

Figure S1: For multi-instrument music, side-by-side comparison of surface rhythm (all instruments combined) and single-instrument rhythm. Related to Figure 3 and Figure 4. A & B: flexible tempos, C & D: rigid, fast tempos (thresholds indicated in blue). Differences between surface and single-instrument rhythm are highlighted by red arrowheads. A & B, flexible tempos: In North Indian Ragas, Cuban Salsa and Uruguayan Candombe, surface and single-instrument rhythms are largely similar. In Malian Jembe, the isochronous rhythm peak produced by single instruments (in A) disappears at the surface rhythm (in B). Malian Jembe presents an exception in strongly favoring non-isochronous rhythm classes over isochrony in combined rhythm (as expected from previous literature [S1,S2,S3]). In Tunisian Stambeli and Cuban Salsa, 1:2 / 2:1 rhythms are routinely produced by single instruments, but are masked on the surface level where isochrony becomes more pronounced. C & D, fast/rigid rhythms: In Cuban Salsa, additional high-ratio peaks appear at the surface level in rigid tempos (in D as compared to C), possibly due to expressive deviations or timing inaccuracy in some, but not other instruments. In Malian Jembe rigid tempos, combined surface rhythms (D) show a slight shift of ratio peaks towards isochrony without reaching it.

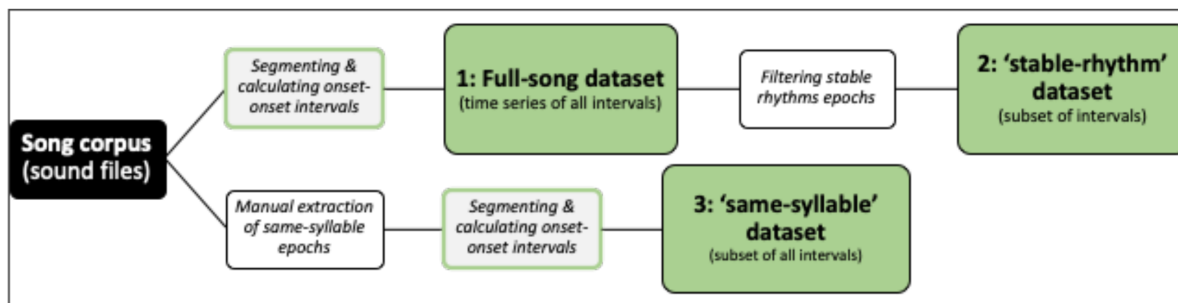


Figure S2. Schematic depicting the workflow to generate the three thrush nightingale rhythm datasets. Related to STAR Methods.

Supplemental References

- S1. Polak, R. (2010). Rhythmic Feel as Meter: Non-Isochronous Beat Subdivision in Jembe Music from Mali. *Music Theory Online* 16
- S2. Polak, R., and London, J. (2014). Timing and Meter in Mande Drumming from Mali. *Music Theory Online*.
- S3. Polak, R., London, J., and Jacoby, N. (2016). Both Isochronous and Non-Isochronous Metrical Subdivision Afford Precise and Stable Ensemble Entrainment: A Corpus Study of Malian Jembe Drumming. *Front. Neurosci.* 10.