

## ABSTRACT

This thesis focuses on visual attention towards faces in intersexual and intrasexual selection. It consists of two main parts. The first part begins with a brief overview of the intersexual and intrasexual selection mechanisms. Within the framework of intersexual selection, facial attractiveness is discussed, with its putative link to health and immune system function. Within the framework of intrasexual selection, the thesis focuses on perceived facial dominance and formidability and their connection to actual characteristics. Moreover, specific facial traits and morphological features connected with judgements of attractiveness, dominance, and formidability are described. Given the scarce evidence of direct visual attention towards facial features connected with judgements of facial attractiveness and dominance or formidability, we discuss the eye-tracking method, which can measure direct visual attention. A brief summary of eye-tracking studies focusing on visual attention to faces, especially during attractiveness and dominance assessments, is provided. Finally, the thesis focuses on how individual sensory modalities (visual, olfactory and vocal) relate to each other in the perception of individuals and the detection of cues to an individual's quality.

The second part of this thesis includes five empirical studies. The first study shows that perceived facial attractiveness, healthiness, skin healthiness and facial skin colouration provide limited cues to immunoreactivity and facial skin colouration is only connected to perceived characteristics. The evidence that facial attractiveness cues an individual's immunocompetence remains equivocal, but it seems that individuals are generally sensitive to more immediate changes in appearance caused by current illness. In the second study, we observed that the individuals' faces, following immune system activation by vaccination, were perceived as less attractive and healthy. Though facial appearance and specific facial features are thought to cue numerous individual's qualities, direct visual attention is not often investigated. The third paper is an eye-tracking study focusing on visual attention to faces in intersexual and intrasexual selection. It showed that women gave more visual attention to the faces of potential partners than to rivals, but they also gave more visual attention to both potential partners and rivals than men did. Variations in visual attention with respect to the rater's sex and rating context for facial features proposed as important in respective judgements, such as cheeks and chin, were detected. Nonetheless, the eyes, nose and mouth received most of the visual attention. The fourth study focused on visual attention towards male faces and features under judgements of attractiveness and formidability, considering the target's level of attractiveness and

formidability. Faces with a medium level of formidability received more visual attention than those with a high level of formidability, but no association between the target's level of attractiveness and visual attention was found. Similar to the third study, the eyes, nose, and mouth captured the most visual attention. Variations were observed in visual attention in relation to the rater's sex or target's level of attractiveness and formidability towards other facial features, such as the chin. The fifth study shows a weak positive association between body odour and facial attractiveness, as well as body odour and vocal attractiveness. Given the strength of this association, it appears that faces, body odour, and voices provide non-redundant information about an individual's mating quality.

#### KEYWORDS

Mate choice; competition; face perception; attractiveness; dominance; formidability