

The pronoun interpretation problem in bilinguals: evidence from Dutch/German speaking children
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Background Dutch-speaking children, like English-speaking children, make mistakes in the interpretation of pronouns until age 7 (Pronoun Interpretation Problem or PIP, Baauw et al., 2011; also called Delay of Principle B Effect, Chien & Wexler, 1990), whereas German-speaking children already interpret pronouns correctly from age 4 (Ruigendijk et al, 2010). This cross-linguistic difference is not yet fully understood. Explanations are sought in differences in the pronominal systems of the languages. We address the question: what happens if a bilingual child acquires a language with (Dutch) and one without (German) the PIP? There are in principle four logical possible outcomes: Dutch influences German: a PIP in both languages; German influences Dutch: no PIP in either language; bidirectional influence: smaller PIP in Dutch, increased PIP in German; no influence: a PIP in Dutch, no PIP in German. The aim of this study is to further our understanding of the PIP and its cross-linguistic differences.

Experiment We tested 21 Dutch-German bilingual children, age 3;8–6;11 ($M = 5;7$, 10 girls) that were recruited from the areas of Groningen (NL) and Oldenburg (DE) with a picture selection task (see Ruigendijk et al., 2010). The test consisted of transitive and ECM sentences with a reflexive or a personal pronoun. All started with an introduction sentence ‘first the woman and girl VERB and then...’ (8 items per condition, 32 in total, see (1) and (2) for examples). Each item was presented with three pictures: one depicting the pronoun interpretation, one the reflexive and one as a distractor depicting a different verb. Each child was tested in both languages, in separate sessions, with at least 1 week in between.

(1) Dutch... en daarna heeft de vrouw zichzelf/haar gekieteld

German: ..., und dann hat die Frau sich/sie gekitzelt

‘..., and then the woman tickled herself/her’

(2) Dutch: ... en daarna zag de vrouw zichzelf/haar applaudiseren

German: ... und dann sah die Frau sich/sie klatschen

‘..., and then the woman saw herself/her applauding’

Results Whereas the children did not show a clear difference in performance on pronouns versus reflexives in transitive sentences in German, the same children did so in Dutch (Table 1). Furthermore, performance on pronouns in ECM sentences drops considerably in both languages (as has been reported before for monolinguals, e.g. Baauw et al. 2011). Finally, these bilingual children perform lower than monolingual children of the same age from earlier studies, in fact, in German they perform more like monolingual 3-4 year olds (Ruigendijk et al. 2010).

	Dutch		German	
	reflexive	pronoun	reflexive	pronoun
Transitive	79.9	63.6	78.6	74.4
ECM	82.6	48.4	79.2	63.7

Table 1: % correct

These results indicate that there is no cross-linguistic influence in pronoun interpretation. We find a PIP in Dutch, but not in German. The results also show that the PIP is not a task effect or a language-independent effect of processing or pragmatics (as has been argued before, Chien & Wexler, 1990; Conroy et al. 2009). Rather, the PIP seems to originate in the grammatical system of the specific language: the observed cross-linguistic difference may arise from the stronger ambiguity of Dutch pronouns compared to German pronouns.

References Baauw, S., S. Zuckerman, E. Ruigendijk & S. Avrutin. 2011. Principle B delays as a processing problem: Evidence from task effects. In Grimm, Muller, Hamann & Ruigendijk (eds.), *Production-comprehension asymmetries in child language*, 247–272. Berlin: Mouton De Gruyter. Chien, Y.-C. & K. Wexler (1990). Children’s knowledge of locality conditions in binding as evidence for the modularity of syntax and pragmatics, *Language Acquisition* 1, 225–295. Conroy, A., Takahashi, E., Lidz, J., & Phillips, C. (2009). Equal treatment for all antecedents: How children succeed with Principle B. *Linguistic Inquiry*, 40(3), 446–486. Ruigendijk, E., Friedmann, N., Novogrodsky, R., & Balaban, N. (2010). Symmetry in comprehension and production of pronouns: A comparison of German and Hebrew. *Lingua*, 120(8), 1991–2005.