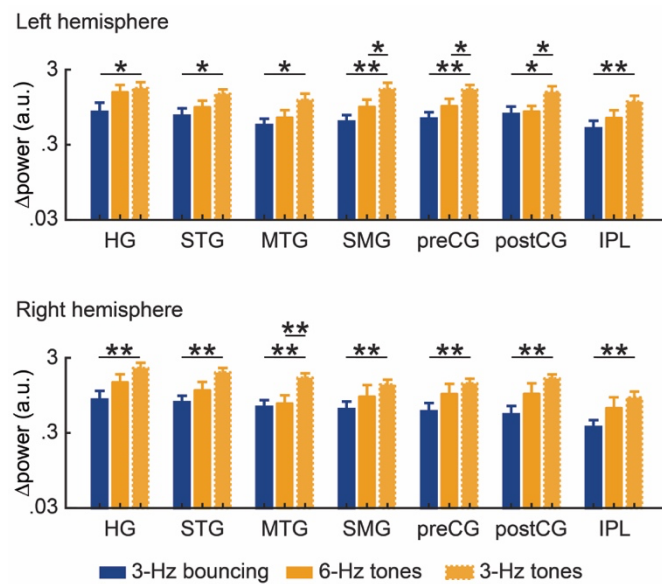
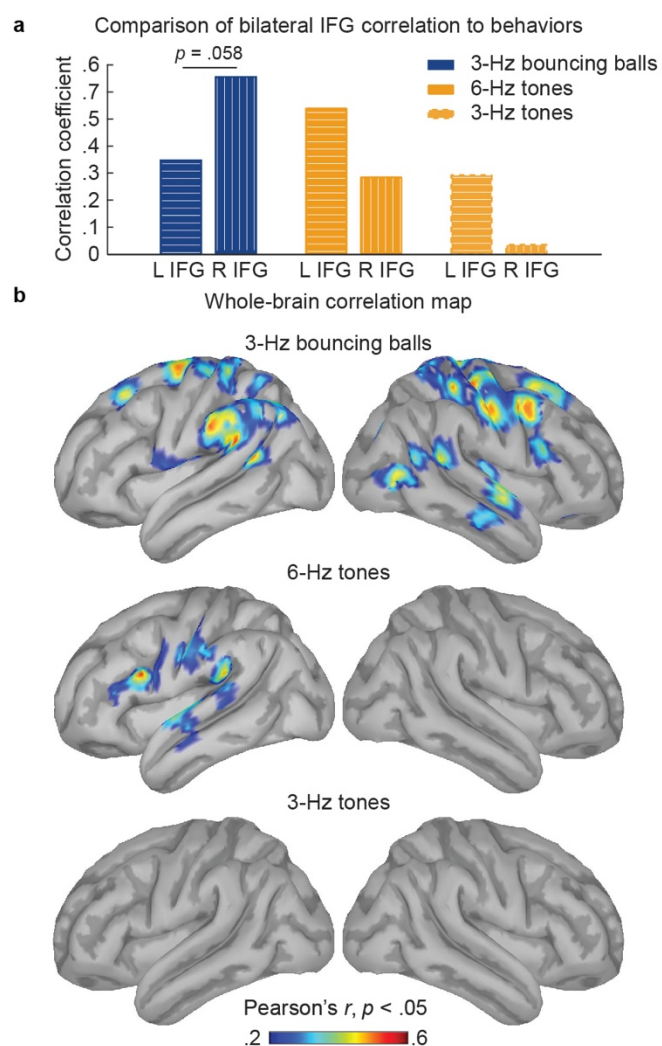


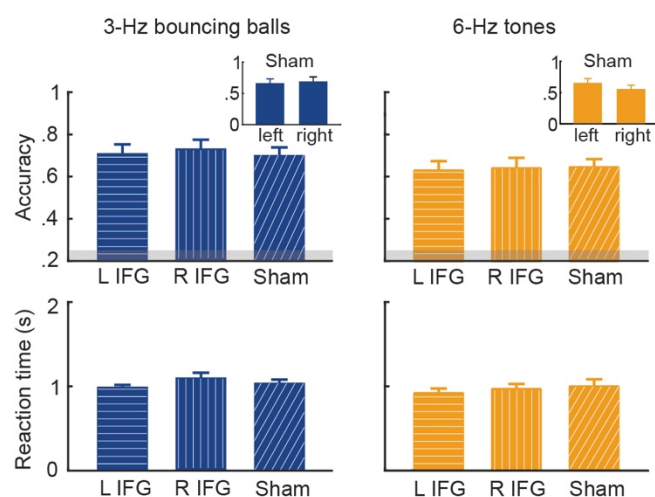
Supplementary information



Supplementary Figure 1 | Comparisons of chunk-rate power over ROIs among the three conditions. The chunk-rate activations under the 3-Hz tone condition are strongest relative to the 6-Hz tone condition and 3-Hz bouncing ball condition, in all ROIs shown here (paired two-sided bootstraps, FDR corrected). The activations under the 6-Hz tone condition and the 3-Hz bouncing ball condition are comparable. Error bars represent 1 s.e. across subjects. * $p < 0.05$, ** $p < 0.005$.



Supplementary Figure 2 | Neural correlates to behaviors at source space. a, Contrasts of among correlation coefficients. The left IFG is a marginally better predictor than the right IFG in predicting visual sequence-chunking accuracy. **b,** Whole-brain surface map showing significant relations between source-level chunk-rate response and behavioral performance ($N = 23$, $p < 0.05$, Spearman correlation, uncorrected). Neural substrates of tracking 3-Hz bouncing-ball structure cluster over right hemisphere, while those of tracking 6-Hz tone structure cluster over left hemisphere.



Supplementary Figure 3 | Behavioral performance averaged across subjects. In the TMS experiment, half of participants accept left sham stimulation while that other half accept right sham stimulation. No significant difference is found between the left and the right sham condition ($N = 24$; $p = 0.988$ for all comparisons, paired two-sided bootstraps, FDR corrected; inset figures). The behavioral performance of the left and the right sham conditions is merged afterwards. The accuracy and the reaction time are average across subjects, TMS disruptive effect was not observed among stimulation sites ($N = 24$). Gray shaped area indicates chance level and error bars represent 1 s.e. across subjects.

Supplementary Movie 1 | Visual stimuli used in the Experiment 2.