

# Visual adaptation to masculine and feminine faces influences generalized preferences and perceptions of trustworthiness

**G Buckingham**  
(University of Aberdeen)

**LM DeBruine**  
(University of St Andrews)

**AC Little**  
(University of Liverpool)

**LLM Welling**  
(University of Aberdeen)

**CA Conway**  
(University of Aberdeen)

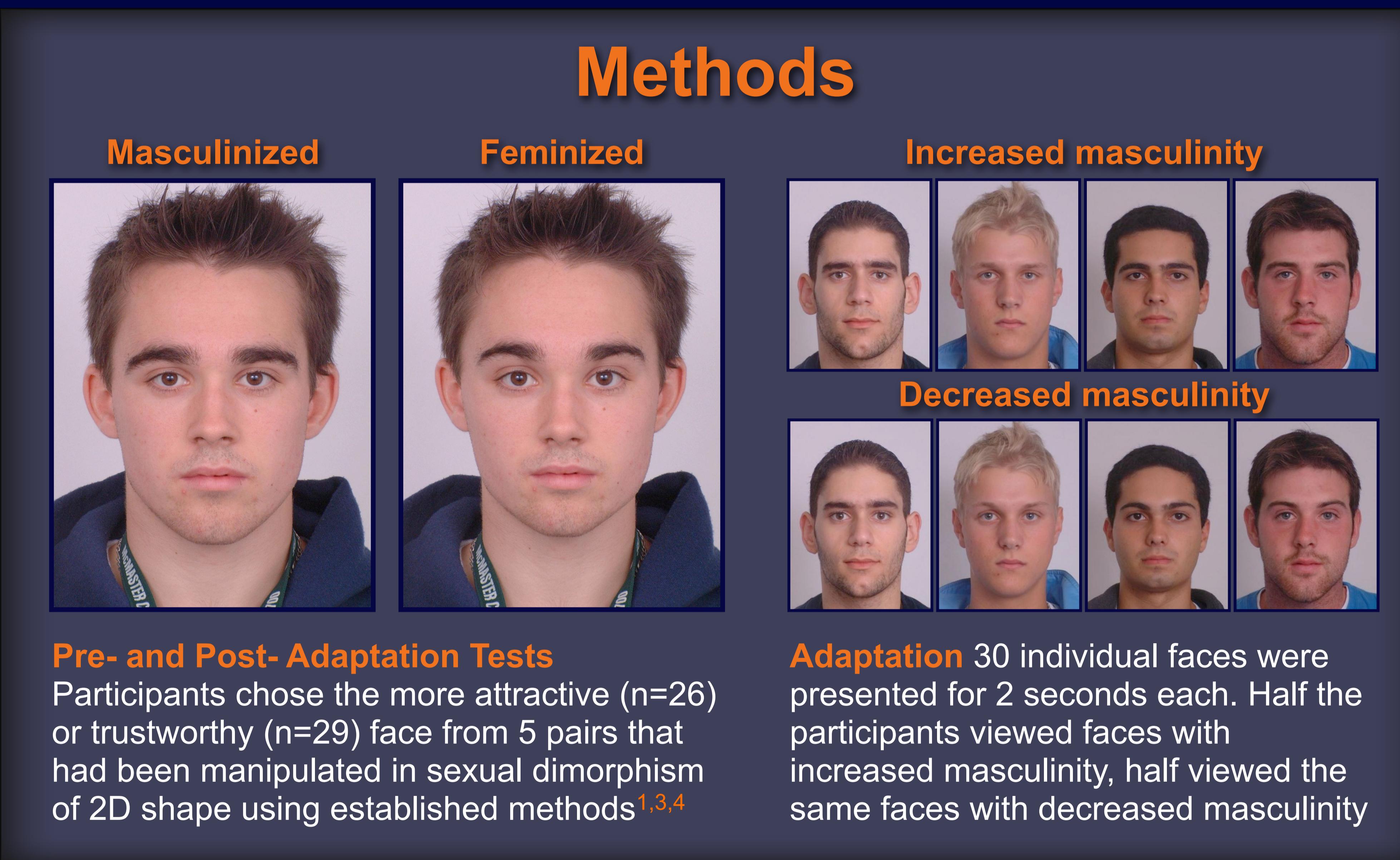
**BP Tiddeman**  
(University of St Andrews)

**BC Jones**  
(University of Aberdeen)

**Background** While studies have shown that feminine faces are perceived as both trustworthy and attractive<sup>1</sup>, self-resemblance increases the perceived trustworthiness of faces while at the same time decreasing their sexual attractiveness<sup>2</sup>. These latter findings call into question the extent to which perceptions of trustworthiness and attractiveness are necessarily correlated. Although previous studies of individual differences in preferences for masculine faces have typically emphasized factors such as menstrual cycle phase<sup>3</sup>, recent studies have demonstrated that adaptation to either masculine or feminine faces increases preferences for novel faces that are similar to those that were recently seen<sup>4</sup>. Although it is well established that adaptation to faces influences attraction<sup>4,5</sup>, it is not known if these effects generalize to other judgments of faces that can be important for social interactions (e.g. perceptions of trustworthiness). In light of this, here we compared the effects of adaptation to faces varying in sexual dimorphism of shape on perceptions of the trustworthiness and attractiveness of masculine faces.

**Hypothesis 1** If adaptation has equivalent effects on perceptions of trustworthiness and attractiveness, exposure to masculine or feminine faces will increase both the attractiveness and the perceived trustworthiness of the type of faces seen during the adaptation phase.

**Hypothesis 2** If adaptation has different effects on perceptions of trustworthiness and attractiveness, the effect of exposure to masculine or feminine faces will interact with judgment type (trustworthiness or attractiveness).



**Conclusions** Exposure to masculine or feminine faces increased the perceived trustworthiness and attractiveness of the type of face seen during the adaptation phase. This replicates previously reported effects of adaptation to masculine or feminine faces on attraction<sup>4</sup> and demonstrates that adaptation also influences the extent to which masculine faces are perceived as trustworthy. These adaptation effects support the proposal that visual exposure alone cannot explain the context-specificity of attitudes to self-resembling faces<sup>2</sup> and reveal a proximate mechanism for phenomena such as condition dependent and imprinting-like effects in face preferences<sup>6</sup>.

**References** [1] Perrett et al. (1998) *Nature*, 394, 884-7. [2] DeBruine (2005) *Proc Roy Soc Lond B*, 272, 919-22. [3] Penton-Voak et al. (1999) *Nature*, 399, 741-2. [4] Little, DeBruine & Jones (2005) *Proc Roy Soc Lond B*, 272, 2283-7. [5] Rhodes, Jeffery, Watson, Clifford & Nakayama (2003) *Psych Sci*, 14, 558-66. [6] Little, Penton-Voak, Burt & Perrett (2003) *Ev Hum Behav*, 24, 43-51.

To contact the authors email [faceresearch@abdn.ac.uk](mailto:faceresearch@abdn.ac.uk) or visit <http://www.facelab.org>

## Results

Responses were analyzed using a mixed-design ANOVA. The dependent variable was **strength of preference** for the type of face viewed in the adaptation phase (e.g. preference for the more feminine face if feminine faces were viewed in the adaptation phase). The within-subject factor was **phase** (pre-adaptation, post-adaptation) and the between-subjects factors were **sex of subject** (male, female), **judgment** made by subject (attractiveness, trustworthiness), and **adaptation type** (masculine, feminine).

### Preference for the face type viewed in the adaptation phase



A main effect of phase ( $F_{1,47}=5.52$ ,  $p=.023$ ) confirmed that adaptation to masculinized or feminized faces increased attractiveness and trustworthiness judgments of novel, similar faces.

The effect of phase did not interact with judgment ( $F_{1,47}=0.28$ ,  $p=.602$ ), confirming that visual experience has similar effects on judgments of attractiveness and trustworthiness.