

Contrasting the Executive Function and Medial Temporal Hypotheses of Autism

The neural basis of autism is still unknown. The two brain regions that appear most likely to be involved are the frontal and medial temporal lobes. The frontal lobe is implicated in autism because of the poor executive function skills individuals with the disorder usually display and the medial temporal lobes are of interest because of memory and emotional problems that are apparent in the disorder. There is a new test available, the Cambridge Neuropsychological Automated Test Battery (CANTAB) which has normative data and whose subtests reliably measure functioning of the frontal lobes, the medial temporal lobes, and both combined. Participants in the autism group (n=41) all met DSM-IV criteria for Autistic Disorder, as well as both ADI-R and ADOS research criteria for autism. Control participants (n=28) either were developing normally or were diagnosed with reading disability. The data shows a significant group by subtest interaction effect. This interaction was accounted for by equivalent performance between the autistic and control groups on the executive

differences on the memory (medial temporal) tests ($p < .06$). These findings suggest that the medial temporal lobes may be especially fruitful areas for future investigation, particularly in neuroimaging studies.



Julia Connelly
Class Standing: Senior
Major: Psychology
Leipzig, Germany
E-mail: Puck21@uswest.net



Faculty Mentor: Sally Ozonoff
Department of Psychology
E-mail:
sally.ozonoff@hsc.utah.edu