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Attractiveness Differences Between Twins Predicts Evaluations of Self and Co-Twin

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Abstract

One of the most consistent findings in psychology shows that people prefer and make positive attributions about attractive compared with unattractive people. The goal of the current study was to determine the power of attractiveness effects by testing whether these social judgments are made where attractiveness differences are smallest: between twins. Differences in facial attractiveness predicted twins' evaluations of self and their co-twin ($n = 158$; 54 male). In twin pairs, the more attractive twin judged their less attractive sibling as less physically attractive, athletic, socially competent, and emotionally stable. The less attractive twin did the reverse. Given that even negligible differences in facial attractiveness predicted self and co-twin attitudes, these results provide the strongest test yet of appearance-based stereotypes.

Keywords

attractiveness; social attributes; twins

Adults and children judge attractive people as having more socially desirable characteristics compared with unattractive people (Dion, 1973; Dion, Berscheid, & Walster, 1972). Not only do people evaluate unfamiliar physically attractive people as more intelligent, sociable, and friendly than less attractive people, this finding holds even for people who are well acquainted (see Langlois et al., 2000 for a review and meta-analysis). Attractiveness even predicts differences in the quality of the relationship between mother and child (Langlois, Ritter, Casey, & Sawin, 1995).

A familial bond that might be even closer than the mother and child bond is that of twin siblings. Beginning at conception, twins are inextricably linked with each other throughout their lifetime, and previous research demonstrates that the mere fact of being a twin influences the sense of self (Akerman, 2003; Bacon, 2006; Danby & Thorpe, 2006; Noller, Blakeley-Smith, & Conway, 2007; Schave & Ciriello, 1983). However, no study has examined the role of physical attractiveness on evaluations of self and sibling within the twin relationship. This fact is not surprising: Differences in the facial appearance of twins are often minimal. Moreover, there is often a remarkable physical similarity even between dizygotic twins (DZ). Nevertheless, research shows that there are measurable attractiveness differences between “identical” monozygotic twins (MZ)—differences likely caused by disparate developmental experiences *in utero* (McGovern, Neale, & Kendler, 1996; Mealey,

Bridgstock, & Townsend, 1999). Mealey et al. (1999) found that mean attractiveness differences ranged from 0.01 to 1.03 on a 7-point Likert scale among MZ co-twins.

Given that there are small but measurable attractiveness differences in MZ and DZ twins, the purpose of the current study is to apply the strongest test yet to appearance-based judgments. Do facial attractiveness differences between twins predict differences in the perception of one's self and co-twin? If even minimal differences in appearance affect evaluations of the self and those of the person to whom they are closest, then the power of appearance-based stereotypes is greater than any study has yet suggested. We hypothesized that—despite remarkable physical similarities—the more physically attractive co-twin within each pair will report higher ratings of self-worth and of associated domain-specific perceived aptitudes (e.g., intelligence) compared to their less attractive twin. We also postulate that twins will evaluate their co-twins with respect to attractiveness differences: The more attractive twin should rate their less attractive sibling as less socially competent, whereas the less attractive twin should do the reverse.

Finally, we are interested in determining whether twin-type status (either MZ or DZ) predicts attitudes based on appearance. For example, attractiveness differences may be more deleterious to less attractive MZ twins' self-worth because they are presumed to be "identical" to their sibling, whereas DZ twins are presumed not identical and therefore they may not expect appearance equality. However, this finding could only result if twin type is considered to be an important component of the self (i.e., twins who are not certain of whether they are MZ or DZ might show no differences in outcomes related to the attractiveness disparity between sibling and self).

Method

Participants

One hundred twin pairs from two universities in the southwestern United States participated. We recruited twins using methods similar to previous investigations (see Rowe, Clapp, & Wallis, 1987). In brief, registrars released student birth dates and last names prior to the first day of the semester. Our research team contacted every student who shared a birthdate and last name with another student to inquire if they a) were in fact a twin and b) would consider participating in a brief psychological study. Participants received either research course credit or a nominal gift. We established whether the twin pair was monozygotic or dizygotic following the procedure established by Torgersen (1979). We excluded the data of some twin pairs for the following reasons: opposite-sex fraternal twins (so as not to confound gender differences with attractiveness differences; $n = 2$); pairs who declined to have their photographs taken or used in the research ($n = 2$); twin type could not be determined ($n = 2$); and digital images of twin siblings that were of poor comparison quality ($n = 19$; see Procedure for explanation). The final sample included 47 MZ pairs, 32 DZ pairs. Henceforth, we refer to the co-twin whose given name is alphabetically first as "Twin A" and their sibling as "Twin B."

Procedure

Twins completed a battery of questionnaires designed to assess their self-views and judgments of their co-twin (see Measures). A member of our research team answered questions and prevented talking or sharing of answers between the twins. We obscured all cues to physical appearance (i.e., reflective surfaces) so participants would be less likely to focus on their appearance. After the completion of the questionnaires, we photographed twins' faces. Each twin posed with a neutral facial expression, and a drape masked clothing cues. We standardized images offline for size and brightness using Adobe Photoshop 8.0™.

Because we were interested in differences in attractiveness between people who appear very similar, it was especially important that the only perceptual difference between sibling images was attractiveness. Thus, we chose not to have the images of 19 twin pairs rated because we could not resolve all between-sibling differences (e.g., photographer error—contrast, blur—twins' cosmetic choices, emotional expression, and so on).

After all twins had participated, 145 undergraduate students (49 male) rated all Twin As for attractiveness on a 7-point Likert scale (1 = very unattractive and 7 = very attractive). A second independent group of 75 undergraduate students (27 male) rated Twin Bs for attractiveness. In both cases, inter-rater reliabilities were high ($\alpha > .95$).

Measures

Self-Perception Profile for College Students (SPPCS)—We were interested in two sections from the SPPCS (Neeman & Harter, 1986), the “What Am I Like” (WIAL) survey and the “People in My Life” (PIML) survey. The WIAL assesses participants' perceived aptitudes in the areas of creativity, intellectual ability, scholastic competence, job competence, athletic competence, appearance, romantic relationships, social acceptance, close friendships, parent relationships, humor, morality, and global self-worth. The PIML assesses participants' perceived relationships with close friends, mothers, fathers, campus organizations, and instructors. Both measures present participants with pairs of statements (e.g., “some students are not satisfied with their social skills BUT other students think their social skills are just fine”; Neeman & Harter, 1986, p. 6). Participants first must decide which of these two statements best describes them. After selecting a statement, participants must specify whether the statement is “really true of me” or “sort of true for me.” The SPPCS has high internal validity and the reliabilities of the self-perception subscales range from $\alpha = .76$ to $\alpha = .92$.

Self-Attribute Questionnaire (SAQ)—The SAQ assesses participants' perceived aptitudes (Pelham & Swann, 1989). The SAQ consists of four sections, each comprised of 10 questions evaluating participant attributes. The first section asks participants to evaluate themselves in comparison with peers on a scale that ranges from the bottom 5% of college students to the top 5% of college students on dimensions of intellectual ability, social competency, artistic ability, athletic competency, physical attractiveness, leadership ability, common sense, emotional stability, luck, and discipline. The second section asks participants to rate their level of certainty regarding their abilities on the same 10 dimensions. The third section evaluates how personally important these 10 dimensions are, and the last section asks participants to compare their abilities along these 10 dimensions to their ideal self. We considered participant abilities within each dimension, total self-view and ideal-self discrepancy as well as the indices of certainty and importance (see Pelham & Swann, 1989 for details on how these scores are calculated). The SAQ is internally consistent ($\alpha = .76$).

Self-Liking and Self-Competence (SLSC-R)—The SLSC-R is an additional measure of feelings of global self-esteem (Tafarodi & Swann, 2001). Twins reported their feelings of self worth on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Examples of items include “I am very comfortable with myself” and “I do not have enough respect for myself” (negatively scored). The SLSC-R is internally consistent in both self-liking ($\alpha = .83$) and self-competency ($\alpha = .94$) measures.

Twin-Attribute Questionnaire (SAQT)—The SAQT was modified from the SAQ for use in the current study. Twin siblings evaluated their co-twin in comparison with other college students on a scale that ranged from the bottom 5% of college students to the top 5%

of college students. Like the SAQ, twins judged their co-twins on dimensions of intellectual/academic ability, social skills/social competency, artistic and or musical ability, competency or skill at sports, physical attractiveness, leadership ability, common sense, emotional stability, luck, and discipline. The SAQT was internally consistent ($\alpha = .75$).

Data Analysis

Two types of analyses were performed. First, we executed ordinary least squares (OLS) regression analyses on the various self- and twin-evaluation outcomes, using attractiveness as the sole predictor to confirm and replicate previous research that shows a relationship between attractiveness and social judgments. Second, we executed a hierarchical linear model (HLM) analysis to determine whether the differences in attractiveness between twins predict social judgments beyond overall attractiveness. Individual participants (Level 1) were nested within twin pairs (Level 2). All HLM analyses included attractiveness and difference in attractiveness as predictors. Additional random effects were added to the models if they improved model fit as determined by the Akaike information criterion (AIC). For significant random effects, we report the intraclass correlation coefficient, $\rho = \tau/(\tau + \sigma^2)$, an indicator of the percentage of variance explained by differences between twin pairs. For the sake of brevity, we report only the final significant models using the notation established by Raudenbush and Bryk (2002; see Appendix for final HLM equations).

Results

Effects of Attractiveness

Replicating previous research, OLS regressions revealed positive linear relationships between the attractiveness of participants and self-reported social acceptance, social competency, physical attractiveness, close relationship with parents, romantic success, and athletic ability. Furthermore, attractive participants reported having significantly closer relationships with their friends, mothers, fathers, and campus organizations compared with less attractive participants. Interestingly, there was a negative relationship with attractiveness and self-reported artistic ability. Finally, we found a marginally significant relationship between overall attractiveness and reported self-liking. The third column of Table 1 reports the unstandardized regression coefficients and effect sizes for each of these analyses.

Effects of Differences in Attractiveness Between Twins

We first determined that twins' attractiveness ratings of themselves and their siblings were correlated with the attractiveness ratings obtained from participants who did not know the twins ($r = .28$ and $r = .32$, respectively; $ps < .01$). HLM analyses revealed a significant interaction of twin type (MZ or DZ) and attractiveness difference on self-reported job competency (see the fifth column of Table 1 and Equation A1 in the Appendix). The more attractive the MZ twin was compared with their co-twin, the higher they rated their own job competency (see Figure 1). Although the more attractive DZ twin appears to rate their job competency lower than that of their sibling, an OLS test of the simple effects revealed that this slope was not significant ($p = .36$). Although only marginally significant, the same interaction and pattern of results was found for dimensions of intelligence (Equation A2), and sense of humor (Equation A3). There was significant variation between twin pairs for job competency ($\rho = .33$) and intelligence ($\rho = .58$) but not for sense of humor. Put another way, differences in attractiveness between twin pairs accounted for 58% of the variation in reported intelligence. Another HLM analysis revealed that the attractiveness difference between siblings significantly predicted the reported closeness of friendships: Less attractive twins reported having closer friendships compared with their more attractive siblings (see the fourth column of Table 1 and Equation A4). We found significant variability in the

intercept ($p = .46$) and slope of attractiveness differences ($p = .13$), again indicating variation between twin pairs. In addition, an HLM analysis revealed an effect of twin attractiveness difference on self-liking such that as the attractiveness disparity between twins increased, the self-liking ratings of the more attractive twin decreased (Equation 5). There was significant variation between twin pairs ($p = .35$).

HLM analyses also revealed that attractiveness differences within twin pairs predicted how co-twins evaluated each other. For example, after controlling for overall attractiveness, attractiveness differences predicted ratings of co-twins' social competence ($p = .31$), athletic ability ($p = .66$), physical attractiveness ($p = .47$), leadership ability ($p = .14$), and emotional stability ($p = .16$; see Table 1, Equations A6–A10, and Figure 2). In each case, the less attractive twin rated their co-twin as significantly more socially competent, more athletic, more physically attractive, having greater leadership ability, and being more emotionally stable.

Because attractiveness differences predicted a number of social evaluations, we sought to determine whether our participants were conscious of the attractiveness differences between their twin and themselves. By comparing self-ratings to twin ratings, we found that only 7 of 79 pairs agreed that one twin was more attractive than other (e.g., Twin A rated themselves an 8 and their sibling a 7; Twin B did the opposite). Of these 7 pairs, 6 agreed with the objective ratings. Examining the 149 participants overall, 58 (38.93%) rated themselves and their sibling as equally attractive. Of those who rated either themselves or their twin as more attractive, only 51 participants' ratings were in the same direction as the objective ratings (56.67%). One participant did not rate herself for attractiveness. There was no difference between MZ and DZ pairs ($\chi^2_s < 1.8$, $p_s > .18$). Thus, despite their predictive power, twin attractiveness differences appear to be unconscious for most of our participants.

Twin Type Considerations

Because there were few significant twin type interactions, we removed 24 twin pairs who reported that they were not sure of their status as MZ or DZ twins for an additional set of analyses. Although removing these twins significantly reduced our statistical power, we found a marginally significant interaction of twin type by difference in attractiveness. Specifically, attractive MZ and DZ twins rated their siblings as less attractive, but MZ twins' ratings of their siblings were lower than DZ ratings of their siblings ($p = .13$). Because there is no accepted measure of effect size for HLM analyses, however, this result should be interpreted with caution.

Discussion

The results of this study demonstrate the power of appearance-based stereotypes. Surprisingly, even twin siblings evaluate themselves and each other based on the attractiveness differences observed by independent raters. This effect is shown most dramatically in their evaluations of their co-twins; differences in unbiased ratings of facial attractiveness predict assessments of social competence, leadership ability, emotional stability, athletic ability, and physical attractiveness. Furthermore, twins evaluated themselves based on the same attractiveness differences. The more attractive siblings evaluated themselves as more intelligent, as having higher job competency, a better sense of humor, and as liking themselves more than their less attractive twins rated themselves. Note that there are several possible mechanisms that might account for these differences. However, because the current study was exploratory, we did not explicitly investigate causal mechanisms. Nevertheless, exploring possible mechanisms might inform future research. Why might even small differences in attractiveness between twins have resulted in

differential evaluations? We posit that differential treatment and social comparisons explain our results.

Differential Treatment

Internalization of perceived views of others are likely reinforced by the observable differences in the treatment people receive. Specifically, differences in attractiveness result in differential treatment: More attractive people are given preference over less attractive people as measured in greater employment opportunities and higher pay (Hamermesh, 2011; Hosoda, Stone-Romero, & Coats, 2003). Many different types of interaction partners, including parents and children (e.g., Langlois et al., 1995; Elder, Van Nguyen, & Caspi, 1985), peers (Dion, 1973), and teachers and students (e.g., Kenealy, Frude, & Shaw, 1987) treat unattractive people more negatively than attractive people. One such domain where differential treatment may be especially salient is between siblings. Parents, peers, and teachers compare siblings to one another and treat them differently (Lamb, 1982).

Differential parental solicitude theory (see Daly, 1990) suggests that parents treat children differently based on evolutionary fitness—rewarding fit children who are more likely to survive—with better parenting. As attractiveness is thought to be a marker of fitness (see Thornhill & Gangestad, 1999; but see Kalick, Zebrowitz, Langlois, & Johnson, 1995 for an alternative view), more attractive people should have superior outcomes than less attractive people. In a dramatic demonstration, Langlois et al. (1995) showed that mothers of less attractive infants spent comparatively more time interacting with other adults and less time engaged in affectionate behavior with their infants compared with mothers of more attractive infants. Perception of parental differential treatment influences siblings, including twins, self-views (Sheehan & Noller, 2002). When siblings are treated differently, the sibling who is not preferred will likely have lower self-esteem (Noller, 2005). Treatment in the mother-child relationship may be especially influential to twin siblings because twins are reared in triads of the mother and the two co-twins (Rowland, 1991). Perhaps attractiveness is one of the factors that explain why mothers form a closer bond with one twin over another (Piontelli, 2002; Rowland, 1991). Twins who are treated more advantageously are likely to have self-views that are more positive compared with their non-preferred co-twins (Noller, 2005; Sheehan & Noller, 2002). These differential evaluations and behaviors may be internalized and influence one's own self-appraisals (Klein, 2003). Our results demonstrate that the attractiveness difference between twins predicts views of self and those of their co-twin.

Social Comparison

Social comparison is the process through which people evaluate themselves by contrasting their abilities and attributes with those of others' (Buunk & Mussweiler, 2001; Festinger, 1954). Appearance is one dimension along which people compare themselves (Krones, Stice, Batres, & Orjada, 2005). For example, women with higher levels of contingent self-esteem have significant decreases in positive affect and increases in negative affect after rating magazine models for attractiveness (Patrick, Neighbors, & Knee, 2004).

Furthermore, because of the many social, physical, and contextual similarities, siblings frequently compare themselves to one another (Bank & Kahn, 1982). Evolutionary psychology suggests that social comparisons among siblings are common due to competition for parental investment (Gilbert, Price, & Allan, 1995). For instance, status as the more attractive sister may lead to positive self-evaluations, whereas status as the less attractive sister may lead to negative self-evaluations (Rieves & Cash, 1996). Because of their similarities in age and physical appearance, twin siblings are especially likely to contrast their co-twin with their own skills and characteristics (Coomber & King, 2008; Klein, 2003).

Moreover, according to Brewer (1991) high similarities reinforce the need to be different. As they mature, same-age peers encourage co-twins to make continuous comparisons between themselves, influencing both their self-views and their views of each other (Bank & Kahn, 1982; Noller, Blakeley-Smith, & Conway, 2007). Thus, in many ways, the finding that there are several dimensions upon which twins distinguish themselves is not surprising. What is noteworthy is that, in the case of our data, positive social traits were almost always associated with the attractive twin.

The self-evaluation maintenance model (SEM; Tesser, 1988) is a social comparison theory that might be especially relevant in future research on twins' assessments of each other. According to the SEM model, social comparisons of one's self to another are based on not only one's level of performance within a given domain but also on the personal relevance of that domain and one's closeness to the other person. However, the current study did not explicitly measure twins' psychological closeness to each other; in addition, it may be likely that even if we had, we would not have found sufficient variation in closeness to be able to make an educated statement about SEM (i.e., twins who attend the same college are likely to be psychologically close to one another). Furthermore, this study was not interested in how the implicit or explicit social comparisons affect twins' evaluations of each other; rather, we sought to determine whether objective differences in facial attractiveness as measured by people unknown to the twins predicted evaluations of their self and co-twin.

Unexpected Findings and Limitations

Unexpectedly, the less attractive twins reported having closer relationships with friends. Although we did not predict this finding, if more attractive twins have more friends and are more popular (Dijkstra, Lindenberg, Verhulst, Ormel & Veenstra, 2009; Langlois & Stephan, 1981), they may have less time to develop "closeness". And, if less attractive twins perceive that their co-twin is judging them negatively, they may be more motivated to seek positive feedback from others leading to more friendships. Future research should investigate these possibilities.

Our sample was limited to twin pairs who attended the same university. Twins who attend the same university may be more similar or have stronger relationships than twins who attend other schools. Furthermore, MZ twins may be more likely to attend the same college compared to DZ twins, accounting for the unusual sample distribution (DZ twins occur in nature twice as often as MZ twins). Moreover, effects of attractiveness differences were only found after controlling for overall attractiveness; thus, attractiveness differences within the twin pair are likely important only when making direct comparisons. Many of our statistical tests may not have been significant because they were not areas in which twins make explicit predictions. Nevertheless, these limitations do not weaken the primary finding that twins stereotype their siblings based on attractiveness within several domains.

This study is not able to determine whether twins' judgments of their co-twins are a mere stereotype or whether this assessment reflects an accurate appraisal (i.e., whether the more attractive twin is objectively more socially competent, athletic, and so forth compared with their less attractive twin). We surmise that the most likely scenario is that the social judgments associated with attractiveness are both stereotypes and accurate reflections of our participants. Many studies have shown that although attractiveness is used as a cue to sociability, altruism, and so forth when there is a dearth of additional information, attractive people nevertheless behave in more socially desirable ways than less attractive people (see Langlois et al., 2000 for a review and meta-analysis). We believe that the stereotypes observed and learned as young infants are acted upon throughout one's life; these judgments become prophecy.

Although there were some interactions of attractiveness difference and twin type, for most analyses twin type did not significantly predict social judgments. One possible reason for this null result was that many of our participants ($n = 48$) were unsure of their status as either an MZ or DZ twin. As such, it is impossible for these twins to have incorporated twin type into their sense of self. When we removed these 24 pairs from our dataset and searched for attractiveness difference by twin type interactions, we found a marginally significant relationship with co-twin attractiveness suggesting that although both the more attractive MZ and DZ twins rate their siblings as less attractive, MZ twins' ratings of their siblings are lower than DZ ratings of theirs. As mentioned earlier, these results should be interpreted with caution; nevertheless, the possibility remains that twin type status interacts with attractiveness differences.

Finally, we found that as the attractiveness disparity between twins increased, the self-liking ratings of the more attractive twin decreased. This finding is surprising because self-liking was positively related to attractiveness overall. It is possible that greater attractiveness disparities between some twins elicits more conscious introspection of these differences; in turn, this awareness evokes self-conscious emotions such as guilt among the high attractive twins, which might decrease self-liking. Future research should test this supposition.

Implications and Future Directions

Perhaps the most important implication of this study is the counterintuitive indication that attractiveness may be one of the more salient differences between twins. Much work in cognitive psychology has shown that people are more likely to compare very similar objects with regard to their differences (e.g., Markman & Wisniewski, 1997). If Bill and Phil are twins, it makes less sense to ask "How are Bill and Phil similar?" than to ask "How are Bill and Phil different?" Thus, despite twins' genetic similarities, or perhaps because of them, people may use this difference and its presumed associated qualities (more attractive is therefore more athletic, more sociable, and so on; less attractive is therefore less athletic, less sociable, and so on) to distinguish between siblings and infer traits and identities regardless of the truth. Furthermore, given that this social comparison occurs within twin pairs, it is likely that it occurs in other dyads and groups such as non-twin siblings, peers, and colleagues. If so, knowing this information may help people to be aware of these unconscious biases and behave accordingly.

Additional research should examine the mechanisms that cause twins to differentiate themselves based on attractiveness. Because twins are so similar, they may enhance the salience of physical appearance. Indeed, many of our participants made conscious clothing and style decisions so as not to overly "match" their sibling. More importantly, however, because our findings emphasize that attractiveness differences predict attitudes and judgments of the self and others even when these differences are very small, we believe future research and interventions should be directed at ameliorating the negative effects of appearance-based stereotypes. Although more work is clearly needed, research has made a positive impact on gender and race stereotypes by disseminating their negative effects to teachers, employers, and policy-makers. Negative stereotypes based on appearance are just as deleterious and deserve similar attention.

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Appendix. HLM Equations

$$\begin{aligned} \text{WIAL.job competence} = & \gamma_{00} + \beta_1(\text{Attractiveness}) \\ & + \beta_2(\text{Attractiveness Difference Between Twins}) + \beta_3(\text{twin} \\ & \quad - \text{type}) \\ & + \beta_4(\text{twin} - \text{type} * \text{attrdif}) + u_0 + \varepsilon \end{aligned} \quad (\text{A1})$$

$$\begin{aligned} \text{intelligence} = & \gamma_{00} + \beta_1(\text{Attractiveness}) \\ & + \beta_2(\text{Attractiveness Difference Between Twins}) + \beta_3(\text{twin} \\ & \quad - \text{type}) \\ & + \beta_4(\text{twin} - \text{type} * \text{attrdif}) + u_0 + \varepsilon \end{aligned} \quad (\text{A2})$$

$$\begin{aligned} \text{sense of humor} = & \beta_0 + \beta_1(\text{Attractiveness}) \\ & + \beta_2(\text{Attractiveness Difference Between Twins}) + \beta_3(\text{twin} \\ & \quad - \text{type}) \\ & + \beta_4(\text{twin} - \text{type} * \text{attrdif}) + \varepsilon \end{aligned} \quad (\text{A3})$$

$$\text{PIML.close friend} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \gamma_{20}(\text{Attractiveness Difference Between Twins}) + u_0 + u_2 + \varepsilon \quad (\text{A4})$$

$$\text{SLSC-R.self-liking} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \beta_2(\text{Attractiveness Difference}) + u_0 + \varepsilon \quad (\text{A5})$$

$$\text{SAQT.social comp} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \beta_2(\text{Attractiveness Difference}) + u_0 + \varepsilon \quad (\text{A6})$$

$$\text{athletic ability} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \beta_2(\text{Attractiveness Difference}) + u_0 + \varepsilon \quad (\text{A7})$$

$$\text{attractiveness} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \beta_2(\text{Attractiveness Difference}) + u_0 + \varepsilon \quad (\text{A8})$$

$$\text{leadership ability} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \beta_2(\text{Attractiveness Difference}) + u_0 + \varepsilon \quad (\text{A9})$$

$$\text{stable emotions} = \gamma_{00} + \beta_1(\text{Attractiveness}) + \beta_2(\text{Attractiveness Difference}) + u_0 + \varepsilon \quad (\text{A10})$$

Figure 1. Difference in attractiveness within twin pairs predicts self-evaluation of job competency, depending on whether the twin pair is mono- or dizygotic.

Figure 2.

Predicted values generated from HLM analyses for the lesser (dark bar) and greater (light bar) attractive twin within each pair are plotted against one another.

Table 1

Summary of Results by Attractiveness, Attractiveness Difference Between Twins, and Twin Type Interaction

Self-evaluations of...	Measure	Attractiveness ^a	Attractiveness Difference ^b	Twin Type by Attractiveness Difference ^c
Intelligence compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Intellectual ability	WIAL	<i>ns</i>	...	$b = -0.16^+$
Scholastic competence	WIAL	<i>ns</i>	<i>ns</i>	<i>ns</i>
Job competence	WIAL	<i>ns</i>	...	$b = -0.25^*$
Social skills compared with peers	SAQ	$b = 0.45^*, R^2 = .04$	<i>ns</i>	<i>ns</i>
Social acceptance	WIAL	$b = 0.22^{**}, R^2 = .06$	<i>ns</i>	<i>ns</i>
Relationship with friends	PIML	$b = 0.23^*, R^2 = .03$	$b = 0.03^*$	<i>ns</i>
Relationship with parents	WIAL	$b = 0.15^{**}, R^2 = .05$	<i>ns</i>	<i>ns</i>
Relationship with mother	PIML	$b = 0.04^{**}, R^2 = .05$	<i>ns</i>	<i>ns</i>
Relationship with father	PIML	$b = 0.05^{**}, R^2 = .06$	<i>ns</i>	<i>ns</i>
Relationship with a campus organization	PIML	$b = 0.03^*, R^2 = .03$	<i>ns</i>	<i>ns</i>
Relationship with an instructor teacher	PIML	<i>ns</i>	<i>ns</i>	<i>ns</i>
Relationships with significant other	WIAL	$b = 0.17^*, R^2 = .03$	<i>ns</i>	<i>ns</i>
Artistic ability compared with peers	SAQ	$b = 0.72^{**}, R^2 = .05$	<i>ns</i>	<i>ns</i>
Creativity	WIAL	<i>ns</i>	<i>ns</i>	<i>ns</i>
Athletic ability compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Athletic competence	WIAL	$b = 0.23^{**}, R^2 = .04$	<i>ns</i>	<i>ns</i>
Physical attractiveness compared with peers	SAQ	$b = 0.56^{***}, R^2 = .08$	<i>ns</i>	<i>ns</i>
Appearance	WIAL	$b = 0.18^*, R^2 = .03$	<i>ns</i>	<i>ns</i>
Leadership ability compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Common sense compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Emotional stability compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Luck compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Discipline compared with peers	SAQ	<i>ns</i>	<i>ns</i>	<i>ns</i>
Sense of Humor	WIAL	<i>ns</i>	...	$b = -0.20^+$
Morality	WIAL	<i>ns</i>	<i>ns</i>	<i>ns</i>

Self-evaluations of...	Measure	Attractiveness ^a	Attractiveness Difference ^b	Twin Type by Attractiveness Difference ^c
Self-liking	SLSC-R	$b = 0.16^{+}$, $R^2 = .02$	$b = -0.20^{*}$	<i>ns</i>
Self-competency	SLSC-R	<i>ns</i>	<i>ns</i>	<i>ns</i>
Global self-worth	WIAL	<i>ns</i>	<i>ns</i>	<i>ns</i>
Evaluations of co-twins' ...	Measure	Attractiveness	Attractiveness Difference	Twin Type by Attractiveness Difference
Intelligence	SAQT	<i>ns</i>	<i>ns</i>	<i>ns</i>
Social ability	SAQT	$b = 0.55^{**}$, $R^2 = .05$	$b = -0.59^{**}$	<i>ns</i>
Artistic Ability	SAQT	<i>ns</i>	<i>ns</i>	<i>ns</i>
Athletic Ability	SAQT	$b = 0.47^{+}$, $R^2 = .02$	$b = -0.61^{*}$	<i>ns</i>
Physical Attractiveness	SAQT	$b = 0.75^{***}$, $R^2 = .20$	$b = -0.66^{***}$	<i>ns</i>
Leadership Ability	SAQT	<i>ns</i>	$b = -0.44^{+}$	<i>ns</i>
Common Sense	SAQT	<i>ns</i>	<i>ns</i>	<i>ns</i>
Emotional Stability	SAQT	$b = 0.36^{*}$, $R^2 = .03$	$b = -0.60^{**}$	<i>ns</i>
Luck	SAQT	<i>ns</i>	<i>ns</i>	<i>ns</i>
Discipline	SAQT	<i>ns</i>	<i>ns</i>	<i>ns</i>

Note.

^aThe Attractiveness column reports the unstandardized beta weights from OLS regressions using the attractiveness of the target (either self or twin) as the sole predictor.

^bThe Attractiveness Difference and Twin Type by Attractiveness Difference columns report the unstandardized beta weights from the HLM regressions using the difference in attractiveness within twin pairs and status as either a MZ or DZ twin as predictors after controlling for individual attractiveness. In the event of a significant twin type by attractiveness difference interaction, we report only the coefficient associated with the interaction term but retained the attractiveness difference main effect, as denoted by ellipses, in the model (see Appendix A).

⁺ $p < .10$;

^{*} $p < .05$;

^{**} $p < .01$;

^{***} $p < .001$