Archives Jean Piaget

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1205 Genève │Suisse

18th Advanced Course

Cognitive Development, Mechanisms and Constraints

3 – 5 July 2008

Friday morning, July 4, 2008

10h00 **Tracy Alloway**, University of Durham
Working memory in development : Links with learning between typical and atypical populations

Abstract:
Working memory refers to the capacity to store and manipulate information for brief periods of time and is closely associated with various aspects of learning. The primary aim of the present talk is to understand the extent to which deficits in subcomponents of working memory may differentiate these groups as measured by verbal and visuo-spatial tasks. The present review discusses the profile of working memory in different groups of typical children as well as atypical children: those with dyslexia, Specific Language Impairment (SLI), Developmental Coordination Disorder (DCD), Attention Deficit and Hyperactive Disorder (ADHD), and Autistic Spectrum Disorder (ASD). We report findings confirming differential memory profiles on the basis of developmental disorders. Specifically, language impairments (dyslexia and SLI) were associated with selective deficits in verbal short-term and working memory, while motor impairments (DCD) with selective deficits in visuo-spatial short-term and working memory. Children with attentional problems were selectively impaired in verbal working memory, visuo-spatial short-term and working memory, but not verbal short-term memory. The profile of children with ASD mirrored those with ADHD in that they had deficits in verbal short-term memory but not in any other memory component. The implications of these findings are discussed in light of support for learning.