

Motor control and timing in speech and music: Perspectives from neural disorders

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Speaking and dancing to music are common phenomena in humans and may look like very trivial skills. However, the underlying cognitive and neural mechanisms are far from simple. To tackle the complex issues, in the current talk, we focus on motor control and timing in speech and music. In speaking and dancing, motor patterns should be planned, coordinated, and ordered in time. Thus, mechanisms of motor control and timing seem to be common denominators of speech and music. Moreover, even in passively listening to speech and music, our motor systems are engaged to predict future events. Does it mean that deficits of general motor control and timing mechanisms affect speech and music on both production and perception sides? We will approach this question in the current talk by discussing studies investigating neural disorders known to cause motor control deficits such as essential tremor, Parkinson's and Huntington's disease.