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Children with Autism Fail to Orient to Naturally Occurring Social Stimuli

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Children with autism were compared to developmentally matched children with Down syndrome or typical development in terms of their ability to visually orient to two social stimuli (name called, hands clapping) and two nonsocial stimuli (rattle, musical jack-in-the-box), and in terms of their ability to share attention (following another's gaze or point). It was found that, compared to children with Down syndrome or typical development, children with autism more frequently failed to orient to all stimuli, and that this failure was much more extreme for social stimuli. Children with autism who oriented to social stimuli took longer to do so compared to the other two groups of children. Children with autism also exhibited impairments in shared attention. Moreover, for both children with autism and Down syndrome, correlational analyses revealed a relation between shared attention performance and the ability to orient to social stimuli, but no relation between shared attention performance and the ability to orient to nonsocial stimuli. Results suggest that social orienting impairments may contribute to difficulties in shared attention found in autism.

KEY WORDS: Social stimuli; autism; shared attention.

INTRODUCTION

Several authors have suggested that autism involves an impairment in attentional functioning (e.g., Courchesne *et al.*, 1994; Dawson & Lewy, 1989a, 1989b; Bryson, Wainwright-Sharp, & Smith, 1990). Even very able persons with autism have been found to exhibit impairments in selective attention and orienting (Casey, Gordon, Mannheim, & Rumsey, 1993; Courchesne *et al.*, 1994; Wainwright-Sharp & Bryson, 1993). Various explanations have been offered for how such attentional impairments may contribute to the profound social disabilities that characterize autism. One explanation, proposed by Courchesne, Chisum, and Townsend (1995), is that early social exchanges require rapid shifting of attention between different stimuli. In particular, the ability to share attention with others, which is impaired in autism, requires the young child to rapidly shift his/her attention between different stimuli. A somewhat different explanation, offered by Dawson (Dawson, 1991; Dawson & Lewy, 1989a, 1989b), focuses not on the ability to rapidly shift attention, but on the nature of the stimuli to be processed. Dawson has proposed that, although children with autism have general impairments in orienting and shifting of attention, these impairments are more evident for social stimuli. She hypothesized that, because social stimuli (e.g., facial expressions, speech, gestures) are complex, variable, and unpredictable, children with autism have difficulty processing and representing such stimuli and, therefore, their attention is not naturally drawn to such stimuli. The lack of attention to social stimuli limits the child's opportunity to engage in critical early social experiences which provide the foundation for social development (Dawson,

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