

## The effects of beat gestures and prosody in information memorization and comprehension within a contrastive discourse by children

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The cognitive benefits of co-speech gestures have been widely described (e.g., McNeill, 1992; Goldin-Meadow, 2003). The increase in word recall has been highlighted as one of the positive effects in the use of representative (or iconic) gestures (e.g., Kelly et al., 1999; So et al., 2012). With respect to beat gestures (rhythmic hand/arm movements produced with prominent prosody) results remain controversial. Research has shown that naturally produced beat gestures (accompanied by prosodic prominence) favor word recall in a contrastive discourse by adults (Kushch & Prieto, 2015). According to So et al. (2012), beat gestures increase word memorization by adults but not by children. In this study, preschoolers (e.g., 4 to 5 year olds) couldn't perceive beats as a prominent cue and the pragmatic information was not controlled for. A more recent study by Igalada et al. (2014), showed that beat gestures do help preschoolers to recall words. In these two studies children had to remember target words from a list of items. Yet, we do not know whether preschoolers can benefit from the use of beat gestures as pragmatic encoders of contrastive information in natural discourse.

The aim of our study is to investigate whether beat gestures help children to recall contrastive information in a child-directed discourse. Twenty children will be exposed to a total of 12 stories. Target contrastive items will be presented under three experimental conditions: 1) unaccented, 2) prominence in speech alone (accented words); and 3) prominence in both speech (accented words) and gesture (beats). Following the results by Igalada, et al. (2014), Kushch & Prieto (2015), Krahmer and Swerts (2007), we hypothesize that children will remember more items conveyed in the beat gesture condition than in the other two conditions, showing that beat gestures influence positively information memorization and recall within a contrastive discourse by children.

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