



# Preferences for facially communicated big five personality traits and their relation to self-reported big five personality



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## ABSTRACT

A growing body of research has begun to document that core personality traits are associated with specific facial structures, and that individuals are sensitive to these facial cues, as indexed by preferences for faces communicating higher or lower levels of specific traits. We explored how self-reported Big Five personality traits influence preferences for facially-communicated Big Five personality in targets. Participants selected among pairs of faces manipulated to have structures associated with high or low levels of personality traits (e.g., high extraversion versus low extraversion) and completed a Big Five Inventory. Participants demonstrated the strongest preferences for faces communicating high levels of agreeableness and extraversion. Greater self-reported openness was associated with preferences for higher levels of all facially-communicated Big Five Traits. Interestingly, higher neuroticism in women predicted a stronger preference for agreeable male faces, but disagreeable female faces. Higher neuroticism in men was associated with a stronger preference for facially-communicated openness in male targets, but a reduced preference for facially-communicated openness in female targets. Implications of these findings as they relate to personality and social perception are discussed.

## 1. Introduction

As a social species, humans have historically benefited from group living and pair-bonding for significant periods of time to rear offspring born extremely vulnerable and requiring an extended developmental period for maturation. Myriad research has explored the various factors predicting successful friendships and intimate relationships. One factor predicting initial attraction and satisfaction in lasting bonds is the extent to which individuals have similar levels of various personality traits (Montoya, Horton, & Kirchner, 2008). Although personality similarity predicts attraction and relational satisfaction (e.g., Barelds & Barelds-Dijkstra, 2007; Selfhout, Denissen, Branje, & Meeus, 2009), personality complementarity is also adaptive in forming lasting bonds (e.g., Markey & Markey, 2007). Given their value in predicting relationship satisfaction, it would behoove humans to have developed capacities to identify personality traits efficiently to facilitate association with conspecifics affording greater relational opportunity. While numerous strategies exist to infer another's personality profile (e.g., interacting with this person, others' evaluations), facial structure is one cue from which humans can infer personality at zero-acquaintance. We explored the extent to which people prefer faces whose structures connote high, versus low, levels of Big Five personality traits and link these findings to established research on personality preferences in the

context of similarity and complementarity hypotheses.

### 1.1. Personality and relational satisfaction

Considerable research has explored the extent to which personality similarity or complementarity influence satisfaction across various relationships. Similarity is more important at zero acquaintance or earlier in a relationship than in longer-term contexts (Montoya et al., 2008). For example, personality similarity predicts roommate satisfaction in college (Carli, Ganley, & Pierce-Otay, 1991). However, personality similarity may be differentially beneficial depending on given traits. Social interaction quality is rated higher by participants when partners are similarly extraverted. However, similarly disagreeable partners have poor interaction quality (Cuperman & Ickes, 2009), suggesting similarity preferences may only emerge for traits related to positive interpersonal experiences.

Within dyadic interactions, complementary partnerships based on submissiveness and dominance (i.e., dominant people with submissive partners) produce more interaction satisfaction than dyadic interactions involving high-similarity (i.e., two dominant or two submissive partners; Dryer & Horowitz, 1997). Interestingly, high degrees of personality similarity can be detrimental for marital satisfaction; however, the negative effects of similarity are most pronounced when partners are

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similarly extraverted and conscientious (Shiota & Levenson, 2007). Although personality similarity heightens initial attraction and contributes to relationship satisfaction, specific personality similarity may be detrimental, particularly along the dominance-submissiveness axis and with respect to conscientiousness.

### 1.2. Preferences for others' personality

Given that similarity and complementarity in personality traits predict positive interaction and relational outcomes, it would be adaptive for individuals to prefer personality profiles that might best facilitate relational success. Indeed, people desire partners whose personality resembles their own. Nonetheless, when asked about general preferences, complementarity is preferred to similarity. Additionally, women also desire highly conscientious and extraverted and less neurotic partners than men (Dijkstra & Barelds, 2008). When describing ideal romantic partners, men and women report preferring someone more conscientious, extraverted, and agreeable, but less neurotic, than they are (Figueredo, Sefcek, & Jones, 2006). Such preferences are adaptive, as conscientious and agreeable individuals also report less interest in sexually promiscuous behavior (Schmitt & Shackelford, 2008), agreeable spouses are satisfying (Botwin, Buss, & Shackelford, 1997), and extraverts are attractive (Lukaszewski & Roney, 2011). To identify ideal partners, selection would favor sensitivity to physical features connoting personality to facilitate initial attraction to those who might best fulfill relational goals.

Increasing evidence suggests humans use various nonverbal channels to infer others' personality. Specifically, certain facial structures communicate varying levels of personality traits and people utilize such thin slices of information to form relatively accurate personality judgments (Ambady, Bernieri, & Richeson, 2000), with accuracy exceeding chance levels when facial cues alone are available. Little and Perrett (2007) generated composite images of individuals scoring high or low on personality traits, demonstrating accuracy in detecting Big Five traits; the strongest and most consistent results emerged for conscientiousness and extraversion. Reflecting the efficiency of such personality trait extraction from faces, such inferences occur within 50–150 ms of exposure, particularly for extraversion (Borkenau, Brecke, Möttig, & Paelecke, 2009).

Preferences for facially communicated personality are further predicted by adaptive aspects of one's own personality. For example, individuals who self-report higher levels of trait need to belong report stronger preferences for faces connoting extraversion, an adaptive preference given extraverted persons' gregariousness could satisfy these persons' chronically high affiliative needs (Brown & Sacco, 2017a). Conversely, trait disease vulnerability concerns, as indexed by perceived infectibility, reduces this preference (Brown & Sacco, 2016). Given the association of extraversion with increased pathogen exposure (Nettle, 2005), downregulated extraversion preferences would be adaptive for those with chronic disease concerns to mitigate pathogen transmission. Thus, preliminary evidence provides some support for our hypothesis that perceiver personality traits adaptively calibrate facially communicated personality preferences.

Previous research indicates similarity and complementarity effects occur through assortative mating, particularly related to preferences for facial personality. Narcissistic women prefer narcissistic male faces, a similarity effect to facilitate short-term mating goals (Lyons & Blanchard, 2016). Complementarily, such preferences did not emerge for psychopathy and Machiavellianism. Further, women with dispositionally heightened interest in short-term mating prefer extraverted and narcissistic male faces, as such men utilize consonant mating strategies (Brown & Sacco, 2017b; Marcinkowska, Helle, & Lyons, 2015).

### 1.3. Current research

This study sought to identify preferences based on similarity and complementarity as a function of perceiver personality and facial structures connoting high and low levels of Big Five personality traits. Given similarity and complementarity in personality traits relate to various levels of relational satisfaction, the fact individuals prefer certain traits in others, and one's own personality moderates such preferences, we tested several hypotheses in the context of perceiving personality from faces. First, given an ideal partner personality profile (Figueredo et al., 2006), we predicted participants would prefer faces communicating high-extraversion, agreeableness, and conscientiousness, but low-neuroticism. Further, we expected similarity preferences to be most apparent among extraversion, agreeableness, conscientiousness, and openness. Finally, given past research indicating women's preferences for stability and conscientiousness (Furnham, 2009), we predicted women's preferences would be stronger than men's for low-neuroticism (stability) and high-conscientiousness.

## 2. Methods

### 2.1. Participants

We recruited 222 undergraduate participants from a medium-sized university in Southeastern U.S. for course credit in an online data collection procedure (68 men, 152 women, 2 undisclosed sex;  $M_{Age} = 21.16$  years,  $SD = 4.70$ ; 53.1% White). A medium-effect-sized power analysis (Cohen's  $f = 0.25$ ,  $\beta = 0.80$ ) indicated 200 participants would sufficiently detect effects. All participants were included in statistical analyses, minus models considering participant sex, which excluded the 2 unspecified participants.

### 2.2. Materials

#### 2.2.1. Face preference tasks

Our stimulus set consisted first of 20 male and 20 female Caucasian face identities from the Aging Faces (Minear & Park, 2004) and Chicago Face Databases (Ma, Correll, & Wittenbrink, 2015) aged between approximately 18–40 years. Each target face was morphed with a composite face prototypic of high and low levels of each Big Five trait, respectively (see Holtzman, 2011 for composite face generation process). Specifically, prototypes were generated using software that created “average” faces consisting of the 10 individuals who scored highest (or lowest) on each Big Five personality dimension for both sexes (combined peer- and self-reports). This resulted in the utilization of 20 composite faces for stimulus generation in the current study: composites of male faces representing high self-reported levels of each trait, composites of male faces representing low self-reported levels of each trait, composites of female faces representing high self-reported levels of each trait, and composites of female faces representing low self-reported levels each trait. We blended each unique target with the same-sex prototype for each trait level using morphing software (Morpheus Animation Suite v3.10); morphs were 50/50 blends (i.e., 50% original face/50% prototype). We created high- and low-trait versions of each target for 40 face pairs (i.e., 20 for each sex for both high and low versions of each trait) for 200 total trials (see Fig. 1 for sample face pairs for each trait).

For each face preference task, participants viewed face pairs, with one target being the version of the target high in a trait (e.g., high-conscientiousness target) and the other being low (e.g., low-conscientiousness). We counterbalanced morphs' positions (i.e., left-, right-screen position) and randomized presentation on a between-participants basis. Each trial had participants select the version of the face they preferred. The task was framed as a general preference task, unrelated to sexual preference, given participants evaluated both male and female face pairs. The task was self-paced; participants viewed each

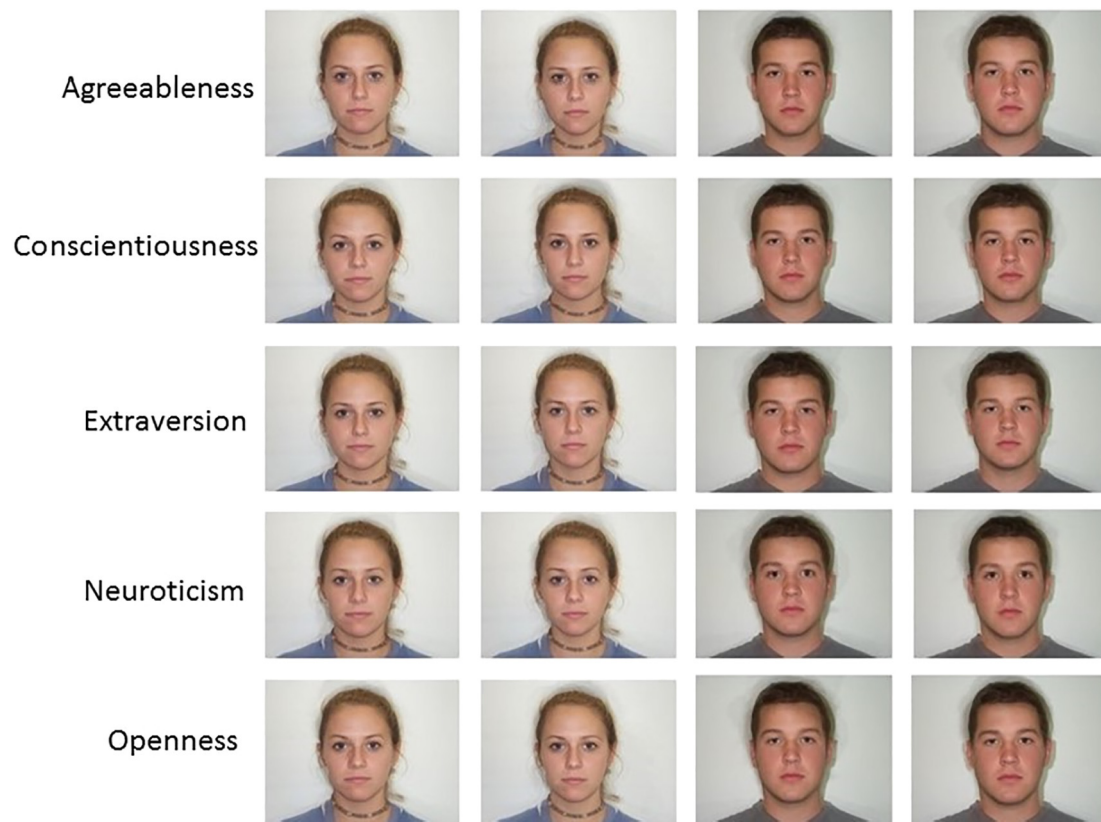


Fig. 1. Examples of male and female facially communicated personality targets as a function of trait. Note. High levels are the left-hand side of each pair and low on the right-hand side.

pair until they indicated their preference before viewing the next pair. Participants completed all 40 face pair trials for each personality dimension in randomized order before moving onto the next trait preference; order of the five tasks was randomized. We calculated preference scores by summing frequency of the trials in which participants selected high-trait target faces as a proportion of the total number of trials, separately for male and female targets. Higher values reflected greater preference for higher levels of each trait.

### 2.2.2. Big five personality inventory

We used a well-validated 44-item measure of Big Five Personality Traits (John & Srivastava, 1999). Participants responded using 5-point Likert-type scales (1 = *Strongly Disagree*; 5 = *Strongly Agree*), framed as, “I see myself as someone who...” The five facets of personality demonstrated adequate reliability: extraversion (8 items,  $\alpha = 0.76$ , e.g., “is talkative”), openness (10 items,  $\alpha = 0.75$ , “is curious about many different things”), conscientiousness (9 items,  $\alpha = 0.65$ , “does a thorough job”), neuroticism (8 items,  $\alpha = 0.76$ , “is depressed, blue”), agreeableness (9 items,  $\alpha = 0.75$ , “likes to cooperate with others”).

### 2.3. Procedure

Consenting participants were directed to the survey and initially completed the Big Five personality inventory before the five preference tasks. This was followed by demographics and debriefing.

## 3. Results

### 3.1. Preliminary analysis

Prior to the omnibus analysis, we conducted 5 one-sample *t*-tests to test for categorical preferences. Tests were weighted against 0.5 (i.e., no

preference) for each trait, collapsed across target sex. Consistent with previous research, participants preferred high-extraversion faces ( $M = 0.52$ ,  $SD = 0.10$ ); further, participants categorically preferred high-agreeableness ( $M = 0.52$ ,  $SD = 0.09$ ) and low-conscientiousness ( $M = 0.47$ ,  $SD = 0.09$ ),  $|ts| > 3.30$ ,  $ps < 0.010$ ,  $ds > 0.43$ . No preferences emerged for neuroticism and openness,  $ts < 1.30$ ,  $ps > 0.190$ .

### 3.2. General personality preference based on facial structure

We controlled for family-wise error rates with a 2 (Participant Sex: Male vs. Female)  $\times$  2 (Target Sex: Male vs. Female)  $\times$  5 (Target Personality: Extraversion, Agreeableness, Conscientiousness, Openness, Neuroticism) custom mixed ANCOVA, with repeated measures over the latter two factors, and participants' self-reported Big Five Personality Traits as covariates. While independent regression models would have been equally appropriate for testing the impact of participant personality, target sex, and the interactions, a custom mixed ANCOVA similarly afforded such analyses while also having the advantage of testing for effects of target personality trait, target sex, and their interactions with predictor variables in a single, parsimonious model. Below, we report significant effects to emerge from the omnibus analysis due to its complexity; data are available upon request.

Effects were first qualified by a significant Target Sex  $\times$  Participant Openness interaction,  $F(1, 205) = 4.52$ ,  $p = 0.035$ ,  $\eta_p^2 = 0.021$ . We correlated participants' openness with their preferences separately for both male and female faces, collapsed across personality traits. Self-reported openness positively correlated with a stronger preference for female faces communicated high levels of Big Five traits,  $r(220) = 0.132$ ,  $p = 0.049$ . Conversely, no relation emerged for male faces,  $r(220) = 0.065$ ,  $p = 0.338$ . That is, high-openness participants preferred female faces communicating high levels of all traits. It is not

clear why this finding emerged. It could be related to open individuals' affinity for experiential diversity, potentially including interactions with individuals displaying high degrees of various traits that could represent an interesting interaction (McCrae, 1996).

A Target Personality × Participant Openness interaction emerged,  $F(4, 804.24) = 2.64, p = 0.032, \eta_p^2 = 0.013$ . We individually correlated participants' openness scores with preference scores for each trait collapsed across both target sexes. Openness positively correlated with openness preferences; high-openness individuals preferred high-openness faces,  $r(220) = 0.144, p = 0.032$ . Openness did not correlate with any other preferences,  $|rs| < 0.110, ps > 0.130$ .

A marginally significant Participant Sex × Target Personality × Target Sex interaction emerged,  $F(4, 804.24) = 2.35, p = 0.053, \eta_p^2 = 0.011$ . Decomposing this interaction by Participant Sex indicated a significant Target Personality × Target Sex interaction for female participants,  $F(4, 578.39) = 7.86, p < 0.001, \eta_p^2 = 0.049$ , but not male participants,  $F(4, 578.39) = 1.43, p = 0.223, \eta_p^2 = 0.021$ . Subsequent paired-samples *t*-tests comparing preferences for male and female faces for each separate personality indicated women preferred high-extraversion female faces compared to male and low-conscientiousness male faces compared to female faces,  $ts < -4.00, ps < 0.001, ds > 0.43$ . Although not qualified by a significant interaction, men preferred high-extraversion in female faces more than male faces,  $t(67) = -2.76, p = 0.007, d = 0.45$ . Table 1 presents descriptive statistics and results from one-sample *t*-tests for personality preferences.

Effects were further qualified by a significant Participant Sex × Target Personality × Target Sex × Neuroticism interaction,  $F(4, 804.24) = 3.01, p = 0.018, \eta_p^2 = 0.014$ . We decomposed this interaction by running separate Target Sex × Target Personality custom ANCOVAs for men and women, with participant neuroticism as a covariate to test for interactive effects. A significant 3-way interaction emerged for women,  $F(4, 576.32) = 4.51, p = 0.002, \eta_p^2 = 0.029$ . We conducted 5 separate repeated custom ANCOVAs to compare women's preferences for male and female faces for each personality trait with neuroticism as a covariate. For target agreeableness, effects were qualified by a Target Sex × Neuroticism interaction,  $F(1, 150) = 10.04, p = 0.002, \eta_p^2 = 0.063$ . Individually correlating neuroticism with agreeableness preferences for both sexes indicated women's neuroticism positively correlated with preferences for male agreeableness,  $r(150) = 0.201, p = 0.013$ , and negatively with female agreeableness,  $r(150) = -0.164, p = 0.044$ . That is, greater female neuroticism heightened preferences for male agreeableness and female antagonism. A Target Sex × Participant Neuroticism interaction emerged for neurotic faces,  $F(1, 150) = 4.84, p = 0.029, \eta_p^2 = 0.031$ . Although neither were conventionally significant, women's neuroticism negatively correlated with preferences for male neuroticism,  $r(150) = -0.122, p = 0.133$ , and positively with preferences for female neuroticism,  $r(150) = 0.117, p = 0.151$ ; these correlations were directionally

**Table 1**  
Mean preferences (and standard deviations) for facially communicated personality as a function of participant and target sex.

| Preferences       | Male participants |                | Female participants |                |
|-------------------|-------------------|----------------|---------------------|----------------|
|                   | Male targets      | Female targets | Male targets        | Female targets |
| Extraversion      | 0.47 (0.14)       | 0.53 (0.13)*   | 0.50 (0.12)         | 0.56 (0.14)**  |
| Agreeableness     | 0.53 (0.13)       | 0.53 (0.11)*   | 0.52 (0.14)*        | 0.51 (0.11)    |
| Conscientiousness | 0.46 (0.13)*      | 0.48 (0.12)    | 0.44 (0.16)**       | 0.51 (0.12)    |
| Openness          | 0.49 (0.14)       | 0.51 (0.13)    | 0.52 (0.13)*        | 0.50 (0.11)    |
| Neuroticism       | 0.50 (0.11)       | 0.49 (0.12)    | 0.50 (0.11)         | 0.52 (0.12)*   |

Notes. Personality preferences categorically for high or low levels of a trait (i.e., above or below the midpoint) are denoted by asterisks. High preferences are significantly above 0.5 and low preferences are significantly below 0.5.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

different ( $z = -2.07, p = 0.038$ ). Neuroticism heightened women's preference for male stability and female neuroticism.

A significant three-way interaction emerged for men,  $F(4, 241.39) = 2.57, p = 0.043, \eta_p^2 = 0.038$ . Decomposing men's data similarly to women's, a Target Sex × Participant Neuroticism interaction for openness faces emerged,  $F(1, 66) = 10.98, p = 0.001, \eta_p^2 = 0.143$ . Individually correlating neuroticism with separate openness preferences for male and female targets revealed a positive correlation with male openness,  $r(66) = 0.237, p = 0.052$ , and a negative correlation with female openness,  $r(66) = -0.341, p = 0.004$ . Neuroticism heightened men's preference for open men and restricted women.

### 3.3. Correlations between various facial personality preferences

Correlations between each facially communicated personality trait revealed only one significant, albeit sensible, relation. Facially communicated openness preferences negatively correlated with conscientiousness,  $r(220) = -0.203, p = 0.002$ . Given conscientiousness is associated with conventional thinking and conformity, it is reasonable open individuals would be disinterested in targets whose faces communicate high-conscientiousness.

Comparing across Participant Sex, no effects emerged for men, although extraversion preferences in men marginally negatively correlated with conscientiousness preferences,  $r(66) = -0.221, p = 0.070$ . Women's extraversion preferences were marginally positively correlated with agreeableness preferences,  $r(150) = 0.147, p = 0.070$ . Women's openness preferences predicted reduced preferences for conscientiousness,  $r(150) = -0.235, p = 0.004$ . Interestingly, women's preference for facial conscientiousness marginally positively correlated with neuroticism preferences,  $r(150) = 0.153, p = 0.060$ . However, few significant correlations between facially communicated personality preferences emerged and those that did were of modest magnitude, suggesting cautious interpretation.

## 4. Discussion

Several hypotheses were generally supported, with several interesting, albeit unexpected, effects emerging. Consistent with predictions, participants preferred high-agreeableness and -extraversion faces. These findings are sensible, given humans' adaptations for group living to benefit from reciprocity and cooperation (Gintis, 2000). Agreeableness's association with cooperative intentions (Ross, Rausch, & Canada, 2003) and extraversion's with extensive social networks (Pollet, Roberts, & Dunbar, 2011), suggests preferring agreeable and extraverted faces would facilitate identifying conspecifics capable of sustaining reciprocal altruism.

Surprisingly, conscientiousness preferences were significantly below-chance, indicating a preference for low-conscientiousness. Given our sample was largely college-age students and given conscientiousness's association with conventional thinking and conformity (DeYoung, Peterson, & Higgins, 2002; Wolfradt & Pretz, 2001), high-conscientiousness may not be prioritized by participants in our sample's age group; future research should nonetheless determine the robustness of this finding. Nonetheless, neuroticism preferences were lower than all other preferences, except conscientiousness. This finding is sensible insofar as high-neuroticism connotes emotional instability and poor relational functioning (Schaffhuser, Allemand, & Martin, 2014).

Participant sex interacted with extraversion preferences. Women marginally preferred extraversion more than men, and women's extraversion preference was above-chance, whereas men's was not. This demonstrates consistency with past research in which both men and women significantly preferred high levels of facial extraversion (Brown & Sacco, 2016, 2017a, 2017b). Although not qualified by a superordinate interaction (likely due to small sample size), men's preference for female extraversion is partially consonant with previous research. This preference could be to identify viable sexual opportunities, given

extraverted women's promiscuity (Schmitt & Shackelford, 2008). Although extraverted men could provide similar sexual opportunities to women, the added tradeoffs associated with male extraversion could have led to women's downregulation of preferences, including extraverted men's proclivity toward infidelity and dominance (Cheng, Tracy, & Henrich, 2010; Lukaszewski & Roney, 2011; Nettle, 2005).

A similarity effect emerged for openness. High-openness participants preferred faces communicating high-openness. Such similarity effects would ultimately be adaptive; similarly open conspecifics could afford the stimulating social opportunities that low-openness could not guarantee. Furthermore, given the goal of experience for openness, it is sensible complementarity would not emerge for open participants, although it was surprising that self-reported openness did not predict preferences low-conscientiousness faces. Nonetheless, because findings were not necessarily predicted a priori, further research would benefit from determining how robust these findings are.

#### 4.1. Findings with neuroticism

Unexpectedly, participants' neuroticism heightened their sensitivity to various facial features connoting personality. Such findings may nonetheless represent an adaptive function for highly neurotic individuals. Anxiously attached adults, a corollary to emotional instability (Crawford, Shaver, & Goldsmith, 2007), demonstrate reduced perceptual acuity toward positive emotionality and hypervigilance toward features connoting negative emotions distress (Fraley, Niedenthal, Marks, Brumbaugh, & Vicary, 2006; Niedenthal, Brauer, Robin, & Innes-Ker, 2002). These results appear consonant with previous findings, as neurotic individuals may be more readily able to identify certain facial features, particularly related to identifying those who may be able to satisfy their salient needs, a point we return to below.

In terms of agreeableness, given the link between insecure attachment and neuroticism (Crawford et al., 2007), it would seem sensible for high-neuroticism women to prefer agreeable male faces, as such men are predictive of heightened marital satisfaction and prefer monogamy (Botwin et al., 1997; Schmitt & Shackelford, 2008). Thus, identifying and selecting such men could be analogous to identifying partners who could mitigate infidelity concerns, and could also be evidence of a complimentary personality preference. Conversely, associating with antagonistic women (i.e., low-agreeableness) could be adaptive for neurotic women for downward social comparisons (Smith, 2000). Because antagonism correlates with poor relational outcomes (Botwin et al., 1997), neurotic women would look desirable by comparison. Because of the costs women face from relationship dissolution, this sex difference ultimately seems sensible, albeit warranting additional investigation.

The finding that high-neuroticism women's preference for facially communicated neuroticism seems sensible. Specifically, their preference for male low-neuroticism could reflect these women's interest in identifying a partner capable of satisfying relational needs, through their greater communication of emotional stability (Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010). Similar to their preference for antagonistic women, the preference for female neuroticism could reflect interest in associating with women posing little threat to their current relationship.

Neurotic men's preferences for openness may represent opposing motives. Highly open men could represent interesting social opportunities with people who would seem interested in interacting with a diverse array of personalities (McCrae, 1996); although neuroticism may not be desirable to many, open men may provide a better affiliative opportunity for men and provide a strong basis for friendships. Conversely, men's aversion to open female faces could represent aversion to mates who could be more prone to infidelity (Schmitt & Shackelford, 2008).

#### 4.2. Correlations between different face trait preferences

Our data also suggest sensible relations between preferences for traits, which further demonstrates the reliability of these faces in connoting high and low levels of the traits in question. For example, preferences for openness negatively correlated with conscientiousness preferences. Such an association would seem sensible, considering the social rigidity typical of conscientiousness. Those looking to engage conspecifics interested in new experiences would perceive highly conscientious faces as incompatible with their preferred interaction partner.

#### 4.3. Future directions

Future directions should build upon the limitations of the current study, beyond simply addressing any potential concerns with statistical power, particularly as it may relate to analyses including participant gender. For example, the current study's primary dependent measure was participants' general preference in a forced choice paradigm in which one face was constructed to communicate high levels of a particular trait and the other low levels of that same trait. However, preference is a multifaceted construct, which includes things such as preference to interact with, work with, date, form a friendship, etc. Thus, assessing the extent to which preferences for certain facial personalities emerge in these various domains would elucidate the specificity of preferences documented in the current study.

Furthermore, given that high or low levels of Big Five personality traits represent an optimum (e.g., high extraversion is associated with affiliative interest and gregariousness, but also increased probability of pathogen transmission due to exposure to more conspecifics), future research would benefit by identifying particular contexts in which people prefer high versus low levels of a given traits in ways that would facilitate goal acquisition, such as a preference for targets whose faces communicate high conscientiousness to facilitate completion of a given task, but low conscientiousness when creative problem-solving might be of greater benefit. Thus, to the extent that preference for any given facially-communicated trait is robust across, or contingent upon, type of preference judgment context, it could provide evidence regarding generality or domain-specificity of the preferences documented in the current study. Finally, the current research did not assess the extent to which participants accurately perceived the faces to be high and low in each personality trait, but rather just focused on which version they preferred. Future research would benefit by determining the extent to which participants' actual perception of the traits influences preferences as documented in the current study.

### 5. Conclusion

The human face is a robust social stimulus capable of providing a litany of interesting cues that facilitate adaptive interactions. The current research sought to identify how various personality constellations interact to form the basis of optimum group living through similarity and complementarity-related capacities. Specifically, we identified various ways personality predicts preferences for face that communicate personality themselves.

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