Abstract ECVP 2006 St. Petersburg: Talk on Prosopagnosia

What can we learn from prosopagnosia about face processing?

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Prosopagnosia (PA) is a disorder concerning the recognition of familiar faces. Research papers discriminate between an acquired (aPA) and a congenital form of prosopagnosia (cPA). Here, the focus was on research on cPA and, mainly, implications of results from cPA research for general theories of face processing. Experiment 1 used a simultaneous matching task in which faces and houses were used as stimuli. Both object classes varied by relational, featural or local (colour) aspects. Only for faces but not for houses, people with cPA were severely impaired in recognition of stimuli which varied by relational aspects. In Experiment 2, participants had to detect Thatcherised faces (Carbon and Leder 2005) in a speeded recognition task. For people with cPA, our data showed a strong linear relationship between the deviation of the presented faces from an upright orientation and RT. In contrast, the controls' data revealed a sigmoid function of RT. This indicates that cPA is based on impairments of configural/holistic face processing. Thus, configural/holistic processing seems to be a key ability with respect to general face processing and what we call 'face expertise'.

Carbon C C, Leder H, 2005 "When feature information comes first! Early processing of inverted faces" *Perception* **34** 1117-1134

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