

Like Father, Like Self ¹

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Introduction

There is debate²⁻³ about the extent to which we learn about kin from self-referential phenotype matching³ (observing one's own phenotype) or through familial imprinting⁴ (observing the phenotype of likely close relatives).

Evidence for self-referential phenotype matching in humans comes from computer-graphic studies showing effects of experimentally manipulated self-resemblance⁵. However, similarities between romantic partners and opposite-sex parents support familial imprinting⁶. Because parents and offspring resemble each other⁷, effects of self-resemblance may actually reflect attitudes towards parental traits.

Since the effects of familial imprinting are modulated by emotional closeness to parents^{6,8}, if self-resemblance preferences are also modulated by emotional closeness to parents, we can infer a role for familial imprinting in such preferences.

Methods

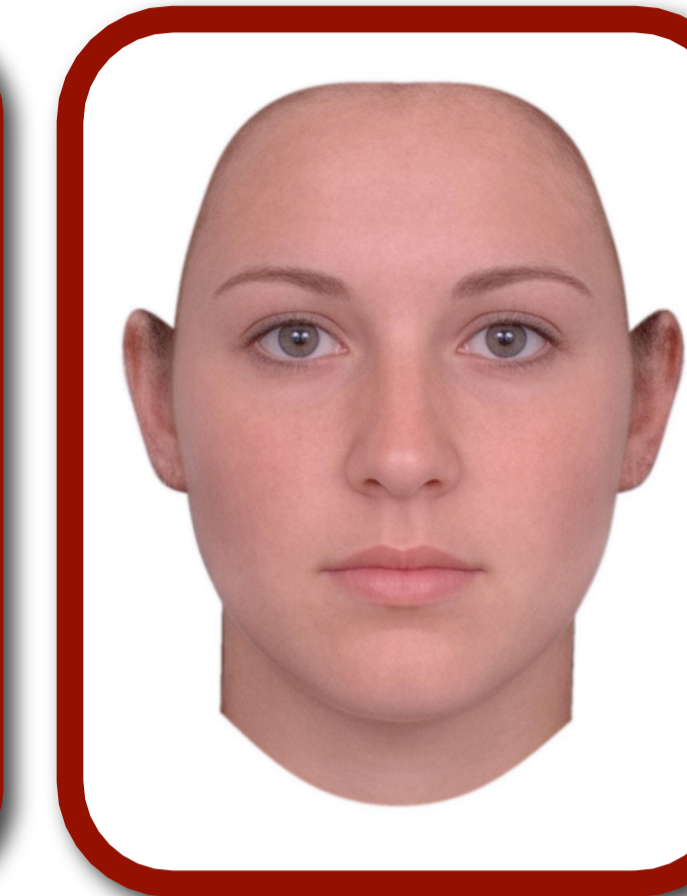
116 women were paired with age and ethnicity-matched controls from the same sample.

Male and female self-resembling (SR) stimuli were made for each participant following established methods⁵.

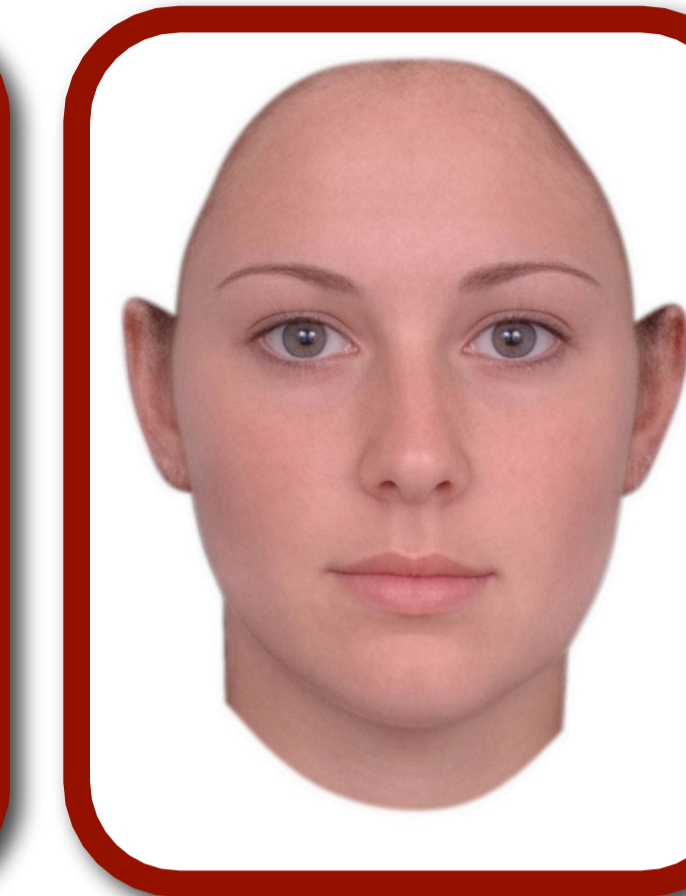
Emotional closeness to parents was measured by asking how much emotional support participants received from their father and mother.



Participant



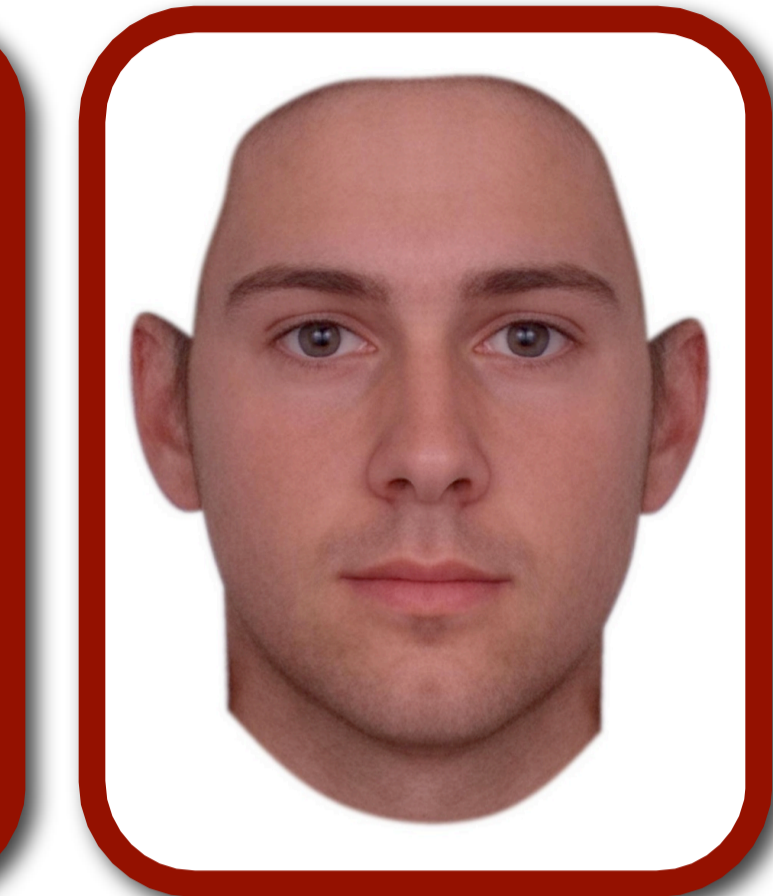
Average Female



SR Female



Average Male



SR Male

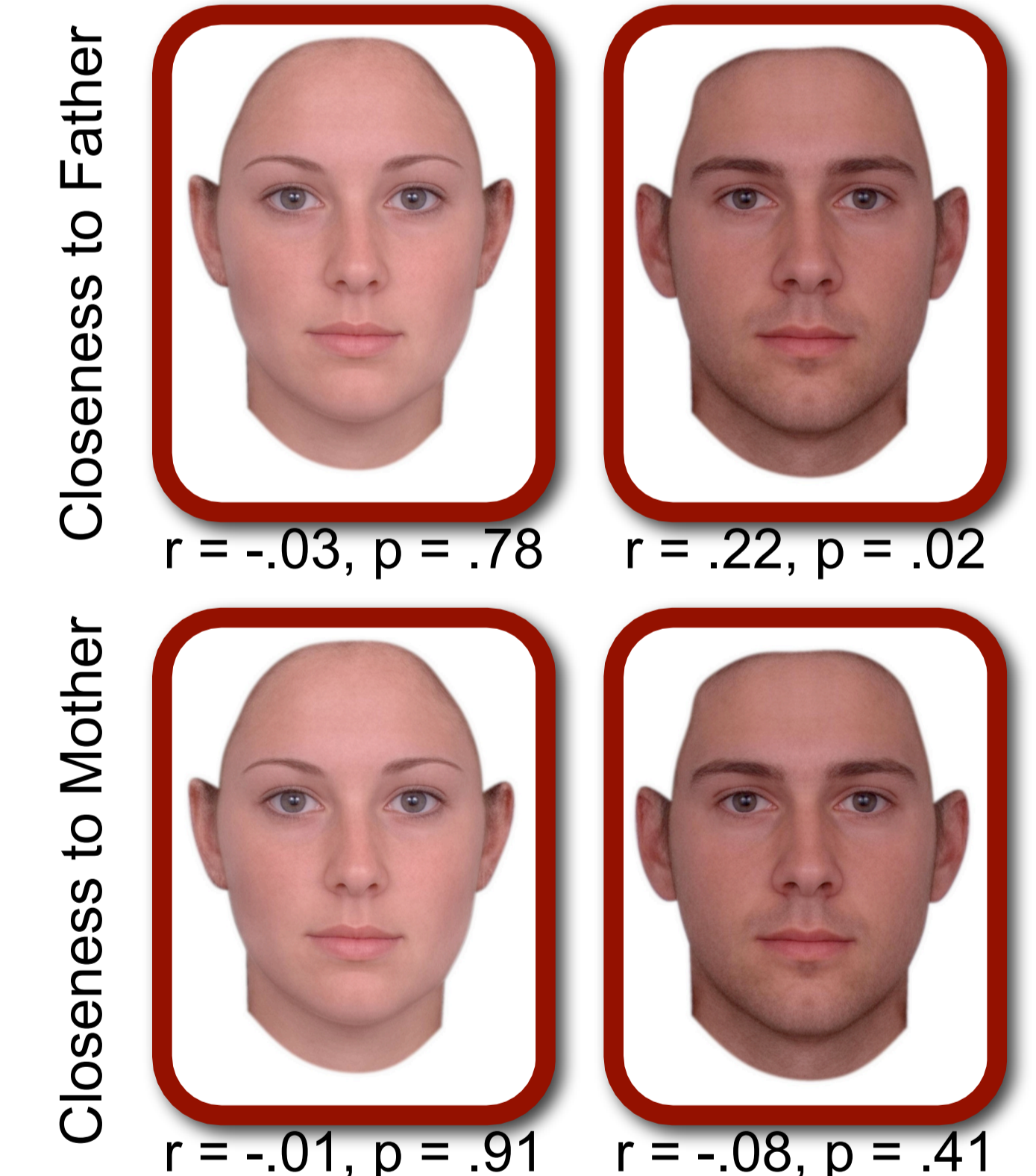
To measure self-resemblance preferences, participants chose the more attractive from 10 pairs of SR vs other-resembling faces and 10 pairs of control-resembling vs. other-resembling faces. Participants and controls viewed the same set of faces. Self-resemblance preferences were scored as the number of times the target participant chose the SR faces minus the number of times their control chose those same faces.

Results

A repeated-measures ANCOVA [within subjects factor: face sex (same, opposite), covariate; father's emotional support] revealed an interaction between face sex and father's emotional support ($F_{1,114} = 5.32, p = .023$). Father's emotional support correlated with self-resemblance preference for opposite-sex, but not same-sex faces (see right).

Additionally, a main effect of face sex ($F_{1,114} = 7.64, p = .007$), whereby women preferred self-resemblance in same-sex faces (one-sample t-test against 0: $t_{115} = 1.84, p = .034$), but not in opposite-sex faces ($t_{115} = -0.38, p = .36$), replicated previous findings⁹.

The same analysis as above for mother's emotional support revealed no effects.



Conclusions

Women who reported higher levels of emotional support from their father showed stronger preferences for self-resemblance in opposite-sex, but not same-sex faces, suggesting that familial imprinting can contribute to preferences for self-resemblance. While preferences for same-sex faces were not modulated by emotional closeness to either parent, they were significantly above chance, suggesting that self-referential phenotype matching may operate in non-sexual contexts, while familial imprinting may operate in mate choice contexts.

References: [1] Watkins et al. (2011) *Evol Hum Behav*, **32**, 70-75. [2] Hauber & Sherman (2001) *Trends Neurosci*, **24**, 609-616. [3] Mateo & Johnston (2003) *Anim Cog*, **6**, 73-76 [4] Kendrick et al. (1998) *Nature*, **395**, 229-230. [5] DeBruine et al. (2008) *Arch Sex Behav*, **37**, 64-77. [6] Bereczkei et al. (2004) *Proc Roy Soc Lond B*, **271**, 1129-1134. [7] Brédart & French (1999) *Evol Hum Behav*, **20**, 129-135. [8] Wiszewska et al. (2007) *Evol Hum Behav*, **28**, 248-252. [9] DeBruine (2004) *Proc Roy Soc Lond B*, **271**, 2085-2090.

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