

## Tempo/Beat Fluctuations – Different Types/Genres of Music:

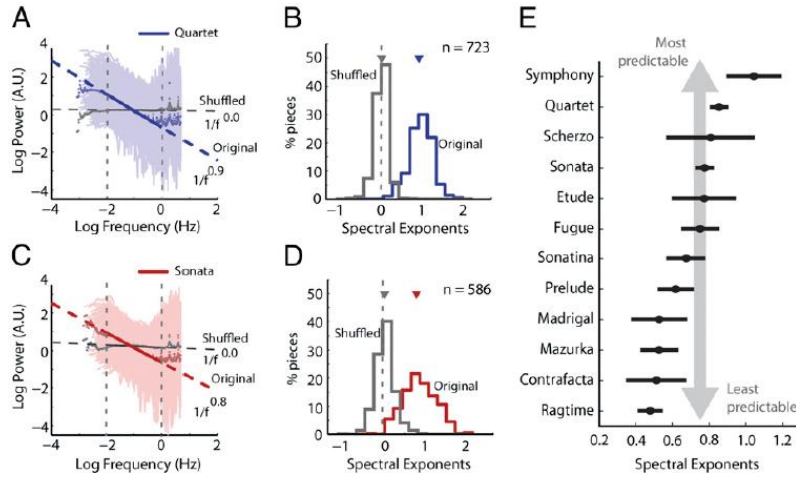


Fig. 3. The  $1/f$  rhythm spectra are ubiquitous across genres. (A) Rhythm spectra for quartets. Average spectra (dark blue points) and linear fit (dark blue) to average spectrum in the frequency range of 0.01 to 1 Hz. Faded blue lines represent spectra of individual pieces. Gray data represent spectra of shuffled rhythms. Other conventions are as in Fig. 2B. (B) Distribution of rhythm spectral exponents obtained by linear fits to individual pieces (blue), and for the corresponding shuffled rhythms (gray). Inverted triangle represents median exponents. Dashed vertical line:  $\beta = 0$ . (C) Rhythm spectra for sonatas (red) and corresponding shuffled rhythms (gray). Other conventions are as in B. (D) Distribution of rhythm spectral exponents for sonatas (red) and corresponding shuffled rhythms (gray). Other conventions are as in B. (E) Distribution of rhythm spectral exponents for musical genres ordered from largest mean exponent to smallest. Larger exponents indicate correlations over longer timescales, and hence more predictable rhythms (vertical gray arrow). Circles are mean exponents, and error bars are 95% CI. Disjoint intervals indicate significantly different mean exponents (Tukey–Kramer HSD).

## Tempo/Beat Fluctuations – Different Composers of Music:

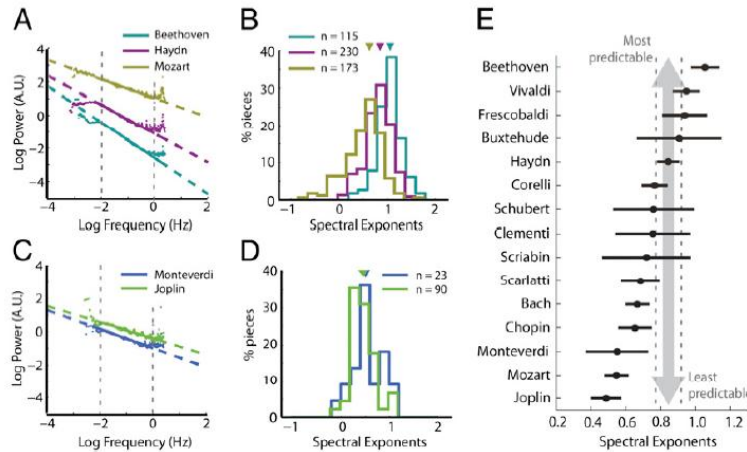


Fig. 4. Composers exhibit distinct  $1/f$  rhythm spectra. (A) Average rhythm spectra for Beethoven (dark green), Haydn (violet), and Mozart (olive green): contemporary composers belonging to the Classical era (1750–1820). Other conventions are as in Fig. 3A. (B) Distribution of rhythm spectral exponents for compositions of Beethoven, Haydn, and Mozart. Color conventions are as in A. Other conventions are as in Fig. 3B. (C) Average rhythm spectra for Monteverdi (blue) and Joplin (green): composers separated by nearly three centuries of compositions. Other conventions are as in Fig. 3A. (D) Distribution of spectral exponents for compositions of Monteverdi and Joplin. Color conventions are as in C. Other conventions are as in Fig. 3B. (E) Distribution of spectral exponents for composers ordered from largest mean exponent to smallest. Spectral exponents of Haydn, for example (dotted vertical lines, 95% CI), are significantly different from those of Beethoven and Mozart ( $P < 0.05$ , Tukey–Kramer HSD). Other conventions are as in Fig. 3E.