

# **Investigating the Development of Joint Attentional Skills in Early Ontogeny through Musical Joint Action**

Kevin Kaiser<sup>\*1</sup>, Sabrina Kierdorf<sup>1</sup>, Marvin Heimerich<sup>1</sup>, Kimberly Severijns<sup>1</sup>,  
Philippe Janes<sup>1</sup>, and Rie Asano<sup>1</sup>

\*Corresponding Author: kevin299@web.de

<sup>1</sup>Department of Musicology, University of Cologne, Cologne, Germany

Joint attention is an important basis for social interaction, which emerges in early ontogeny and scaffolds further social cognitive development. This paper investigates whether joint attentional skills show enhancement in the later developmental stage. To investigate this issue in a natural interactive situation independently of any language-related skills, we conducted a structural observation with children of different age-groups (1.5–2.5, 3–4, and 5–6 y) in a musical joint action setting. We present and discuss our coding scheme allowing for analyzing joint attentional skills and non-verbal interactive behavior of children across a broad age range by means of two categories: social gaze (gaze switching and gaze following) and musical gestures (rocking, clapping, and singing). By examining the relation between those categories, it is possible to investigate whether children's interactive behaviors are linked to an enhancement of joint attentional skills. Moreover, we report results from our first application of this coding scheme.