You're better than I if you're hotter than I: The role of objective physical attractiveness in the physical attractiveness stereotype

Vous êtes mieux que moi si vous êtes plus sexy que moi: le rôle de l'attirance physique objective dans le stéréotype d'attirance physique

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Abstract
This research explored whether one's objective physical attractiveness affects the expression of the physical attractiveness stereotype. 113 participants rated photographs of individuals of various levels of physical attractiveness before their own photograph was rated by objective means. Consistent with the physical attractiveness stereotype, targets that were rated as more physically attractive were also rated as more sociable and better adjusted. In addition, increases in participants' objective physical attractiveness covaried with lowered evaluations of the target's psychological attributes, with this effect mediated by the participant's ratings of the target persons' physically attractiveness. Overall, these findings are consistent with implicit personality theory and point to the importance of assessing objective attributes to predicting evaluations of other persons.

Résumé
Cette recherche a examiné si l'attirance physique objective de quelqu'un modifie l'expression du stéréotype d'attirance physique. 113 participants ont évalué des photographies de personnes de différents niveaux d'attirance physique avant que leur propre photo soit évaluée par des évaluateurs objectifs. En accord avec le stéréotype d'attirance physique, les cibles évaluées comme plus attractantes physiquement étaient également évaluées comme plus sociables et mieux ajustées. Lorsque le participant était plus attirant physiquement, son évaluation des attributs psychologiques des cibles était plus basse. Cet effet était médialisé par les évaluations de l'attirance physique des cibles. Dans l'ensemble, ces résultats sont cohérents avec la théorie de la personnalité implicite et montrent l'importance d'évaluer les attributs objectifs pour pouvoir prédire les évaluations d'autres personnes.

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Key words
Physical attractiveness stereotype, physical attractiveness, implicit personality theory, self-esteem

Mots-clés
Stéréotype d'attractance physique, attrait physique, théorie de la personnalité implicite, estime de soi
The physical attractiveness stereotype—the finding that individuals ascribe more positive evaluations to those who are physically attractive than to those less attractive (Dion, Berscheid, & Walster, 1972)—is robust (average effect size, \( d = .49 \)) and holds for multiple evaluative dimensions, including intellectual and social competence, integrity, potency, and adjustment (Eagly, Ashmore, Makhijani, & Longo, 1991). From the perspective of the most prominent explanation for the effect, implicit personality theory (Ashmore & Del Boca, 1979; Ashmore, Del Boca, & Wohlers, 1986), the physical attractiveness stereotype develops from direct observation and from the cultural values via the creation of schemas for “physically attractive” versus “physically unattractive” persons. Whereas the research is clear that the physical attractiveness stereotype is a robust effect, the question posed here is whether the process similarly applies when the raters themselves are physically attractive, such that physically attractive raters may not view their similarly-attractive compatriots as possessing positive attributes. In the following sections, I begin by discussing the influence of the rater’s subjective and objective physical attractiveness on the physical attractiveness stereotype.

**Influence of objective physical attractiveness**

People’s objective characteristics (i.e., what one “actually” is rather than what one believes oneself to be) can affect how they view and evaluate other people. Research on reference points (Rosch, 1975) and social cognition (Zebrowitz, 1990), for example, indicates that perceivers’ objective attributes influence how they perceive the attributes that other people possess. Combs and Snygg’s (1959) assertion that “the self provides the frame of reference from which all else is observed. People are not really fat unless they are fatter than we” (pp. 145) posits that raters’ evaluations of other people are dependent on their own objective attributes. Consistent with this notion, research has noted that one’s objective attributes affect evaluations of one’s mental simulations (Markman & McMullen, 2003), social comparisons (Festinger, 1957; Taylor, Morin, Parker, Cohn, & Wang, 2009), comparative appraisals (Jones & Gerard, 1967), and evaluations of other people’s weight (Ball, Crawford, & Kenardy, 2004; Swami & Tovée, 2009).

Important for its proposed role in the physical attractiveness stereotype, perceivers’ objective physical attractiveness also affects their ratings of target people’s physical attractiveness. Specifically, Montoya (2008) found that as perceivers’ objective physical attractiveness increased, their ratings of the physical attractiveness of all of the targets decreased. Montoya found similar links between objective physical attractiveness and perceived satisfaction with, and expected rejection by, unattractive and attractive others. The influence of objective physical attractiveness held even after controlling for subjective physical attractiveness (i.e., how physically attractive individuals rated themselves to be) and self-esteem.

From the perspective of implicit personality theory, one’s evaluation of the attributes of physically attractive targets is determined by schemas applied to “physically attractive” persons. However, by taking into consideration the perceivers’ objective physical attractiveness, ratings of the target person’s psychological attributes would then be affected by perceptions of the target person’s physical attractiveness. More specifically, this perspective posits that the perceivers’ objective physical attractiveness affects how physically attractive they perceived other people to be, which in turn influences their evaluations of the target person’s attributes. In short, the more attractive the rater, the less physically attractive s/he evaluates another to be, which then reduces the evaluation of the other person’s psychological attributes.

**What about subjective self-evaluations?**

Self-esteem and subjective physical attractiveness have also been linked to the strength of the physical attractiveness stereotype. Research has proposed that individuals with low self-esteem are likely to experience social threat from those who possess desirable characteristics. The presence of desirable characteristics can lead to perceived social threat, which may lead persons with low self-esteem to derogate physically attractive people. Indeed,
research has revealed that the physical attractiveness stereotype is moderated by participants' self-esteem (Graham & Perry, 1976) and self-perceived attractiveness (Horton, 2003), such that participants with less positive self-views rated physically attractive targets less favorably (e.g., less well adjusted, more dull) than participants with more positive self-views. Importantly, the authors reasoned that people with less favorable self-views lowered their evaluations, because they regarded—in the words of Graham and Perry—“attractive others as a threat to their own competence” (p. 271). In short, this research advances the proposition that subjective self-evaluations affect the physical attractiveness stereotype due to the evaluative threat that perceivers experience from the target person's physical attractiveness.

It is important to note that subjective physical attractiveness is only moderately correlated with objective physical attractiveness. Specifically, a meta-analysis of 18 studies found a small, but reliable, relation between objective and subjective physical attractiveness (r = .25, Feingold, 1992). This lack of consistency may be attributable to the notion that self-evaluations of physical attractiveness are generated from, and usually inflated by, numerous sources, including past dating successes/failures (e.g., past dating relationships, past rejections at the discotheque), motivated social comparisons (Stapel & Koomen, 2000), and biased memories to maintain a high self-esteem (Tafarodi, Marshall, & Milne, 2005).

Purpose of the study

The purpose of this research was to test whether the physical attractiveness stereotype was affected by perceivers' objective and subjective characteristics. Ratings of the target persons' psychological attributes were hypothesized to fall as the perceiver's objective physical attractiveness rose. Importantly, the perceiver's assessments of the target's physical attractiveness were hypothesized to mediate the link between the participant's objective physical attractiveness and ratings of the target's psychological attributes. I also tested whether subjective self-evaluations (self-esteem and subjective physical attractiveness) affected the operation of the physical attractiveness stereotype.

To test these predictions, participants were asked to evaluate target photographs on various psychological dimensions. The dimensions on which the target photographs were evaluated were drawn from Eagly et al.'s (1991) meta-analysis of the physical attractiveness stereotype. Eagly et al.'s meta-analysis found that attractive others were imbued with more positive assessments for the ability/competence assessment of a target person (social competence, adjustment, potency, intellectual competence), but that the stereotype did not refer to assessments consistent with a morality/warmth assessment of a target person (integrity, concern for others). In this research, I selected three dimensions associated with reliable effect sizes for investigation: sociability (social skills), potency, and adjustment. To assess the roles of target and rater physical attractiveness, participants also rated the target person's physical attractiveness and the participant's photograph was taken.

Method

Participants

One hundred thirteen undergraduate students (M = 19.11 years old, SD = 0.90; 47% women, 88% white) enrolled in an introductory psychology course at a medium-sized university participated in the study as a partial fulfillment of a course requirement.

Procedure

Each participant was seated alone in a private room. Participants first assessed their own subjective physical attractiveness (“How physically attractive do you consider yourself to be, relative to other people your age?; 1 = not at all attractive, 9 = very attractive) and completed the global self-esteem scale (α = .89; Fleming & Courtney, 1984). Next, participants viewed two photographs of opposite-sex individuals for each of the seven levels of physical attractiveness (for a full description of the set of photographs, see Montoya, 2008). Each photograph included the target person’s head and shoulders. Participants were instructed to rate
the target individual on each of the four dimensions: sociability (social skills; items: popular, extroversion, sociable; α = .62), adjustment (items: well-adjusted, mature, emotionally stable; α = .66), potency (items: dominant, assertive, strong; α = .65), and physical attractiveness (1 = very physically unattractive, 10 = very physically attractive). After completing their ratings of the photographs, the experimenter asked participants whether s/he could take their photograph with a digital camera (all consented). Participants were instructed to not smile and the photograph included the participants' face and shoulders.

Results

Attractiveness of the participants

Five raters (two men, three women) evaluated all participant photographs (1 = very physically unattractive, 10 = very physically attractive). Because research has demonstrated a strong relation between ratings of men and women by same- and opposite-sex raters (e.g., Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000; Montoya, 2008), raters rated both male and female participants. The reliability between raters was acceptable, ICC = .76.

Data analysis

A two-stage hierarchical linear model with restricted maximum likelihood computations was utilized to assess both within- and between-persons factors by representing ratings of target physical attractiveness as nested within individuals. All analyses were conducted using the PROC MIXED procedure in SAS Software (SAS Institute, 1999).

The first stage (level-1 model) determined the proportion of variability that resulted from changes in targets' physical attractiveness. This model tested whether participants' ratings (of physical attractiveness, potency, sociability, adjustment) changed within each participant across levels of target physical attractiveness. Objective physical attractiveness was then included as a level-2 predictor. The influence of exploratory demographic variables (e.g., relationship status, gender) was tested by repeating the analyses with the moderator included in the model as a level-2 factor. No variable affected the results; as such, these additional analyses are not described.

Preliminary analyses

Descriptive statistics for all variables are presented in Table 1. Pearson correlations were conducted with variables aggregated at the individual level. As expected, objective physical attractiveness was significant negatively correlated with ratings of adjustment, sociability, targets' physical attractiveness, but not potency. In contrast, self-esteem and subjective physical attractiveness were unrelated to assessments of the target's psychological attributes.

Manipulation check

An initial analysis was conducted to determine whether participants' ratings of the target's physical attractiveness increased across target attractiveness level. The mean intercept for targets' physical attractiveness rating (grand mean centered) was 3.14, whereas the slope for targets' physical attractiveness was .54 (β = 27.09, p < .05), indicating that a one unit increase in targets' physical attractiveness was associated with a .54 increase in ratings of the target photographs. The large slope coefficient

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Target physical attractiveness</th>
<th>Objective physical attractiveness</th>
<th>Subjective physical attractiveness</th>
<th>Self-esteem</th>
<th>Potency</th>
<th>Sociability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target physical attractiveness</td>
<td>3.59</td>
<td>0.72</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective physical attractiveness</td>
<td>4.86</td>
<td>1.27</td>
<td>-22*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective physical attractiveness</td>
<td>5.89</td>
<td>1.51</td>
<td>.00</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>6.50</td>
<td>1.28</td>
<td>- .05</td>
<td>.10</td>
<td>.45*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potency</td>
<td>4.09</td>
<td>0.39</td>
<td>.89*</td>
<td>- .03</td>
<td>- .60</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociability</td>
<td>4.07</td>
<td>0.40</td>
<td>.44*</td>
<td>- .25*</td>
<td>- .06</td>
<td>.05</td>
<td>.40*</td>
<td></td>
</tr>
<tr>
<td>Adjustment</td>
<td>4.57</td>
<td>0.54</td>
<td>.27*</td>
<td>- .25*</td>
<td>.18</td>
<td>.02</td>
<td>.11</td>
<td>.35*</td>
</tr>
</tbody>
</table>

Note. N = 113; * p < .05.
provides support for the manipulation of the target photographs by indicating the widely-spaced levels of target physical attractiveness.

**Physical attractiveness stereotype analyses**

**Potency.** To assess the influence of objective physical attractiveness on ratings of potency, objective physical attractiveness was included as a level-2 predictor. The slope for objective physical attractiveness, -0.03, was not significant, \( t(111) = 0.59, p = .55 \).

Models that included subjective physical attractiveness or self-esteem as level-2 predictors failed to produce significant slopes (\( t(111) = 0.95, p = .34 \), and \( t(111) = -0.02, p = .98 \), for subjective physical attractiveness and self-esteem, respectively), meaningful changes in the amount of variance explained, or interactions with ratings of target physical attractiveness; suggesting that neither self-esteem nor subjective physical attractiveness accounted for changes in ratings of the targets' potency ratings.

**Sociability.** The slope for objective physical attractiveness, -0.11, was significant, \( t(111) = -2.37, p < .05 \). Predicted means revealed that mean ratings of sociability fell as levels of objective physical attractiveness rose. In other words, participants at one standard deviation above the mean of objective physical attractiveness consistently rated all targets as less sociable; whereas participants at one standard deviation below the mean rated all targets as more sociable.

As with potency, models that included subjective physical attractiveness or self-esteem as level-2 predictors failed to produce significant slopes (\( t(111) = 1.32, p = .18 \), and \( t(113) = -0.23, p = .82 \) for subjective physical attractiveness and self-esteem, respectively), meaningful changes in the amount of variance explained, or interactions with ratings of target physical attractiveness.

**Adjustment.** As with sociability, the slope for objective physical attractiveness on adjustment ratings, -0.15, was significant, \( t(111) = -2.60, p < .05 \). In addition, as with sociability and potency, models that included subjective physical attractiveness or self-esteem as level-2 predictors failed to produce significant slopes (\( t(111) = 1.53, p = .18 \), and \( t(111) = -0.18, p = .85 \) for subjective physical attractiveness and self-esteem, respectively), meaningful changes in the amount of variance explained, or interactions with ratings of target physical attractiveness.

**Mediation analyses**

To test whether changes in ratings of adjustment or sociability resulted from changes in the target’s physically attractiveness ratings, multilevel mediation (Krull & MacKinnon, 2001) using hierarchically linear modeling was used to model the Level-2 variable (objective physical attractiveness), the Level-1 mediator (ratings of the target’s physical attractiveness), and the Level-1 outcome variable (ratings of adjustment or sociability).

According to MacKinnon, Lockwood, Hoffman, West and Sheets (2002), mediation is established when (a) the independent variable influences the mediating variable; (b) when including the proposed mediator and the independent variable as predictors of the dependent variable, the influence of the proposed mediator is significant; and (c) the indirect effect of the mediating variable is significant. The first mediation condition was satisfied: Ratings of targets’ physical attractiveness were influenced by participants’ objective physical attractiveness, \( B = -0.17, SE = 0.08, p < .05 \).

For sociability, when including ratings of targets’ physical attractiveness and participants’ objective physical attractiveness as predictors of sociability, ratings of the targets’ physical attractiveness predicted sociability, \( B = 0.24, SE = 0.02, p < .05 \). Using MacKinnon et al.’s (2002) empirically derived critical values for the assessment of indirect effects (critical values for \( z^2 \) of .05 are 0.97 and 1.10, respectively), the indirect effect of objective physical attractiveness on sociability via ratings of targets’ physical attractiveness on sociability was significant, \( z^2 = 2.05, p < .05 \), providing support for mediation.

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1. Two photographs (designated to represent the 3rd of the seven levels of target physical attractiveness) were excluded for statistical reasons, specifically, the ratings of the two photographs (a) violated homogeneity assumptions and (b) were rated as more physically attractive than the 7th level of target attractiveness.
With respect to adjustment, when including ratings of targets’ physical attractiveness and participants’ objective physical attractiveness as predictors of adjustment, ratings of the targets’ physical attractiveness predicted adjustment, $B = 0.14, SE = 0.02, p < .05$. The indirect effect of objective physical attractiveness on adjustment via ratings of targets’ physical attractiveness was significant, $z’ = 1.97, p < .05$, providing support for mediation.

Discussion

This research explored whether the physical attractiveness stereotype is applied as a function of the participant’s objective physical attractiveness, such that objective physical attractive people will not view other physically attractive people as holding more favorable attributes. Consistent with expectations, physically unattractive participants, compared to the more attractive participants, evaluated target persons as more sociable and better adjusted (but not more potent), with such evaluations mediated by the participant’s perception of the target person’s physical attractiveness. The finding that objective physical attractiveness, but not self-esteem or subjective physical attractiveness, regulated evaluations of target people provides additional support for assessing perceivers’ objective attributes.

More specifically, little support was identified for the proposition that subjective self-evaluations (e.g., self-esteem, subjective physical attractiveness) affected the operation of the physical attractiveness stereotype, a finding inconsistent with past findings (e.g., Graham & Perry, 1976). The specific design employed in this study may have reduced the influence of subjective self-evaluations on the physical attractiveness stereotype. Whereas the present study asked participants to create anonymous ratings of an unknown target person, research has identified situations in which subjective self-evaluations are more likely to affect interpersonal ratings. Specifically, subjective self-evaluations may have played a larger role (a) when an intense interaction (versus no interaction) is expected (e.g., Agthe, Spörre, & Maner, 2010; 2011) or (b) when morality/warmth traits are assessed (e.g., Eagly et al., 1991; Graham & Perry, 1976). Morality/warmth is more likely to be affected by the participant’s subjective self-evaluations because it is predictive of whether another person will accept/like the person (i.e., people believe that friendly/warm people are more likely to accept them; Montoya & Horton, 2014). Alternatively, research has also observed that participants may be more prone to experience more social threat from same-sex persons than other-sex persons, as those are the people who may arouse negative social comparisons and may pose as competitors in the dating realm (e.g., Agthe et al., 2010). Future research may investigate the degree to which the contribution of objective physical attractiveness on the physical attractiveness stereotype applies more to same- versus other-sex target persons.

Finally, this research is consistent with Eagly et al.’s (1991) conclusion regarding the physical attractiveness stereotype as motivated by implicit personality theory. Specifically, Eagly et al. posited that evaluations of other persons were the result of an automatic process that was governed by perceptual processes associated with person perception. The present findings support the implicit personality theory’s approach by noting that different standards were used to define the target person as “physically attractive” and were thus critical to the application of the physical attractiveness stereotype. If that person meets that standard of physical attractiveness (which is affected by the perceiver’s own objective physical attractiveness), they are considered to be physically attractive, and the appropriate attributes apply to the members of the particular social category.

References


