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Hierarchical timescales of statistical learning revealed by mismatch negativity to auditory
pattern deviations

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Abstract

The amplitude of mismatch negativity (MMN) elicited following an unexpected sound reflects a pattern-violation signal that will increase with estimated precision. Precision is inversely related to environmental variance, and should be higher the longer that current regularities have been stable. However, MMN amplitude can be impacted by initial learning such that the relative probability of sounds when first encountered distorts the precision estimates later associated with those sounds. The present study tested the hypothesis that MMN to a pattern violation would be differentially sensitive to both local and global

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