

## **Individuality and Development in Children's Spontaneous Tempo and Synchronization**

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### **Abstract**

*Key Words:* spontaneous tempo, synchronization, children, individuality, individual differences, development, music, music education.

*Background.* Earlier research has provided an impressive amount of knowledge concerning pulse rhythms and "timing". However, this has not always been related to music, and deals for the most part with adults on a general level. This present investigation concerns individuality and development in children's spontaneous tempo and synchronization.

*Aims.* The study investigates children's spontaneous tempo and ability to synchronize to external stimuli. This ability may be a fundamental and indispensable precondition for musical activity as a whole, and ensemble playing in particular. The study focuses individual stability, individual differences and development over time in the performances of the children.

*Method.* 30 children, 12 boys and 18 girls, participated in the study. A specially designed computer program was used to measure their performances.

The tests were carried out in 1992 when the children were eight years old and in 1997 when they were thirteen. The investigation therefore also provides information concerning the longitudinal development.

*Results.* Individual stability is detected in both spontaneous tempo and synchronizing behaviour. On the other hand the children display substantial individual differences. These results are discovered in both the 1992 and the 1997 measurements. Children with exceptionally low precision in synchronization in 1992 made the greatest change and performed with normal precision in 1997. Girls exhibited greater precision in synchronizing at the age of eight.

*Conclusions.* The individual stability, the differences between the children and the increase in synchronizational precision from 1992 to 1997 are results that could be of importance in music teaching and in musical activities in general. The results further suggest that ageing is a factor that contributes in improving synchronizational precision.