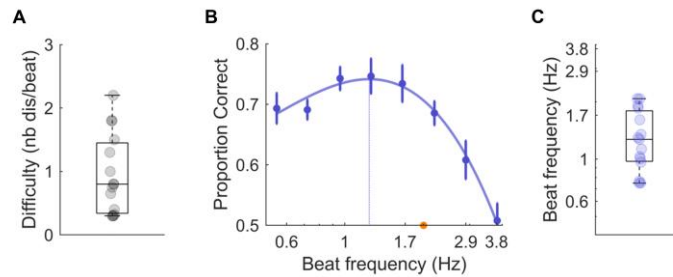


## **Supplementary Information**

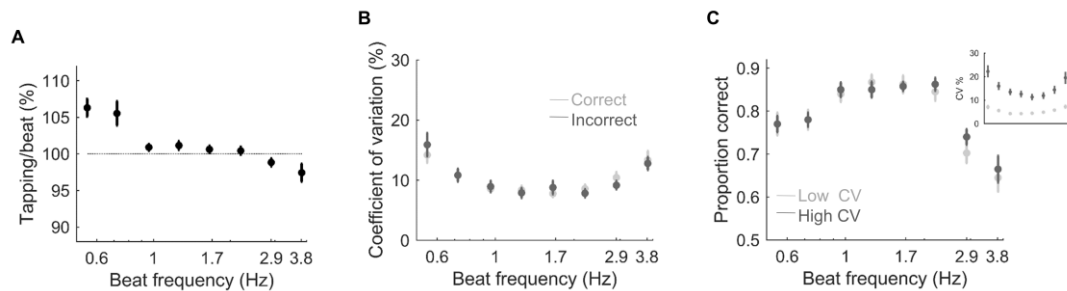
### **Natural rhythms of periodic temporal attention**

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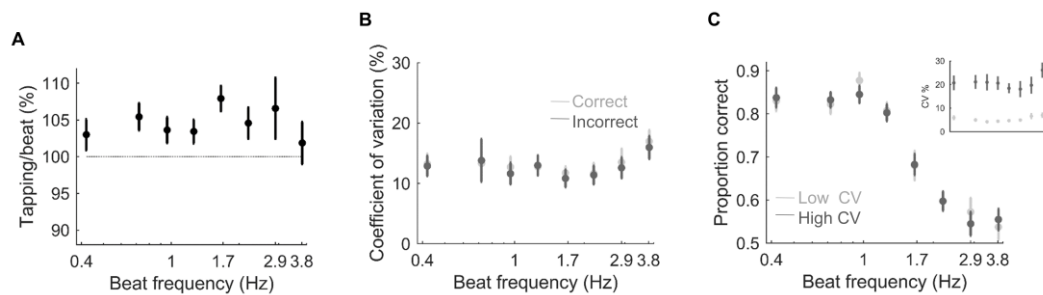
## Supplementary Figures



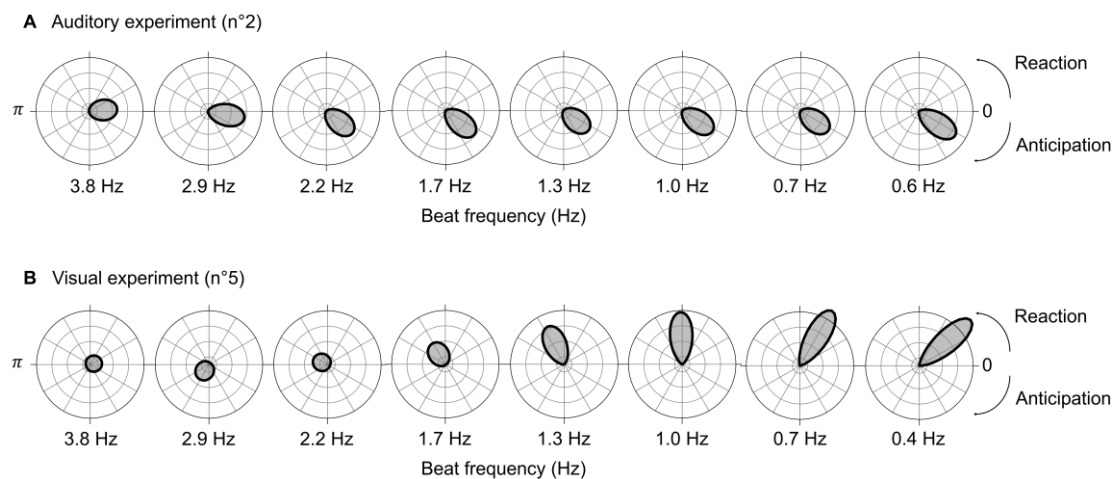
**Supplementary figure 1 |** Experiment 6. In this alternate version of experiment 1, the duration of the pure tones was kept constant across conditions and equal to 22.5ms. **A.** Individual difficulty level to reach threshold performance for a 2 Hz tempo. **B.** Average performance per condition. Same conventions as in Figure 1C. **C.** Individual estimates of the optimal tempo. Error bars indicate s.e.m. ( $n = 15$ ). Boxplots represent median and 1.5 times the interquartile range.



**Supplementary figure 2 |** Experiment 2 (auditory). **A.** Guided tapping precision across conditions of the tracking session. The precision is expressed as the ratio (in %) between the average tapping frequency and the tempo. In other words, it indicates whether the tempo of the tapping is faster (>100 %) or slower (<100 %) than the tempo of the sequence. The horizontal line indicates the ideal ratio. **B.** Coefficient of variation (CV) of guided tapping across conditions in the tracking session, for correct (light grey) and incorrect (dark grey) trials. **C.** Average performance per condition in the tracking session, for trials with low (light grey) and high (dark grey) CV. Trials were sorted according to a median-split procedure. The inset plot indicates the associated CV. Error bars indicate s.e.m. ( $n = 20$ ).



**Supplementary figure 3 | Experiment 5 (visual).** **A.** Guided tapping precision across conditions of the tracking session. The precision is expressed as the ratio (in %) between the average tapping frequency and the tempo. In other words, it indicates whether the tempo of the tapping is faster ( $>100\%$ ) or slower ( $<100\%$ ) than the tempo of the sequence. The horizontal line indicates the ideal ratio. **B.** Coefficient of variation (CV) of guided tapping across conditions in the tracking session, for correct (light grey) and incorrect (dark grey) trials. **C.** Average performance per condition in the tracking session, for trials with low (light grey) and high (dark grey) CV. Trials were sorted according to a median-split procedure. The inset plot indicates the associated CV. Error bars indicate s.e.m. ( $n = 20$ ).



**Supplementary figure 4 | Inter-individual distribution of the temporal distance between motor acts and the beat (in *relative value*, normalized to the tempo period) across conditions in the tracking session of the (A) auditory (exp. 2) and (B) visual (exp. 5) experiments. Negative (/positive) values indicate that motor acts anticipated (lagged) the beat (0: in-phase,  $\pi$ : antiphase).**