The developmental trajectory of different types of presupposition: An experimental study

While presupposition has been one of the central topics in the field of semantics and pragmatics (Karttunen, 1973, 1974; Stalnaker, 1973, 1974; Beaver & Geurts, 2012), acquisition studies that examine the developmental trajectory of different types of presupposition in English and other languages are scarce (Schwarz, 2014). This study aims to fill this gap by investigating the developmental trajectory of four different types of presupposition in typically developing and autistic Cantonese-speaking children, seeking to address the following research questions: (i) What is the developmental trajectory of the four main types of presupposition, namely existential presupposition, factive presupposition, lexical presupposition and structural presupposition, in typically developing Cantonese-speaking children? (ii) At what age do these children reach adult-like performance? (iii) What is the developmental trajectory of the four types of presupposition in Cantonese-speaking children with autism?

In our experimental design, we constructed 10 pairs of utterances for each type of presupposition by making reference to the presupposition triggers of the four types of presupposition in English (Karttunen, 1973, 1974; Levinson, 1983). All 40 pairs of utterances were played to the participants during the experiment. After listening to each pair, the participants were asked to judge whether the second utterance was correct or not, assuming that the first utterance with or without a presupposition trigger was correct.

In our experiment, 30 typically developing Cantonese-speaking children from three different age groups (for each group, n=10; mean age=7;04; mean age=9;325; mean age=11;04) were compared to investigate the developmental trajectory of the four types of presupposition. Their performance was compared with an adult control group (n=10; mean age=45.5) to investigate when they achieve adult-like performance.

We conducted a two-way ANOVA, which revealed that there was a significant effect of age ($F(3, 144) = 24.55$, $p < 0.001$) as well as a significant effect of type of presupposition ($F(3, 144) = 6.74$, $p < 0.05$) on the children's performance, while the interaction between these factors was insignificant ($F(9, 144) = 0.37$). In terms of the developmental

trajectory of the four types of presupposition, our findings showed that existential presupposition was acquired earlier across all three age groups than the remaining three types of presupposition. Comparing children's and adults' performance revealed that children achieved adult-like performance between ages 9 and 11. While 9- to 11-year-olds showed adult-like performance on presupposition, their performance on the four types of presupposition differed. Specifically, they performed best with existential presupposition, followed by factive presupposition and then structural presupposition. Overall, they performed worst with lexical presupposition.

In light of our findings, we expect that (i) age-matched and IQ-matched Cantonese-speaking children with autism will perform more poorly than the typically developing children in the four types of presupposition, (ii) they will acquire existential presupposition earlier, like the typically developing children, and (iii) they will master structural and lexical presupposition earlier than factive presupposition, given the extant literature which shows that autistic children generally have difficulties mastering cognitive mental state verbs due to their inability to take the perspective of others (Tager-Flusberg, 1992).

Selected references:
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