

Seeking the Origins of Inquiring Minds - Studies of Causality and Control in Primates and Children

Amanda M. Seed

School of Psychology and Neuroscience, University of St Andrews

A suite of cognitive skills have been suggested to be unique to humans, such as representing the thoughts of others (theory of mind); remembering the past and planning for the future (episodic thinking); or drawing inferences about invisible causes from the pattern of relationships between events (causal cognition). All of these skills rely on a rich mental life, requiring not only abstract representations with specific content (e.g. beliefs, future times, causation), but also the ability to control and manipulate that content (executive functions). With so many seemingly unique characteristics, disentangling how cognition evolved since the split from our ape ancestry has proved to be extremely difficult. Interpreting adult human success and animal failure on any test is problematic – because there can be many explanations for the cognitive difference. Some of the previous negative results from apes may have revealed more about differences in executive function than differences in representation between humans and other apes. It is possible that commonalities in causal cognition may have been obscured – and that our inquiring minds may owe more to the legacy of our primate ancestry than has been suggested by some authors (e.g. Penn & Povinelli, 2007). However, it also implicates interesting differences in executive function that should be further explored. This talk describes new experiments on causal cognition and executive function in human children, apes and monkeys, to better understand how their cognition may be similar in some respects, and different in others.