

Cross-Linguistic Similarities and Differences in People's Understanding of the Structure of Number Words

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Abstract

Number words follow a set of principles that some have proposed to be universal. According to Hurford (1975), these principles include phrase-structure rules along with additional arithmetic constraints. However, languages vary in how transparently their number systems reflect these principles; for example, the English teens (e.g., twelve) and Turkish decades (e.g., yirmi) deviate from them. How do such irregularities influence speakers' understanding of number word structure? To find out, we examined grammaticality judgments for novel number words among speakers of Chinese (with a transparent number system) and English and Turkish (with less transparent systems). While all groups demonstrated a better understanding of the phrase-structure rules than the arithmetic constraints, Chinese speakers showed more sensitivity to both the rules and the constraints than English or Turkish speakers. The results pinpoint ways in which the structure of number words is available to all speakers and ways in which it varies.