Cross-linguistic influence on pronoun resolution in simultaneous bilingual Turkish-Dutch children: An eye-tracking study

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We investigated whether pronoun interpretation preferences from a null subject language, Turkish, influence online and offline pronoun resolution in a non-null subject language, Dutch, in Turkish-Dutch simultaneous bilingual children. Dutch overt pronouns are usually linked to the most accessible referent in the discourse (e.g., Ariel, 2014), which is Anna in (1). In contrast, Turkish overt pronouns typically signal a shift in topic (e.g., Azar & Özyürek, 2015; Enç, 1986), linking o in (2) either to Sophie or a third unmentioned referent.

(1) Anna en Sophie zijn thuis. Terwijl Anna leest, neemt zij een slokje water.

Anna and Sophie are home. While Anna reads takes she a sip water

(2) Anna okurken, o sudan bir yudum alıyor.

Anna read water a sip take

It is unknown whether preferences from one language can influence bilingual children’s online pronoun resolution preferences in their other language (see Serratrice, 2007, for offline pronoun resolution). In fact, cross-linguistic influence during sentence processing in general is an underexplored area in children (cf. Lemmerth & Hopp, 2019; van Dijk, Dijkstra, & Unsworth, under review). Our main aim was, therefore, to test for online cross-linguistic influence during Dutch pronoun resolution in Turkish-Dutch children. Furthermore, we compared online and offline effects and investigated the role of language dominance. Finally, we tested whether a general bilingualism effect affects children’s pronoun interpretations (e.g., Sorace et al., 2009).

We measured 17 Turkish-Dutch children’s (age: 7;0-11;0) pronoun interpretation preferences in Dutch sentences such as in (1) using an eye-tracking task (visual world paradigm) combined with a picture selection task. Twenty-two German-Dutch bilingual and 14 Dutch monolingual peers served as control groups. We expected no influence from German as Dutch and German have similar pronoun preferences (e.g., Roberts, Gullberg, & Indefrey, 2008).

Using mixed effects modelling we found evidence for cross-linguistic influence from Turkish in children’s fixations when we took children’s language dominance profile into account. The more balanced children were in their languages, as opposed to being Dutch-dominant, the less they fixated on the Turkish-preferred non-topic referent. We observed a similar although non-significant pattern offline. Finally, we found no evidence for a general bilingualism effect online or offline.

Our findings suggest that processing Dutch pronouns activates Turkish overt pronouns and their preferred non-topic interpretation, in line with accounts on non-selective lexical and syntactic access in bilinguals (e.g., Dijkstra & van Heuven, 2002; Hartsuiker & Bernolet, 2017). Turkish-Dutch children had to inhibit this Turkish co-activation. Consequently, the stronger this inhibition was, the less available the ‘Turkish interpretation’ became. Furthermore, language dominance mediated the strength of co-activation, and, consequently, inhibition. This study is one of the first to provide direct evidence of language co-activation during sentence processing in bilingual children.
References


