

The origins of speech anti-rhythm

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Although early ideas about the isochronous organisation of speech units have consistently been shown to lack empirical validity, the idea that speech is rhythmically organised remains prevalent. The notion of rhythm class – “stress-timed”, “syllable-timed”, “mora-timed” – is frequently invoked in typological descriptions, and recent studies of the entrainment of neural oscillators to the amplitude envelope of speech often assume a quasi-periodic signal. Presenting results from studies of language learning and discrimination, I argue that speech is actually characterised by a strong tendency to “anti-rhythm”, exploited in diverse ways cross-linguistically. Typically, speech encodes linguistically important distinctions through spectral and temporal variation, building noise-resistant redundancy into the speech system. Furthermore, in perception, relative unpredictability of temporal patterning may serve to focus attention and facilitate comprehension.