

Invited Commentary

Multiple motives in women's preferences for masculine male faces: comment on Scott et al.

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Mate preferences are complex. Scott et al.'s review raises several issues, but here I focus on 3 topics.

Indirect health or dominance benefits are plausible

Studies demonstrate that men's facial masculinity is positively related to health measures (Rhodes et al. 2003; Thornhill and Gangestad 2006) and other potential measures of quality, such as facial symmetry (Gangestad and Thornhill 2003; Little et al. 2008b). It is then reasonable to suggest that male facial masculinity is associated with health, and so linked to indirect benefits if heritable. Indirect benefits based on choosing a competitive masculine partner are also possible based on acquiring genes for competitiveness because masculine male face traits are associated with factors such as strength (Fink et al. 2007).

Scott et al. question data linking masculinity to health. Focusing on health in humans as a proxy for possible indirect benefits based on immunocompetence appears fair, but any one measure is likely only a very rough estimate of real health. Modern medicine also likely adds noise to such measures. We should then not necessarily be surprised if relationships between masculinity and health are weak or inconsistent. Additionally, the immunocompetence handicap hypothesis does not always lead to positive correlations between a trait and health (Getty 2002), raising further caution that null/negative results are inconsistent with indirect health benefits. It should be noted that any relationship between a trait and heritable health/dominance, no matter how small, could be important over evolutionary time and so, although more work is needed, current data suggests indirect benefits from masculine men are plausible.

A trade-off between indirect and direct benefits is most consistent with the pattern of women's preferences

Preferences likely reflect multiple indirect and direct benefits and not single specific factors, such as health. Previous studies examining variability in masculinity preference often use the immunocompetence handicap hypothesis as an example of how masculinity could be associated with indirect benefits. The logic of variable preferences, however, is consistent with indirect benefits from any source, such as health or dominance.

A trade-off between the desire for indirect benefits for their offspring from masculine men and the desire for direct benefits from feminine men is often put forward to explain variation in preferences for male masculinity: women prefer relatively feminine men for long-term relationships although preferring more masculine men in the short term and when most likely to become pregnant (Little et al. 2011b for review). Indeed, increasing masculinity of face shape

increases perceptions of dominance but decreases perceptions of cooperativeness/quality as a parent (Perrett et al. 1998) and masculine facial characteristics are associated with health (Rhodes et al. 2003; Thornhill and Gangestad 2006), indices of physical dominance, such as strength (Fink et al. 2007), and preferences for low commitment, short-term relationships (Boothroyd et al. 2008).

Increased preferences for masculinity for short-term relationships and at peak fertility (particularly short-term attractiveness) suggest that masculinity, relative to femininity, is preferred due to indirect benefits because potential indirect benefits, such as health and/or dominance, are clear and direct benefits are less likely under these conditions. Although Scott et al. claim preferences for direct benefits from masculine competitive men are consistent with this pattern, some of the arguments need clarity. For example, their suggestion that women may simply care less about aggression in short-term relationships seems unlikely and is not supported by data showing similarity between women's long-term and short-term standards (Buss and Schmitt 1993). Likewise, an argument for preferences moving towards chance relies on overall preferences for femininity found in early studies, whereas recent studies also show positive preferences for male facial masculinity especially for short-term relationships (Little et al. 2011a) and at peak fertility (Little et al. 2008a). Overall, the pattern of preference appears more consistent with a trade-off between direct and indirect benefits than with differing balances of only direct benefits.

Indirect and direct benefits or health and competitiveness are unlikely to be independent explanations of preferences

There are clear direct benefits to choosing a competitive or healthy partner, such as resource availability or disease avoidance, but there are also likely indirect benefits. Preferences based on direct benefits can lead to indirect benefits because females with preferences for traits associated with direct benefits acquire genes for their offspring that are associated with providing those direct benefits (Kokko et al. 2003). In this way choosing a competitive/healthy male could lead to producing competitive/healthy offspring, who themselves have increased reproductive success, an indirect benefit. Such reasoning highlights the interplay between direct and indirect benefits and the inherent difficulty in teasing them apart.

Scott et al. suggest women may prefer masculinity due to an association with male competitive ability rather than health. The two traits may in fact be complementary. Healthy men would logically be more likely to succeed in intrasexual competition over unhealthy men. One could even argue that because only healthy males can successfully engage in physical competition female preferences for competitive ability could reflect preferences for genes for immunocompetence. Data are mixed, but there is evidence that perceptions of male facial masculinity and good health are positively related (Undurraga et al. 2010). It is then possible that masculinity in male faces is preferred due to multiple reasons: masculinity may be associated with both dominance and health and so preferences for masculinity could reflect desires for healthy and dominant partners for which there are both direct and indirect benefits.

SUMMARY

Given likely interactions between direct and indirect benefits and health and competitiveness, it may be a mistake to believe only one explanation can be applied to particular preferences. Consistent with current data, all of these factors potentially contribute to women's preferences for masculine/feminine men.

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REFERENCES

- Boothroyd LG, Jones BC, Burt DM, DeBruine LM, Perrett DI. 2008. Facial correlates of sociosexuality. *Evol Hum Behav.* 29:211–218.
- Buss DM, Schmitt DP. 1993. Sexual strategies theory: an evolutionary perspective on human mating. *Psychol Rev.* 100:204–232.
- Fink B, Neave N, Seydel H. 2007. Male facial appearance signals physical strength to women. *Am J Hum Biol.* 19:82–87.
- Gangestad SW, Thornhill R. 2003. Facial masculinity and fluctuating asymmetry. *Evol Hum Behav.* 24:231–241.
- Getty T. 2002. Signaling health versus parasites. *Am Nat.* 159:363–371.
- Kokko H, Brooks R, Jennions MD, Morley J. 2003. The evolution of mate choice and mating biases. *Proc Roy Soc Lond B Biol Sci.* 270:653–664.
- Little AC, Connely J, Feinberg DR, Jones BC, Roberts SC. 2011a. Human preference for masculinity differs according to context in faces, bodies, voices, and smell. *Behav Ecol.* 22:862–868.
- Little AC, Jones BC, DeBruine LM. 2008a. Preferences for variation in masculinity in real male faces change across the menstrual cycle: women prefer more masculine faces when they are more fertile. *Pers Indiv Differ.* 45:478–482.
- Little AC, Jones BC, DeBruine LM. 2011b. Facial attractiveness: evolutionary based research. *Philos T Roy Soc B.* 366:1638–1659.
- Little AC, Jones BC, Waitt C, Tiddeman BP, Feinberg DR, Perrett DI, Apicella CL, Marlowe FW. 2008b. Symmetry is related to sexual dimorphism in faces: data across culture and species. *PLoS One.* 3:e2106.
- Perrett DI, Lee KJ, Penton-Voak IS, Rowland DR, Yoshikawa S, Burt DM, Henzi SP, Castles DL, Akamatsu S. 1998. Effects of sexual dimorphism on facial attractiveness. *Nature.* 394:884–887.
- Rhodes G, Chan J, Zebrowitz LA, Simmons LW. 2003. Does sexual dimorphism in human faces signal health? *P Roy Soc Lond B Biol Sci.* 270:S93–S95.
- Scott I, Clark A, Boothroyd L, Penton-Voak I. Forthcoming 2012. Do men's faces really signal heritable immunocompetence? *Behav Ecol.* doi:10.1093/beheco/ars092.
- Thornhill R, Gangestad SW. 2006. Facial sexual dimorphism, developmental stability, and susceptibility to disease in men and women. *Evol Hum Behav.* 27:131–144.
- Undurraga EA, Eisenberg DTA, Magvanjav O, Wang R, Leonard WR, McDade TW, Reyes-Garcia V, Nyberg C, Tanner S, Huanca T et al. 2010. Human's cognitive ability to assess facial cues from photographs: a study of sexual selection in the Bolivian Amazon. *Plos One.* 5. doi: e1102710.1371/journal.pone.0011027.