

# Prosodic cues for rhythm in adult vs. child-directed song

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With parallels between music and language widely explored, little is known as to how child-directed music reinforces linguistically relevant information such as rhythm. Research in this direction relies on the assumptions that (i) different musical traditions reveal language-specific rhythmic values (e.g., higher nPVI for English and German vocal music than for French and Italian, see Daniele & Patel 2013), and (ii) child-directed music reflects the tendencies found in child vs. adult-directed speech irrespective of language (i.e., lower nPVI in child than adult-directed music). Research testing these assumptions on vocal music has however yielded incompatible results. While musical nPVIs could not distinguish German from French (VanHandel & Song 2010) or English and German from French and Italian (Temperley 2017), Hannon et al. (2016) have recently found higher nPVI values in English than French children's songs but no difference between English and French adult (folk) songs. The cross-linguistic and cross-genre validity of these findings therefore beg for further investigation.

Here we investigate parallels between rhythm and vocal music in Turkish, a syllable-timed language, and tests whether rhythmic differences are found in adult-directed and child-directed music within the same language, controlling for different musical traditions. Specifically, we analyze nPVI values of a carefully selected children's vs. adult songs composed in two genres: Turkish Makam (classical) music (n=44) and Turkish non-Makam music (n=44).

Preliminary analyses of the Makam songs reveal that mean nPVI values are significantly lower in children's than in adult's songs (33.33 vs. 72.07), the latter showing properties of stress-timing. Whether similar trends hold for non-Makam songs remains to be seen. We will discuss the implications of our current findings for the psychotypology of other prosodic phenomena (stress) and their mirroring in other musical levels (meter and melody) using recent findings from children's songs (Domene Moreno & Kabak 2018).

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