Individuality and Development
in Children's Spontaneous Tempo and Synchronization

Dissertation in English. 219 p.
Ambjörn Hugardt, Göteborg University, Department of Musicology
Box 200, SE-405 30 Göteborg, Sweden
Tel: +46-31-773 40 83, Fax: +46-31-773 40 89

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

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.