Interpersonal Body-Synchronization in Young Children When Watching Video Together

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Abstract : Is it more fun to watch videos together than watching alone? Previous studies showed that synchronizing with others enhances subsequent prosocial behavior and affiliation, and conversely, prosocial individuals tend to coordinate with a partner to a greater extent. However, compared to adults, less is known about interpersonal coordination of young children in real-life situations because most studies have focused on children's particular movement using specific tools or tasks in a laboratory setting. It has also been unclear if prosociality of young children affect the extent of interpersonal coordination within dyads. The present study examined data from motion capture of five body parts of 4-year-old dyads watching the same stimuli together or alone. A questionnaire survey including participants' prosocial trait was also conducted. The wavelet coherence of each body parts within dyads was calculated as a measure of the extent of interpersonal coordination. Results showed that the dyads became significantly more coordinated in a social situation compared to a non-social situation. Moreover, dyads with averagely higher prosociality were more coordinated. These results shed some light on the development of interpersonal coordination in terms of social ability in young children. This study also offers a useful method for a study of spontaneous coordination in young children and infants without instructions or verbal responses.

 ${\bf Keywords:} child \ development, interpersonal \ coordination, \ prosociality, \ synchrony, \ wavelet \ transform$

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