Same/different relation detection and word production in 4-year-olds

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Abstract

Relational processing is critical for complex cognition (Gentner, 2003, 2010). Here, we investigate the development of two fundamental relationssame and different. Previous research suggests that childrens understanding of same may precede understanding of different, and that languageespecially labels for these relationsmay support this understanding (Hochmann et al., 2017; Christie & Gentner, 2014). We presented 4-year-olds with either a different-only or a same/different mixed version of the Relational-Match-to-Sample (RMTS) task. Children made relational matches at above-chance rates in both conditions and performance was comparable with previous findings on a same-only RMTS (Christie & Gentner, 2014; Hoyos, Shao, & Gentner, 2016; replication in process). Across both conditions, children who said the words same/different outperformed those who did not, suggesting that spontaneous production of the terms indicated better encoding of the relations. Interestingly, children produced the word same more than the word different, even when presented with match-to-different trials.