

**Scottish Autism Research Group Seminar Series**  
**An Integrated View of Research on Autism:**  
**Bringing Together Neurocognitive, Clinical/Diagnostic and Educational**  
**Processes**

<p><b>Seminar 4 – Friday 14<sup>th</sup> May, 2004</b>  <b>University of St. Andrews, School of Psychology, The Old Library</b></p>
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***Recent Advances in the Understanding of Social  
Cognition in Autism***

9:30	Registration / Coffee
10:00	<b>B. Wicker</b> CNRS Institut de Neurosciences Physiologiques et Cognitives, Marseille <i>The Emotional Brain In High Functioning Autism: Brain Regions Involved In Explicit Facial Emotion Processing</i>
11:00	<b>D. Riby</b> Stirling University <i>Communicative and Perceptual Face Processing Skills In Autism And Williams Syndrome</i>
11:30	Coffee Break
12:00	<b>J. Piggot</b> University of Glasgow <i>Emotional Attribution and Perceptual Processing in High Functioning Individuals with Autism Spectrum Disorder</i>
13:00	Lunch
14:00	<b>Emese Nagy</b> University of Dundee <i>Emotional Processing in Autism</i>
15:00	<b>E. Loth</b> Institute of Psychiatry, London <i>Abnormalities in Cultural Knowledge in Autism: a Link between Behaviour and Cognition?</i>
16:00	Coffee/Wine Break
16:30	<b>Panel Discussion</b>
17:30	End of seminar

This SARG seminar is co-organised with the School of Psychology, University of St. Andrews, with funding from the British Psychological Society.

**Organising Committee**

Juan Carlos Gómez, *University of St Andrews*; María Núñez, *Glasgow Caledonian University*; Evelyn McGregor & Katie Williams, *University of Edinburgh*

## Selection of Abstracts

Please note that these abstracts relate to seminar presentations, rather than to formal publications and, as such, should not be cited without the permission of the author.

### **Communicative and Perceptual Face Processing Skills in Autism and Williams Syndrome**

*Debbie Riby*

*University of Stirling*

The overarching aim of the research was to provide a broad exploratory investigation of a variety of face processing skills in children with Autism and Williams syndrome (WS). Groups of children (aged 6-16 years) with Autism and WS completed a battery of face processing tasks previously used with typically developing children (Bruce et al., 2000). Assessments addressed emotions, eye gaze, identification and speech sound processing. Performance accuracy for each assessment allowed a profile of abilities to be compiled for each learning difficulty group. Specifically, this included problems with gaze processing and recognition of the 'surprise' emotion by children with Autism. In contrast, the profile of abilities for WS children was characterised by strengths in eye gaze processing and revealed a possible reliance on the eye region for other face processing tasks. Conclusions are drawn concerning the implications of face processing deficits in these populations and how these may impact upon social interactions. The importance of different regions of the face is discussed. Finally, future research is suggested to investigate these abilities, deficits and strengths in performance in more detail.

### **Abnormalities in cultural knowledge in autism: a link between behaviour and cognition?**

*Eva Loth*

*SGDP Centre, Institute of Psychiatry, London*

High-functioning individuals with an Autism Spectrum Disorder show a striking discrepancy between success on complex theory of mind (ToM) tasks and characteristic social impairments in real life. The main proposal put forward in this talk is that cognitive abnormalities specific to this disorder (ToM deficits, Weak Central Coherence) may lead to different moment-to-moment experiences and may hinder individuals on the autism spectrum to participate in social activities necessary to acquire culturally shared background knowledge. I will present three exploratory studies that investigated two facets of cultural knowledge: social norms and event scripts.

Individuals with ASD who failed ToM tasks were significantly more impaired than verbal mental age matched controls in predicting and explaining behaviour based on social norms. Analyses of event narratives showed that lower-functioning children with ASD lacked scripts as a cognitive frame for their experiences, whereas a high-functioning subgroup showed specific abnormalities in the hierarchical organisation of events. On a new Frequency Rating Task, notably ASD who retained preponderance for local processing showed reduced appreciation of event variability, as they tended to represent actions that could sometimes occur in a black-and-white fashion as occurring always or never. Abnormalities in cultural knowledge further indicate the magnitude of social impairments and may provide a new window to the understanding of the adherence to inflexible routines. To delineate when and how exactly different cognitive abnormalities derail the acquisition of cultural knowledge may be the task for future work.