Current Research Literature in Autism & Asperger Syndrome
National Designated Expert

Dr. Christian Ryan
North Lee ASD Service, COPE Foundation, Cork

Research Update on Autism and Asperger Syndrome – Summer 2008

I plan to cover a range of themes in each of these research updates, but hope to include any interesting articles as and when they are published. I will try and group the references by theme and will cite older supporting articles that may be of interest. If I can find online full-text versions of the articles mentioned, I will include hyperlinks.

Summer 2008 Contents:
- Screening
- Diagnostics
- Emotion recognition skills
- Asperger Syndrome

Screening
The current debate on whether screening measures are of much use in the area of autism and Asperger Syndrome has continued in the literature. The early attempts to develop screening measures, such as the CHAT, were hampered by low sensitivity. More recent work such as the M-CHAT has gone in the opposite direction and suffers from the alternative drawback of low specificity. Though the UK National Screening Committee are still against any screening for autism, because of the lack of reliability of the screening measures, there is work currently being done by Baron-Cohen’s group at the ARC in Cambridge University on a quantitative version of the CHAT and it seems likely that this will address the problems of the two previous categorical versions. A paper detailing the preliminary findings of the measure is due for publication shortly in the Journal of Autism and Developmental Disorders (title below).


A draft proof is available from this link:

http://www.autismresearchcentre.com/docs/papers/2008_Allison_etal_QCHAT.pdf
Diagnostics
The issue of diagnostic stability has been addressed in a recent paper; it reports on the interesting finding that nearly 20% of children diagnosed at 16-35 months, subsequently moved “off the spectrum” by 42-82 months.


Abstract Autism Spectrum Disorders (ASD) diagnosis in very young children may be delayed due to doubts about validity. In this study, 77 children received a diagnostic and developmental evaluation between 16 and 35 months and also between 42 and 82 months. Diagnoses based on clinical judgment, Childhood Autism Rating Scale, and the Autism Diagnostic Observation Schedule were stable over time. Diagnoses made using the Autism Diagnostic Interview were slightly less stable. According to clinical judgment, 15 children (19%) moved off the autism spectrum by the second evaluation; none moved onto the spectrum. Results indicate diagnostic stability at acceptable levels for diagnoses made at age 2. Movement off the spectrum may reflect true improvement based on maturation, intervention, or over-diagnosis at age 2.

Emotion recognition skills
Regular readers of New Scientist magazine might have seen the brief report on Ralph Adolphs’s work on autism in the 26th July 2008 edition. What is particularly interesting about the work is it ties together two different strands of research. Firstly, Palermo, Pasqualetti, Barbat, Intelligente and Rossini (2006) demonstrated that the parents of children with autism showed poorer emotion recognition skills than a group of matched controls, but this was using relatively low tech approaches of schematic line drawings of faces. Adolphs and his colleagues use a more high tech “bubbles” method to analysis which parts of the face people are using to make judgements about emotions. The paper is well worth a look.


Summary
In his original description of autism, Kanner [1] noted that the parents of autistic children often exhibited unusual social behavior themselves, consistent with what we now know about the high heritability of autism [2]. We investigated this so-called Broad Autism Phenotype in the parents of children with autism, who themselves did not receive a diagnosis of any psychiatric illness. Building on recent quantifications of social cognition in autism [3], we investigated face processing by using the “bubbles” method [4] to measure how viewers make use of information from specific facial features in order to judge emotions. Parents of autistic children who were assessed as socially aloof (N = 15), a key component of the phenotype [5], showed a remarkable reduction in processing the
eye region in faces, together with enhanced processing of the mouth, compared to a control group of parents of neurotypical children (N = 20), as well as to nonaloof parents of autistic children (N = 27, whose pattern of face processing was intermediate). The pattern of face processing seen in the Broad Autism Phenotype showed striking similarities to that previously reported to occur in autism [3] and for the first time provides a window into the endophenotype that may result from a subset of the genes that contribute to social cognition.

The full paper is available for download at the following link:


**Asperger Syndrome**

There has been extensive discussion over the past few years as to whether Asperger Syndrome and High Functioning Autism constitute distinct entities on the Autism Spectrum. I won’t re-hash the arguments on each side or discuss the problems with ICD-10 and DSM-IV TR criteria. However, some researchers have tried to show that the two groups cannot be distinguished, but an alternative approach has been pursued by Mohammad Ghaziuddin, who over the past 15 years has published a range of interesting articles about Asperger Syndrome. This year he published an interesting and pragmatic study, which in a “nut-shell” suggests that Asperger Syndrome is a useful classification in thinking of people on the spectrum who are essentially in Wing’s category of “active but odd”, whereas the HFA group can be distinguished as being in the “aloof” or “passive” groups. This seems a much more useful distinction, particularly in adulthood, than the “no significant delay in language development” before 3 years of age. The characterisation of Asperger Syndrome is also more interesting in that it captures the fact that many of the differences between Asperger Syndrome and Autism cannot simply be attributed to a *milder* form of autism; there are qualitatively different.


The full-text is available at the following link:

http://www.springerlink.com/content/3r7t686283127033/fulltext.pdf

Some of Ghaziuddin’s previous publications on this area include:


I would also highly recommend reading Asperger’s original article which was translated by Uta Frith and included as the second chapter in the book she edited called *Autism and Asperger Syndrome* (1991), Cambridge University Press. Likewise, Kanner’s original paper *Autistic disturbance of affective contact* (1943) is a marvellous read and is available for download at the excellent Neurodiversity website:

http://www.neurodiversity.com/library_kanner_1943.html

This is the first selection in what will be a regular update on the Autism and Asperger Syndrome literature. Requests for further details or comments and suggestions can be forwarded to me at ryanc@cope-foundation.ie