Research Seminars in General Psychology and Cognitive Neuroscience

("Forschungskolloquium für Absolventen, Doktoranden, und Mitarbeiter“)

„General Psychology and Cognitive Neuroscience“

(Prof. Dr. Stefan R. Schweinberger)

Winter Term 2010/11

Place: Am Steiger 3/EG, SR 009

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Event Schedule

31.01.2011	Nicole Wolff, Jena	The own-age bias in more fine grained age groups
17.01.2011	Claudia Schulz, Jena	The effects of distinctiveness and attractiveness on face learning
10.01.2011	Claus-Christian Carbon, Universität Bamberg	Über die Adaptativität des ästhetischen Urteils
06.12.2010	Dr. Markus Bindemann, Kent, UK	Finding people in natural scenes
22.11.2010	Prof. Dr. Herbert Witte, Jena	Zeitvariante Methoden der EEG(EP) Konnektivitäts- und Synchronisationsanalyse
08.11.2010	Markus F. Neumann, Jena	Average representations in face processing
01.11.2010	Tarik N. Mohamed, Jena	The role of attention in perceiving social information: Behavioral and electrophysiological studies
25.10.2010	Stefan R. Schweinberger, Jena	Initial meeting

Markus Bindemann
University of Kent, UK

Finding people in natural scenes

Human observers are skilled at finding faces in natural scenes, but rather little is known about how we can achieve this. This is surprising as face detection is a prerequisite to any further face processing such as identification or expression analysis - tasks that have received a great deal of attention by psychologists. In this talk I will present a series of experiments investigating the nature of a human face detection "signature". These experiments focus on the impact of colour information, viewpoint, the role of the human body, and central viewing tendencies when observers try to locate another person's face within complex visual scenes.

Markus F. Neumann
Friedrich-Schiller-University of Jena

Average representations in face processing

As an alternative to exemplar representations, averages may offer an efficient way to mentally represent information about familiar faces. In a repetition priming study, we measured response times and ERPs to faces primed by either averages generated from 12 images or exemplars. Here, neither behavioural nor electrophysiological data revealed evidence for greater priming by averages. Instead, priming by exemplars was either of comparable size or even found enhanced. Our data thus cannot support the concept of average face representations for familiar faces. The idea of statistical mean – or average –representations has recently been described in the context of representations of sets, i.e., arrays of simultaneously presented objects. For example, participants quite precisely extracted mean size information from sets of circles varying in size, while information about individual exemplars was nearly absent (Ariely, 2001). Similarly, mean emotion and mean gender has been extracted from sets of unfamiliar faces (Haberman & Whitney, 2007; 2009). In the present study, participants saw sets of four faces from different, well-known celebrities. They indicated whether a subsequent probe face *image* (Exp.1) or *identity* (Exp.2) was presented in the set. Critically, probes were either exemplars (i.e., real face photographs) or averages across the four set identities. Moreover, probes either corresponded to the set, or were new images from the same set identities, or were images from different famous identities. Participants produced large proportions of "present" responses to both the corresponding exemplar and – unexpectedly – the corresponding average conditions. In a control experiment 3, it was ruled out that the result pattern was due to participant's response biases. In conclusion, both exemplar and set average representations appear to be extracted in parallel from famous face sets.