

## **Is there any common background in the brain for action, language and music?**

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The traditional view about brain localization of higher cognitive functions localizes praxic abilities and language in the left, dominant hemisphere and musical ones in the right. This assumption has been more and more weakened by neuroimaging evidence showing that musical structures significantly activate left frontal areas, during both production and listening.

Conversely, ERPs data show left and right anterior negativities elicited by syntactic violations in linguistic and musical domains, respectively. Starting from this ambiguous evidence, I will discuss the hypothesis that both, language and music may share a common syntactical background, motor in origin. Moreover, I will present some recent results of experiments aiming at investigating the conductor/orchestra interaction during music playing and how leaderships expression could be related to the quality of musical execution.