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 2015/16

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Event Schedule

08.02.2016	Uwe Altmann, Jena	Synchronization of Nonverbal Behaviors in Dyadic Interactions
02.02.2016	Daniel Feuerriegel, South Australia	Separating prediction error signals from repetition effects using ERPs
01.02.2016	Helene Kreysa, Jena	Explicit and Implicit Judgments of Voice Attractiveness and Trustworthiness: A Pupillometry Study
25.01.2016	Géza Ambrus, Jena	Using Change Blindness to Investigate Ancestral Priorities in Attention Capture
18.01.2016	Christian Dobel, Jena	Fast Responses in Emotional Stimulus Processing
11.01.2016	Verena Skuk, Jena	Individual Differences in Familiar Voice Recognition and Autistic Traits
14.12.2015	Philipp Kanske, Leipzig	Psychopathology of the Social Brain: From Emotion Regulation to Empathy and Theory of Mind
07.12.2015	Tigran Aydinyan, Jena	The Role of Human Faces in Crowdfunding Videos for the Success of the Project: An Experimental Study
16.11.2015	Helge Schlüter, Hildesheim/Jena	Implicit Perception of Voices in Patients with Auditory Hemineglect
09.11.2015	Anika Fiebich, Bochum/Duisburg	Pluralism in Social CognitionPluralism in Social Cognition
26.10.2015	Louisa Martina Kirchen, Luxemburg/Jena	Perception of Social Information in Voices by Cochlear Implant Users
19.11.2015	Stefan R. Schweinberger, Jena	Initial Meeting

Dr. Anika Fiebich
Duisburg-Essen University

Pluralism in Social Cognition

In my talk, I will present a pluralistic approach to the explanation of social understanding that integrates literature from social psychology with the theory of mind debate (Fiebich and Coltheart 2015; Fiebich 2015). There are two main schools in the contemporary debate that need to be mentioned here: (i) Theory Theory (TT), and (ii) Simulation Theory (ST). According to TT, we understand other minds by means of folk psychological theories. ST, in contrast, claims that we put ourselves imaginatively 'into the shoes' of another person and simulate the thoughts and feelings we would experience in his or her situation. Despite accounting for different socio-cognitive procedures, TT and ST share the assumption that there is a default procedure that individuals typically apply whenever attempts are being made to understand other minds (e.g., theory according to TT, or simulation according to ST). Pluralistic accounts, in contrast, argue that social understanding in everyday life is achieved in various ways. Social psychological studies from other domains such as economic games suggest that people may use various cognitive procedures to solve a mental task but typically make use of that procedure which is cognitively least effortful in a given context (see Kahneman 2011 for a discussion). I propose that the same holds true in the domain of social cognition (call this 'fluency assumption'); rather than there being a default procedure of social understanding, people make use – as a rule of thumb – of those socio-cognitive processes and procedures that are cognitively least effortful to them in a given context. That is, 'fluency', which is defined as the "the subjective experience of ease or difficulty associated with completing a mental task" (Oppenheim 2008, p. 237), plays a central role in social cognition (see Fiebich 2014 for a discussion of the role of fluency in social cognition in early ontogeny). Moreover, aside from theory and simulation that require understanding other people's behaviour in terms of mental states, pluralistic accounts point to research from social psychology, which suggests that everyday social understanding may also rely on associations of behaviours with familiar agents, stereotypes, being sensitive to environmental contexts, norms, habits, and social conventions. Drawing on developmental research, I discuss the development of a variety of socio-cognitive processes and procedures throughout ontogeny, arguing that those that emerge at the beginning of ontogeny are the cognitively least effortful ones and continue to play a dominant role in everyday social understanding in adulthood (Fiebich, Gallagher, and Hutto, forthcoming). Moreover, whereas some socio-cognitive processes and procedures are universally shared across cultures, others such as e.g., folk psychological theories depend (at least partially) on culture-specific environmental factors like narrative practices and hence may be acquired at different ontogenetic stages (see Fiebich, in press, for a discussion). I conclude with discussing psychopathological research, illustrating that children with autism are impaired in their ontogenetic development of various socio-cognitive processes and procedures and need to revert to effortful theorizing processes as a default strategy to understand other people's behaviour in terms of mental states (Fiebich, under review).

References:

Fiebich, A. (2014). Mindreading with ease? Fluency and belief reasoning in 4- to 5-year-olds, Synthese, 191(5), 929-944.

Fiebich, A., & Coltheart, M. (2015). Various Ways to Understand Other Minds. Towards a Pluralistic Approach to the Explanation of Social Understanding. Mind and Language. 30(3), 238-258.
Fiebich, A. (2015). Varieties of Social Understanding. Paderborn: mentis.
Fiebich, A. (in press). Narratives, Culture, and Social Understanding. Phenomenology and the Cognitive Sciences. DOI 10.1007/s11097-014-9378-7.
Fiebich, A., Gallagher, S., & Hutto, D. (forthcoming). Pluralism, interaction, and the ontogeny of social interaction. In the Routledge Handbook on "The Philosophy of the Social Mind", ed. by J. Kiverstein.
Fiebich, A. (under review). More than one way to skin a cat? Social cognition and interaction in autism.
Kahneman, D. (2011). Thinking, Fast and Slow. London: Penguin Books.
Oppenheim, D. M. (2008). The secret life of fluency. Trends in Cognitive Sciences, 12(6), 2372–41.

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Perception of Social Information in Voices by Cochlear Implant Users

Voices are highly complex acoustic signals that transmit not only verbal information (speech), but also convey a large amount of nonverbal socially relevant information about a speaker, such as gender, age, or emotional state. However, little is known on the perception of social cues in voices in cochlear implant (CI) users. Here we investigated the relative importance of acoustical cues for the perception of gender and age in 28 CI users (15 female, 13 male) and compared their performance to a normal-hearing control group of 19 (12 female, 7 male) listeners. A novel parameter-specific voice morphing approach based on Tandem-STRAIGHT (Skuk & Schweinberger, 2014) was used to control various acoustical cues in the stimuli. Specifically, we generated voice morphs along various male-female (Experiment 1) or young-old (Experiment 2) morph continua. Importantly, we varied in each experiment selected acoustical cues along the continuum, in order to measure their impact on the discrimination task, while keeping the residual cues at an intermediate "androgynous" or "middle-aged" morph level. In Experiment 1, we varied either the fundamental frequency (F0) or the timbre in short vowel-consonant-vowel syllables. In Experiment 2, we varied F0, the timbre, or timing information along the gender-congruent young-old morph continua, using sentence stimuli. The results showed that the perception of social information in voices was highly variable among CI users, with few CI users performing similar to normal hearing individuals. Importantly, while normal listeners made more usage of the timbre information in the voice gender discrimination task in Experiment 1, CI users discriminated gender almost exclusively based on F0. In Experiment 2, the control group predominantly relied on timbre for discriminating age, whereas F0 and timing information were relatively less important. In CI users, individual differences were substantial: while some CI users showed a similar pattern as normal hearing listeners, other CI users discriminated age based on F0, thus consistently perceiving female voices as younger and male voices as older. Overall, the present approach provides a promising novel tool to objectively assess the perception of social information in voices by CI users.

Reference: Skuk, V.G., & Schweinberger, S.R. (2014). Influences of fundamental frequency, formant frequencies, aperiodicity and spectral level information on the perception of voice gender. Journal of Speech, Language, and Hearing Research, 57, 285-296.