

Dominant themes

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‘Your money or your life!’ Do you confront the highwayman and defend yourself, or flee? It is easy to imagine such scenarios from the past where it would have been important to be able quickly and accurately to assess the physical dominance of others. However, is this ability still important? ‘Generation Y’ have grown up in a time when there is unprecedented access to social media and computer technology. In this information age, social status is arguably linked to intelligence and technical expertise to a much greater extent than at any other point over the preceding few hundred years. So are we really still sensitive to information about physical dominance?

Recent work by Oosterhof and Todorov (2008) suggests that impressions of others’ dominance influence a wide range of key social judgements. Using computer modelling, they identified dominance perceptions as a critical factor in how we perceive faces, demonstrating that dominance drives important social judgements about others’ personality attributes, appearance, emotional states and preferences. Men’s impressions of the dominance of romantic rivals affect how much jealousy they feel when imagining the rival flirting with their partner (Buunk et al., 2008). Other work suggests that perceptions of politicians’ dominance play an important role in voting behavior, particularly during times of war (Little et al., 2007). Perhaps surprisingly,

adults and children as young as four years old appear to judge others’ dominance in remarkably similar ways, suggesting that dominance perceptions play a fundamental role in social interaction from a young age (Keating & Bai, 1986). These findings suggest that people do assess others’ dominance.

Are impressions of others’ dominance accurate, however? Research suggests that they can be. Fink et al. (2007) found that ratings of men’s facial dominance were positively correlated with measures of their physical strength. Accurate perception of others’ physical strength is not unique to groups of European undergraduate students; similar findings have been reported more recently in Amazonian forager-farmers in Bolivia (Undurraga et al., 2010) and Andean



Red facial colouration on a male mandrill – recent research by Setchell and colleagues shows that more dominant males display redder colouration

farmers in Argentina (Sell et al., 2009). Accurate cues to dominance are not limited to the visual domain; people from a wide range of cultures are able to accurately judge physical strength from vocal cues alone (Sell et al., 2010). More impressively, Mueller and Mazzur (1996) demonstrated that ratings of the facial dominance of first-year cadets at West Point military academy were very good predictors of the military rank they eventually achieved.

Importantly, accurate perceptions of others’ dominance from facial cues do not appear to require much conscious deliberation; we need only 39ms exposure to images of men’s faces to make accurate judgements about how aggressive they might be – even when they are shown with neutral expressions (Carre et al., 2009). An intriguing explanation for this accuracy in dominance perception is that it reflects adaptations for assessing both potential rivals’ and potential associates’ ability to acquire and hold resources (Sell et al., 2009, 2010). Indeed, evidence from the fossil record suggests that aggressive conflict among ancestral hunter-gatherers was an important selection pressure on human evolution.

The findings described above show that people can and do judge others’ dominance, raising questions about the specific physical characteristics that influence these dominance judgements. In many non-human animals, masculine characteristics (i.e. physical characteristics that are more pronounced among males than females), signal an individual’s position in the dominance hierarchy. For instance, red facial coloration is a masculine trait in mandrills, and more dominant males display redder coloration (Setchell et al., 2008). Another example comes from bighorn rams, where horn size is positively correlated with fighting ability (Coltman et al., 2002).

Do masculine traits signal dominance in humans in a similar

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way? It would seem so. Exaggerating masculine shape characteristics in digital images of men's and women's faces causes them to appear more dominant (e.g. Jones, DeBruine et al., 2010), as does lowering the pitch of their voices in digital recordings (e.g. Jones, Feinberg et al., 2010).

How humans and non-human primates respond to facial cues of dominance also share similarities. Gaze following refers to the tendency for



Ratings of the facial dominance of first-year cadets at West Point military academy were very good predictors of the military rank they eventually achieved

individuals to follow others' gaze direction (i.e. to shift, relatively spontaneously, their attention so that it is oriented towards an object that others are attending to). Gaze following has been well documented in a wide range of species, from prosimians to humans, as well as goats, ravens, dogs, seals and dolphins, underlining its likely importance for fundamental aspects of social behaviour, such as threat assessment and cooperation. Although some researchers have suggested that gaze following is not sensitive to facial cues other than gaze, recent experiments suggest that gaze following in primates may be modulated by facial cues of dominance. For example, male macaques are more likely to follow the gaze

direction of dominant macaques than subordinate macaques (Shepherd et al., 2006). Similarly, humans are also more likely to follow gaze cues from masculinised, dominant faces than from feminised, subordinate faces (Jones, DeBruine et al., 2010). Moreover, in Jones and colleagues' experiments, this effect of dominance on gaze following was largest when participants only had a few milliseconds to track the gaze, suggesting that dominance-contingent gaze following in humans reflects involuntary, rather than voluntary, processes.

Other research also suggests that people combine information from gaze cues and face shape when assessing others' dominance. For example, direct gaze is perceived as more dominant than averted gaze, but that this effect of gaze direction on dominance perception is greater when judging masculine than feminine faces (Main et al., 2009). In addition to gaze direction, head tilt can also affect dominance judgements. Tilting the head back increases perceived dominance (Mignault & Chaudhuri, 2003), which, together with Main and colleagues' findings, highlights the importance of changeable social signals for impressions of dominance.

While previous research on dominance perceptions has tended to focus on identifying physical cues that, on average, cause others to appear particularly dominant, my recent work investigated the possibility that the perceiver's own dominance might affect their responses to cues of others' dominance. Height is positively correlated with dominance, with taller men being more likely to attain high status positions in the workplace (Judge & Cable, 2004) and possessing greater physical strength (Sell et al., 2009). My research has

recently shown that shorter (i.e. less dominant) men are significantly more likely to attribute high dominance to masculine men (Watkins, Fraccaro et al., 2010). In a different sample of men, I observed a similar effect of own dominance when it was assessed using a dominance questionnaire, rather than with height (Watkins, Jones & DeBruine, 2010). Greater sensitivity to cues of other men's dominance among low-dominance men may be beneficial if less dominant men incur greater costs if they incorrectly perceive the dominance of rivals. In other words, by erring on the side of caution, less dominant men may avoid costly confrontations with more dominant men. My follow-up studies also suggest that indices of own dominance predict individual differences in women's sensitivity to cues of other women's dominance in a similar way.

While work on person perception has generally focused on identifying factors that influence attractiveness judgements, my research contributes to a growing body of evidence that emphasises the importance of dominance judgements for social interaction and perception. Although the traditional approach that psychologists have taken to studying dominance perception has been to focus on identifying the characteristics that people, on average, agree indicate high or low dominance, my own research demonstrates that individual differences in dominance judgements can occur in predictable ways. Understanding these individual differences is important to obtain a fuller understanding of the complexities and subtleties in dominance perception and in person perception more generally.



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