha = .88$ ) using a 7-point scale (1 = *not at all*, 7 = *very much*).

## Results

A series of multiple regression analyses were conducted to examine the effects of receiving a self-affirmation

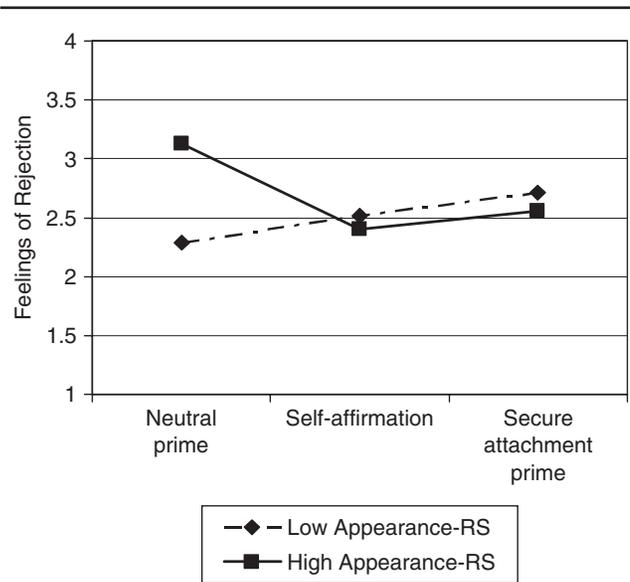


**Figure 2** Expected value of state self-esteem as a function of Appearance-RS and priming condition.

NOTE: Means are plotted at 1 SD above and 1 SD below the mean of Appearance-RS.

versus secure attachment versus neutral prime following an appearance threat on state self-esteem, feelings of rejection, and positive and negative affect. First, the three conditions were dummy coded into two variables such that self-affirmation condition = 1, all others = 0; secure attachment prime condition = 1, all others = 0, making the neutral prime condition the reference comparison group.<sup>8</sup> Centered scores for Appearance-RS, Appearance CSW, and their two-way interactions with condition also were entered simultaneously into the regression equations. In addition, gender (dummy coded: -1 = female, 1 = male), centered self-esteem, and attachment styles were entered as control variables in all analyses. Then, following the recommendations of Aiken and West (1991), I calculated expected values for participants' responses on the dependent measures at 1 SD above and 1 SD below the mean of Appearance-RS in each condition separately and then examined simple effects of Appearance-RS in each condition.

**State self-esteem.** Results of regression analyses revealed a significant Appearance-RS  $\times$  Self-Affirmation interaction ( $\beta = .17, p < .03$ ) and a marginally significant Appearance-RS  $\times$  Secure Attachment interaction ( $\beta = .12, p < .09$ ). None of the Appearance CSW interactions were significant. Simple slopes analyses revealed that following an appearance threat, participants in the neutral prime condition reported significantly lower state self-esteem the higher their Appearance-RS ( $\beta = -.39, p < .001$ ), whereas the effect of Appearance-RS was nonsignificant



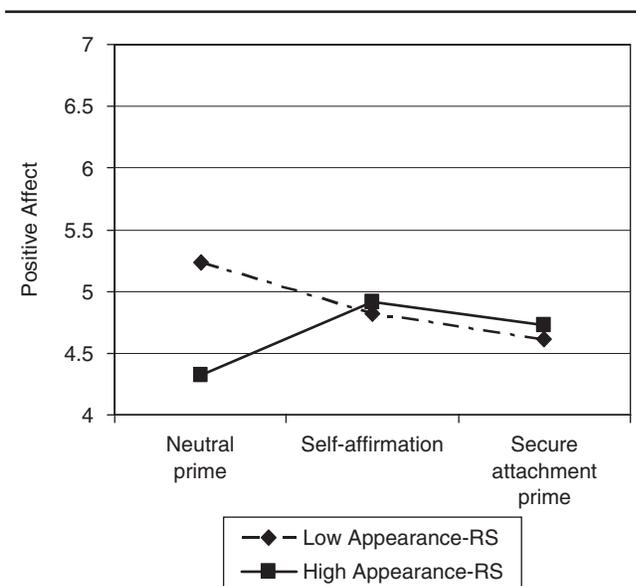
**Figure 3** Expected value of feelings of rejection as a function of Appearance-RS and priming condition.

NOTE: Means are plotted at 1 SD above and 1 SD below the mean of Appearance-RS.

in the self-affirmation ( $\beta = -.09, p > .41$ ) and secure attachment priming conditions ( $\beta = -.10, p > .33$ ). Figure 2 illustrates the results. These findings suggest that participants who experienced an appearance threat and were highly sensitive to appearance-based rejection felt worse about themselves when they received a neutral prime but had their self-esteem buffered if they received a self-affirmation or secure attachment prime.

**Feelings of rejection.** Results of regression analyses revealed a significant Appearance-RS  $\times$  Self-Affirmation interaction ( $\beta = -.24, p < .05$ ) and Appearance-RS  $\times$  Secure Attachment prime interaction ( $\beta = -.25, p < .04$ ). No Appearance CSW interactions were significant. Simple slopes analyses revealed that in the neutral prime condition, higher Appearance-RS predicted significantly greater feelings of rejection ( $\beta = .46, p < .01$ ), whereas the effect was nonsignificant in the self-affirmation ( $\beta = -.10, p > .55$ ) and secure attachment prime condition ( $\beta = -.14, p > .44$ ). Figure 3 illustrates the results. In sum, following an appearance threat, high Appearance-RS participants felt more rejected if they received a neutral prime, whereas the negative effects of threat were eliminated following self-affirmation or a secure attachment prime.

**Positive affect.** Results of regression analyses revealed a marginally significant Appearance-RS  $\times$  Self-Affirmation interaction ( $\beta = .23, p = .06$ ) and a significant Appearance-RS  $\times$  Secure Attachment prime interaction ( $\beta = .23, p < .05$ ). No Appearance CSW interactions were significant.



**Figure 4** Expected value of positive affect as a function of Appearance-RS and priming condition.

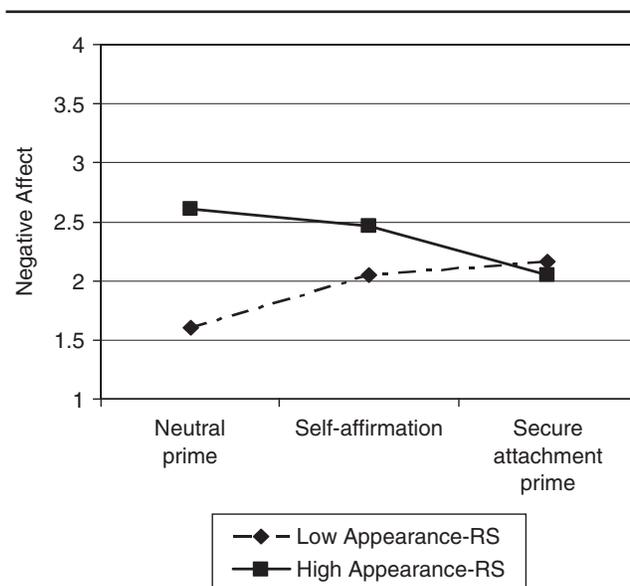
NOTE: Means are plotted at 1 SD above and 1 SD below the mean of Appearance-RS.

Specifically, in the neutral prime condition, higher Appearance-RS predicted significantly less positive affect ( $\beta = -.42, p < .03$ ), whereas this effect became nonsignificant in the self-affirmation ( $\beta = -.01, p > .96$ ) and secure attachment prime conditions ( $\beta = .08, p > .62$ ). Figure 4 illustrates the results. Again, the findings demonstrate that receiving a self-affirmation or a secure attachment prime following an appearance threat buffered high Appearance-RS participants' mood, whereas receiving a neutral prime did not.

*Negative affect.* Results of regression analyses revealed a significant Appearance-RS  $\times$  Secure Attachment prime interaction ( $\beta = -.25, p < .05$ ). No Appearance CSW interactions were significant. In the neutral prime condition, higher Appearance-RS predicted significantly greater negative affect ( $\beta = .41, p < .03$ ), whereas this was not the case in the self-affirmation ( $\beta = .11, p > .53$ ) or secure attachment prime condition ( $\beta = -.13, p > .47$ ). Figure 5 illustrates the results. In sum, following an appearance threat, receiving a neutral prime led to more negative affect among high Appearance-RS participants, whereas this effect was attenuated following a self-affirmation or secure attachment prime.

## Discussion

Across dependent measures, results consistently showed that receiving a neutral prime did not repair high Appearance-RS participants' state self-esteem, feelings of



**Figure 5** Expected value of negative affect as a function of Appearance-RS and priming condition.

NOTE: Means are plotted at 1 SD above and 1 SD below the mean of Appearance-RS.

rejection, or mood after writing about a negative aspect of their appearance. However, being reminded of a personal strength or a close, caring relationship did have an attenuating effect. The strength of these effects is evident in that they held even after controlling for gender, self-esteem, Appearance CSW, and attachment styles. Furthermore, none of the Appearance CSW  $\times$  Condition interactions were significant, providing added evidence for the distinction between Appearance-RS and Appearance CSW. Finally, although participants generated their own essay topics regarding what they disliked about their appearance and their own responses to the neutral, self-affirmation, and secure attachment priming instructions, the effects found across dependent measures were overall consistent and reliable.

## GENERAL DISCUSSION

The present research shows that people's concerns about being rejected based on their appearance have unique effects on their mental and physical health, feelings of belonging, self-esteem, and affect. Study 1 established the reliability and validity of the Appearance-RS scale and documented its relations to low self-esteem, insecure attachment styles, Appearance CSW, low self-rated attractiveness, personal-RS, and neuroticism. Importantly, the correlations between Appearance-RS and these measures were moderate to low, suggesting that Appearance-RS is a relatively distinct construct.

Furthermore, Appearance-RS was not redundant with these constructs in predicting mental and physical health. People high in Appearance-RS reported more symptoms of disordered eating and greater frequency of making social comparisons based on their appearance, even after controlling for relevant gender and personality measures. It is also interesting to note that Appearance CSW independently predicted eating disorders and appearance-based comparisons.

Although sociometer theorists have argued that self-esteem and belongingness are inextricably tied (Leary & Baumeister, 2000), the results of the present studies suggest that it is possible to separate out effects of constructs that differentially emphasize self-esteem versus belongingness concerns. That is, although two constructs may be highly correlated, there may be unique variance accounted for by each construct in explaining certain phenomena. For example, in Study 1, although Appearance-RS and Appearance CSW were positively correlated, each construct uniquely predicted eating disorder symptoms and appearance-based comparisons, suggesting different motivations underlying appearance-related behaviors. In Study 2, high Appearance-RS participants who listed negative aspects of their appearance felt more alone and rejected than participants low in Appearance-RS who were asked to think about objects in the room. Of importance, only Appearance-RS, and not Appearance CSW, significantly interacted with threat condition to predict feelings of loneliness and rejection, providing further suggestive evidence that belongingness concerns lie at the heart of Appearance-RS but not necessarily of Appearance CSW.

Study 3 showed that an appearance threat led to negative outcomes for high Appearance-RS people but that these effects could be attenuated. Specifically, participants who experienced an appearance threat and received a neutral prime (thought of an object in the room) did not show buffering effects on state self-esteem, mood, or feelings of rejection; instead, they reported lower state self-esteem, less positive affect, and more negative affect and feelings of rejection the higher their Appearance-RS. However, participants who received a self-affirmation or secure attachment prime showed attenuation of these responses. These findings are consistent with research showing that self-affirmation temporarily repairs people's self-esteem following threat (Steele, 1988) and that reminders of close others reduce defensive responses to threat (Mikulincer & Shaver, 2001). Of importance, Appearance-RS, but not Appearance CSW, interacted with priming condition to influence these outcomes, providing further evidence for the distinctiveness of Appearance-RS.

In sum, Appearance-RS specifically measures interpersonal anxieties and expectations of rejection based on appearance, with significant effects on appearance-relevant behaviors, feelings of rejection, self-esteem, and

affect. In contrast, Appearance CSW measures feelings of self-worth based on appearance, with no explicit mention of how one's appearance affects interpersonal perceptions or feelings of belonging with others. Furthermore, Appearance-RS differs from personality constructs such as personal-RS because personal-RS is sensitivity to rejection in general (rather than based specifically on an aspect of the self). Because personal-RS is a general personality construct, it should not necessarily predict outcomes specific to appearance or to feelings of rejection based on appearance. Indeed, in Study 1, personal-RS did not significantly predict eating disorder symptoms or appearance-based comparisons. Appearance-RS thus differs from this and other personality constructs because it focuses uniquely on interpersonal anxieties associated with rejection based on appearance.

### Limitations and Future Directions

A limitation of Studies 2 and 3 was that personal-RS was not controlled for. Although personal-RS was not measured, the analyses did control for self-esteem and Appearance CSW, both of which were more strongly correlated with Appearance-RS than with personal-RS (Table 1). Furthermore, Study 1 showed that items on the Appearance-RS scale and the personal-RS scale loaded onto two separate factors (see Note 4). Together, these findings suggest that Appearance-RS is not redundant with personal-RS. Nonetheless, given that the construct of Appearance-RS is conceptually similar to personal-RS, future studies should include both measures to determine the unique effects of Appearance-RS.

An important question for future study is whether Appearance-RS predicts outcomes only in the context of appearance threats or if any kind of threat has similar effects. Demonstrating that those high in Appearance-RS are not just responsive to any kind of threat but distinctively vulnerable to threats related to appearance would provide further evidence of the discriminant validity of Appearance-RS. On a related note, future studies should control for social anxiety and heightened attention to one's appearance, such as the vanity subscale of the Narcissism Personality Inventory, to further document the discriminant validity of Appearance-RS.

Because Appearance-RS is conceptualized as an interpersonal construct, a priority for future research is to examine how Appearance-RS influences people's thoughts, feelings, and behaviors in interpersonal relationships, such as in dating situations or ongoing romantic relationships. The effects of Appearance-RS may be especially strong at the beginning stages of a relationship, when people may be extremely vigilant and vulnerable to the possibility of being rejected based on appearance. It

also would be interesting to examine whether being in a close relationship serves as a naturalistic buffer against the negative effects of appearance threats, given that priming of a secure attachment in Study 3 showed such effects.

Studies also could examine how Appearance-RS affects people's everyday lives using daily diary methodology. On days that high Appearance-RS people feel unattractive, they may experience lower self-esteem, less belonging, more disordered eating, and make more appearance-based comparisons than on days they feel attractive. In addition, future studies could extend the results of Study 3 to examine the effectiveness of interventions, such as thinking about one's strengths or close relationships in attenuating the effects of appearance threat in people's daily lives. High Appearance-RS people also may benefit from shifting their goals from self-focused goals (e.g., avoiding rejection) to goals that are larger than themselves and include others, such as the goal to strengthen their relationships with others, which may inadvertently provide a source of affirmation when encountering future self-threats (see Crocker & Park, 2004).

## Conclusion

The present research provides the first known evidence that concerns about appearance are tied to anxious expectations of rejection based on physical attractiveness. In particular, Appearance-RS was shown to be a dispositional vulnerability; compared to low Appearance-RS participants, high Appearance-RS participants reported more eating disorder symptoms and appearance-based comparisons and felt more alone and rejected when reminded of negative aspects of their appearance. Moreover, the present studies suggest that different motivations underlying appearance concerns can have distinct consequences. Specifically, whereas both Appearance-RS and Appearance CSW predicted eating disorder symptoms and appearance-based comparisons, only Appearance-RS significantly predicted feelings of loneliness and rejection following an appearance threat. In addition, high Appearance-RS participants showed buffering effects following an appearance threat when reminded of their greatest strength or close relationship.

Overall, the present findings suggest that concerns about self-perceived attractiveness can reflect concerns about belongingness or concerns about self-esteem. This research thus highlights the importance of considering both personal and interpersonal bases of motivation and the domain-specific nature of self-processes in interpersonal contexts.

## NOTES

1. Appearance Contingency of Self-Worth (CSW) was expected to have predictive validity above and beyond the other personality

measures because it specifically reflects appearance concerns and was thus appropriate to study given that the outcomes measured in Study 1 were relevant to appearance as were the threats used in Studies 2 and 3.

2. Study 1 presents a selection of findings from a larger survey study.

3. One might argue that the 8-item RSQ does not have as strong predictive power as the full 18-item scale. This is unlikely given that Downey and Feldman (1996) found both scales to have the same internal reliability and predicted similar results.

4. Results of a principal-axis factor analysis with oblique rotation showed that all 15 Appearance-RS items loaded at .40 or greater on Factor 1 (loadings ranged from .40 to .74) and all 8 Personal-RS items loaded on Factor 2 (loadings from .30 to .64). Thus, the Appearance-RS scale items are empirically distinct from the Personal-RS scale.

5. The following results were not reported in the text because of space constraints but may be obtained from the author: Study 1: results for gender, trait self-esteem, personal-RS, attachment styles, self-rated attractiveness, neuroticism; Study 2: results for gender, trait self-esteem, attachment styles; Study 3: results for gender, trait self-esteem, attachment styles, Appearance CSW  $\times$  Priming Condition. (Note: None of the Appearance CSW  $\times$  Condition interactions were significant.)

6. Gender  $\times$  Appearance-RS interactions also were examined for each outcome but no significant interactions emerged.

7. Because no significant effects were found in the no-threat condition in Study 2, this condition was not included in Study 3.

8. Dummy coding was used because it provides more interpretable results and is preferred when examining interactions between continuous and categorical variables (Aiken & West, 1991).

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Received June 2, 2006

Revision accepted September 25, 2006