

THE BEHAVIORAL HALLMARKS OF FACE PROCESSING IN HUMANS AND MACAQUES – AN EYE TRACKING INVESTIGATION

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An essential characteristic of primates is social cognition. Social cognition is an evolutionary result of living in social systems. Underlying all of the social abilities is the recognition of kin and conspecifics and the analysis of communicational signals, in which one element is crucial: the face. Thus, given the social significance of faces compared to other natural objects, it may appear obvious that the brain processes faces differently than non-face objects. The question to what extent faces are processed differently when compared to non-face object has been a major focus of research in human for the past several decades. The behavioral hallmarks of face perception (holistic face perception and subordinate-level entry point) as well as the underlying neural mechanisms have been studied extensively in humans. Relatively little is known so far about the behavioral abilities with respect to face perception in the macaque, while the neural signal derived from single cell recordings taught us much about the aspects of facial selectivity in the brain. Here, critical experimental paradigms, known from the research in humans, were employed in combination with standard eye tracking methods to investigate face processing abilities in macaques and humans. This comparative approach not only demonstrates that macaques and humans employ similar face processing strategies, it also illustrates an effective approach on comparative cognitive research questions.

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