What does pointing have to do with speaking? (How individuals with autism plan and control reaching movements)

Autism is a developmental disorder that impacts a growing number of families each year. Children and adults with autism find tasks that involve communication and social competency to be especially challenging. Besides the cognitive and perceptual skills that are needed, numerous motor skills are required to perform either of these tasks successfully. Thus, to further understand how individuals with autism control reaching movements the present body of work explores motor performance in persons with autism using paradigms and analysis techniques from the motor control literature. We targeted specific points along a closed-loop model of motor control. Initial experiments examined movement planning based on visual information and the effects of movement preparation on the perception of movement initiation. Detailed movement analysis techniques were employed in order to provide a complete picture of online control, both with and without visual feedback. Recent work examines how individuals with autism learn sequential motor patterns and plan movements when their final target is uncertain. The results will be discussed in the context of current theories of autistic behaviour and applied strategies.

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