

## **An oscillatory account of musical and linguistic rhythm**

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Neural oscillations at distinct frequencies are increasingly being related to a number of basic and higher cognitive faculties. Oscillations enable the construction of coherently organized neuronal assemblies through establishing transitory temporal correlations. By exploring the elementary operations of the language faculty – labeling, concatenation, cyclic transfer – alongside neural dynamics, I will outline a newly-developed model of linguistic computation. This model will then be used to explore recent experimental work into the brain rhythms and cognitive faculties responsible for musical rhythm. I will argue that the oscillatory nature of music and language is structured around cognitive systems responsible for rhythmic expectancy, and that both systems share computational generics like concatenation and interface with extra-grammatical mechanisms of attentional entrainment. Lastly, the oscillatory mechanisms of cross-frequency coupling and migrating waves will be claimed to be involved not only in syntactic structure-building, but also in rhythm perception and temporal measurement.