PERCEPTION OF A MODEL'S SELF-ESTEEM AS A FUNCTION OF OBSERVER SELF-ESTEEM AND MODEL'S DURATION OF EYE CONTACT

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College students were given the Multidimensional Self-Esteem Inventory. For each subscale of the inventory, they were classified as having either high self-esteem (top 40% of the scorers) or low self-esteem (bottom 40% of the scorers). Several weeks after the assessment of self-esteem, they watched a 60-s videotape in which a model maintained eye contact with an interviewer for either 5 s or 50 s. After viewing the tape, the students again completed the Multidimensional Self-Esteem Inventory, but this time as they thought the model in the tape would complete it. The general pattern of the results was that high self-esteem students perceived greater self-esteem in the model in the 50-s tape compared to the 5-s tape, whereas low self-esteem students perceived greater self-esteem in the model in the 5-s tape compared to the 50-s tape. The results show the importance of an observer's own self-esteem in the formation of impressions based on eye contact. Implications for further research are discussed.

Maintaining eye contact in situations such as a job interview is a characteristic that generally creates a favorable impression for an observer (e.g., Wheeler, Baron, Michell, & Ginsburg, 1979; Wiens, Harper, & Matarazzo, 1980). The early studies investigating eye contact as a social variable were correlational; participants view videotapes, photographs, or actual interview situations and then make ratings of the characteristics of the person. These ratings are then correlated with patterns of eye contact.

More recently, Brooks, Church, and Fraser (1986), Droney and Brooks (1993), and Napieralski, Brooks, and Droney (1995) conducted experimental studies manipulating duration of eye contact in a social situation. Specifically, 60-s tapes were made in which a model was listening to instructions from another person. Three separate tapes were made, with the model maintaining eye contact for either 5 s, 30 s, or 50 s. The tapes were shown to college students who then gave personality assessments of the individual in the tape. As eye contact increased, the model in the tape...
was judged as more dominant, assertive, and independent (Brooks et al., 1986), as having higher self-esteem (Droney & Brooks, 1993), and as having lower state, trait, and test anxiety (Napieralski et al., 1995). There is clear experimental support, therefore, for eye-contact duration as a positive social cue; as duration increases, people are generally judged more favorably.

In the above studies, all participants were college students who were randomly assigned to different tape conditions. No attempt was made to assess their personality characteristics to see if differences in certain traits would influence the perceptions they developed based on duration of eye contact. Ample evidence indicates that personality characteristics of an observer can influence how that observer attributes traits to another (Zebrowitz, 1990). Personal dispositions play a major role in the process of impression formation (Bargh, Bond, Lombardi, & Tota, 1986) and in the perception of emotions in others (Toner & Gates, 1985).

The present study investigated whether perceptions of another's personality based on duration of eye contact vary as a function of the personality of the observer. We measured the self-esteem of the participants using the Multidimensional Self-Esteem Inventory (MSEI) (O'Brien & Epstein, 1988). Droney and Brooks (1993) also used the MSEI, and it is recognized as an excellent instrument for assessing self-esteem (Mruk, 1995). We expected that participants high and low in self-esteem would differ in their perceptions of models within each eye-contact condition, although predicting the specific direction of the differences was problematic. Zebrowitz (1990) notes that impressions are influenced by an observer's personality, but there is no consistent tendency for the influence to be toward a specific content for that impression. Thus, observers may project their own traits onto others, but they may also project complementary traits (Park & Hahn, 1988).

There are, however, a number of findings in the literature which help in generating some tentative predictions. Feshbach, Weiner, and Bohart (1996) note research on social comparison processes (e.g., Gibbon, 1986) which indicates that as people make comparisons of themselves with others, they often make downward comparisons. That is, as a way of enhancing self-esteem, they compare themselves with inferior others. Greenberg and Pyszczynski (1985) referred to this general inflation of self-esteem as compensatory self-inflation. This tendency could be applied to the present study to generate tentative predictions. For instance, when viewing the long-duration eye contact condition, the high self-esteem observer should see the model as having high self-esteem, a prediction based on our previous findings (Droney & Brooks, 1993). When viewing the short eye-contact duration tape, however, a downward social comparison can easily be made and the complementary trait of low self-esteem should be assigned to the model because the model is perceived as inferior to the observer.

When viewing the long eye-contact duration tape, the low self-esteem observer should also perceive the model as potentially superior in self-
esteem, but also a threat to their already low self-esteem. Consequently, as a way of enhancing their own low self-esteem and protecting their self image, the low self-esteem observer might assign a low self-esteem attribution to the model in the long eye-contact condition. This prediction is consistent with observations by Baumeister, Tice, and Hutton (1989), who found low self-esteem individuals show tendencies to engage in self-protective strategies. Similarly, to the extent the low self-esteem observer identifies with the model in the short eye-contact condition, they could be expected to assign a relatively higher self-esteem to that model, again as a way of enhancing their own weak self-esteem. Hattie and Marsh (1996) describe a variety of ways in which low self-esteem individuals monitor others' behavior for cues and attributions to enhance their own sense of self, and Baumgardner, Kaufman, and Levy (1989) note the self-enhancement strategies of low self-esteem people is different from those with high self-esteem; the former are more likely to affiliate with less fortunate others in order to make downward comparisons and facilitate the self-enhancement process. A tentative, but reasonable prediction in the present study, therefore, is that high self-esteem observers will perceive greater self-esteem in the long-duration eye-contact model, whereas low self-esteem observers will perceive greater self-esteem in the short-duration eye-contact model.

Method

Participants
Seventy-five male ($N = 34$) and female ($N = 41$) undergraduates from introductory psychology classes at King's College volunteered for the experiment with the understanding that they would receive bonus points. The participants ranged in age from 18 - 23 years.

Materials
We used two tapes produced and described in detail by Napieralski et al. (1995). The tapes feature a male Caucasian, 27 years old, who resembles a typical college student, dressed casually in an open-necked polo shirt. The camera angle makes the model visible from the waist up, over the shoulder of an apparent interviewer. One shoulder and the back of the female interviewer are clearly visible, and it is obvious when the model is looking at her. During the 60-s tape the model neither speaks nor changes facial expression; only eye contact shifts according to off-camera prompts while the interviewer reads highly general instructions for a task involving matching shapes and colors.

Two eye-contact duration tapes were used. In the 5-s eye contact condition, the model maintains eye contact with the interviewer during the 25- to 30-s interval of the 60-s period. In the 50-s condition, eye contact occurs in the intervals 0 to 20 s, 25 to 40 s, and 45 to 60 s. During non-eye contact periods, the model shifts his gaze downward and to either side.

We assessed both the self-esteem of the participants and the
participants' attributions of the model's self-esteem using the MSEI. The MSEI is a 116-item self-report inventory. Participants respond using 5-point scales in a Likert format to indicate either the frequency or degree to which an item applies to them. The MSEI provides scores for 10 subscales and a validity scale measuring the tendency to make oneself look better through socially desirable answers to present an overly inflated view of self-worth. Table 1 presents the scales and a brief description of each.

Internal consistency reliability has been examined for each of the subscales of the MSEI, with alpha coefficients ranging from .80 to .90. The stability of MSEI subscales has also been examined by test-retest correlations over a 1-month interval. The correlations ranged from .78 to .89, suggesting that MSEI scores are mostly stable over such a period. Studies support the convergent and discriminant validity by comparing MSEI subscale scores statistically with other published personality scales, measures of academic achievement, and other specially designed indices. See the test manual (O'Brien & Epstein, 1988) for a more detailed review.

### Table 1
Components of Self-Esteem as Measured by the MSEI and Characteristics of a High Scorer

<table>
<thead>
<tr>
<th>Component</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence</td>
<td>Feels effective and capable of mastering new tasks</td>
</tr>
<tr>
<td>Personal Power</td>
<td>Assertive, seeks positions of leadership</td>
</tr>
<tr>
<td>Lovability</td>
<td>Worthy of love, able to express love</td>
</tr>
<tr>
<td>Likability</td>
<td>Popular, gets along with others</td>
</tr>
<tr>
<td>Self-control</td>
<td>Self-disciplined, good at setting goals</td>
</tr>
<tr>
<td>Global Self-Esteem</td>
<td>Pleased with self, feels significant as a person</td>
</tr>
<tr>
<td>Body Appearance</td>
<td>Pleased with appearance, pays attention to appearance</td>
</tr>
<tr>
<td>Moral Self-Approval</td>
<td>Has clearly defined moral standards</td>
</tr>
<tr>
<td>Body Functioning</td>
<td>Agile, in good physical condition</td>
</tr>
<tr>
<td>Identity Integration</td>
<td>Clear sense of identity, inner sense of cohesion</td>
</tr>
<tr>
<td>Defensive Self-Enhancement</td>
<td>Overly inflated view of self-worth</td>
</tr>
</tbody>
</table>

### Design and Procedure
During a regular class period, participants completed the MSEI and a standard informed consent form. Four to six weeks later, a sheet distributed in the classes invited the students to participate in an experiment on "Impression Formation." Those students who signed up for the experiment were randomly assigned to watch either the 5-s or the 50-s eye-contact tape. Participants watched the videotape in groups ranging from three to eight. Prior to watching the tape, they received a copy of the MSEI, and instructions to watch the tape and then fill out the survey as they thought the model in the tape would fill it out. This part of the procedure was repeated three different times to make sure that all participants understood the task. The tape was shown twice; during rewinding after the first showing, participants began filling out the MSEI. At no time was any
mention made of the previous class session using the MSEI, and no participant commented on the earlier session. The experimenters are confident that no participant made any connection between the two sessions.

The experimenters scored the MSEI from the first session, and assigned the participants to either a high self-esteem group (top 40%) or low group (bottom 40%), separately for each subscale. Thus, the same participant could be in a different group, or in neither group, depending on the specific subscale of the MSEI.

The experimental and scoring procedures yielded four groups in a 2 x 2 factorial combination. One factor was the experimentally manipulated one of eye contact (5 s vs 50 s), and the second factor was the subject variable of self-esteem subscale score (High vs Low). The Ns derived for the four groups for each subscale varied from a low of 10 to a high of 18.

Results

The mean ratings given to the models by the participants high and low in self-esteem are presented in Table 2. Means for each eye-contact condition and each of the MSEI subscales are included. In general, the results showed that as eye contact increased, perceptions of the model's self-esteem varied according to the participants' level of self-esteem. Those participants who scored high on the self-esteem subscales tended to see higher self-esteem in the model who maintained high eye contact (50 s) than in the model who maintained low eye contact (5 s); those participants who scored low on the self-esteem subscales showed the opposite pattern, rating the model who maintained high eye contact as having lower self-esteem than the model who maintained low eye contact.

To maintain consistency with our previous studies, a 2 x 2 factorial analysis of variance was done for each subscale of the MSEI. This statistical approach also makes sense because scores for the same

<table>
<thead>
<tr>
<th>Scale</th>
<th>Score</th>
<th>Lo-5s</th>
<th>Lo-50s</th>
<th>Hi-5s</th>
<th>Hi-50s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Self-Esteem</td>
<td></td>
<td>30.88</td>
<td>26.91</td>
<td>24.33</td>
<td>29.83</td>
</tr>
<tr>
<td>Competence</td>
<td></td>
<td>28.43</td>
<td>23.91</td>
<td>27.35</td>
<td>32.92</td>
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<tr>
<td>Personal Power</td>
<td></td>
<td>27.56</td>
<td>24.50</td>
<td>25.53</td>
<td>32.36</td>
</tr>
<tr>
<td>Body Appearance</td>
<td></td>
<td>27.69</td>
<td>27.27</td>
<td>25.75</td>
<td>32.92</td>
</tr>
<tr>
<td>Lovability</td>
<td></td>
<td>26.87</td>
<td>25.33</td>
<td>23.47</td>
<td>28.45</td>
</tr>
<tr>
<td>Likability</td>
<td></td>
<td>28.19</td>
<td>28.35</td>
<td>25.00</td>
<td>31.17</td>
</tr>
<tr>
<td>Body Functioning</td>
<td></td>
<td>30.69</td>
<td>28.40</td>
<td>27.31</td>
<td>31.73</td>
</tr>
<tr>
<td>Moral Self-Approval</td>
<td></td>
<td>30.11</td>
<td>32.18</td>
<td>28.82</td>
<td>27.83</td>
</tr>
<tr>
<td>Self-Control</td>
<td></td>
<td>27.11</td>
<td>28.50</td>
<td>27.24</td>
<td>27.54</td>
</tr>
<tr>
<td>Identity Integration</td>
<td></td>
<td>27.44</td>
<td>26.58</td>
<td>26.44</td>
<td>25.57</td>
</tr>
<tr>
<td>Defensive Self-Enhancement</td>
<td></td>
<td>30.00</td>
<td>36.27</td>
<td>36.54</td>
<td>34.45</td>
</tr>
</tbody>
</table>
participants are not represented for all scales. The pattern of results noted above was reflected in a significant interaction between participants' level of self-esteem and duration of eye contact for five of the subscales: Global Self-Esteem, $F(1, 50) = 4.60, p = .03$; Competence, $F(1, 50) = 4.31, p = .04$; Personal Power, $F(1, 48) = 3.99, p = .05$; Body Appearance, $F(1, 51) = 2.92, p = .09$; Lovability, $F(1, 49) = 3.57, p = .06$. The pattern for Defensive Self-Enhancement was consistent with these interactions: High scorers saw greater defensiveness and inflated self-worth as eye contact decreased, whereas low scorers saw greater inflated self-worth as eye contact increased, $F(1, 46) = 2.76, p = .10$. Of the remaining subscales, three showed directional results consistent with the above patterns, but the interaction term did not reach borderline significance (Likability, Body Functioning, and Morality, all $p$s = .10-.20). The remaining two scales (Self-Control and Identity Integration) showed no tendency at all for the above pattern (both $F$s < 1).

**Discussion**

Of the 11 subscales of the MSEI, 9 provided a similar pattern of results in spite of the fact that data for different participants were represented for each subscale. The data are also consistent with other studies showing that impressions of others can vary with the personality traits of the observer (Zebrowitz, 1990). Thus, in the present study, observers who themselves had high self-esteem tended to see similar high self-esteem in a model who maintained eye contact, and lower self-esteem in a model who did not maintain much eye contact. Observers with a low level of self-esteem, however, showed the opposite pattern; low eye-contact durations produced perceptions of higher self-esteem than did high durations.

Droney and Brooks (1993) and others (Amalfitano & Kalt, 1977; Brooks et al., 1986; Napieralski et al., 1995; Wheeler et al., 1979; Wiens et al., 1980) note that eye contact is a dominant nonverbal cue which conveys positive traits like a sense of control, confidence, reduced anxiety, and high self-esteem. The present data suggest that the degree to which these interpretations are made by an observer depend to some extent on the personality of that observer, and that low self-esteem individuals in particular might provide an exception to this generally favorable perception pertaining to maintaining eye contact.

Feshbach et al. (1996) note most of us want to be in situations which enhance our self-esteem and to avoid situations which threaten our self image. Maintaining eye contact in a social situation can be difficult for anyone who is uncomfortable and unsure of oneself (Hiscock, 1975; Kendon, 1967; Meskin, 1974), and if that person comes to the situation with low self-esteem, establishing and maintaining eye contact with another might be especially difficult and may even constitute a threatening situation with respect to self-esteem levels. Baumeister et al. (1989) note that low self-esteem individuals engage in self-protective strategies and, consequently, observing someone who maintains eye contact could
produce the negative perceptions found in the present study as a way of avoiding the threat and protecting the self-image by reducing the possible superiority of the one being observed. For the person high in self-esteem, however, eye contact is not a threat, and, in fact, when another person is observed to avoid such eye contact, as in the 5-s tape, a downward comparison of that person may be made to enhance and maintain the observer’s own already high self-esteem. In the case of the low self-esteem observer of the low eye-contact model, however, affiliation and identification with this model (Baumgardner et al., 1989) could produce perceptions of higher self-esteem and thus be used to enhance the self-view of the observer.

These interpretations of the present data are, of course, tentative and speculative. The self-esteem level of the participants in the present study is a subject-defined variable and cannot be inferred as a causal variable (Elmes, Kantowitz, & Roediger, 1995). Also, we did not directly measure any potential mediating processes in our observers. In spite of these cautions, however, our results are compatible with studies discussed earlier and other research showing that people often have a tendency to evaluate themselves in a positive fashion to enhance and protect their view of self (Gibbon, 1986; Greenberg & Pyszczynski, 1985; Hattie & Marsh, 1996; Lewinsohn, Mischel, Chaplin, & Barton, 1980; Taylor & Brown, 1988). Baumeister et al. (1989) and Baumgardner et al. (1989) note, however, the strategies used in this process can vary as a function of self-esteem. Along these lines, it seems reasonable to infer that our high self-esteem participants enhanced their self-esteem by perceiving lower self-esteem in the low-eye contact model. In the case of the low self-esteem participants, however, an argument can be made that they similarly tried to enhance their self-esteem, but did so by perceiving relatively higher self-esteem in the low eye-contact model. Additional research is needed to investigate these possibilities by determining the degree to which observers in a situation like ours tend to identify with the model on the tape. Baumgardner (1990), for instance, found that the self-enhancement process in low self-esteem individuals is based on less confidence and certainty than is the case for high self-esteem individuals.

References


