

Color your first intuition: A study on antecedent selection using the Coloring Book method

The study reported in this paper is part of a larger project on language comprehension and on ecologically valid methods to assess this competence. The aim of this specific study was to empirically determine whether L1 speakers have clear intuitions (or preferences) with regard to discourse pragmatic rules, i.e. with constructions that are grammatically well-formed, but that can be pragmatically adequate or inadequate depending on the context of use. Establishing L1 discourse pragmatic competence is of crucial importance in order to determine to which extent L2-learners differ from the baseline.

In the present study we examined antecedent selection for subject pronouns in Dutch. As argued by Kaiser & Trueswell (2004), van Kampen (2010) and Author1 (xxxx), Dutch presents distinct forms (*zij/ze* versus *die*) that have a dedicated interpretation at the discourse pragmatic level. According to van Kampen (2010), the *zij/ze* pronouns mainly refer to the actual topic of the sentence, whereas the *die* pronoun refers to the focus of the previous clause and can only be used to signal a topic shift. Our first question was whether van Kampen's distribution of Dutch subject pronouns is corroborated by empirical data. The type of evidence we were looking for is defined as the first intuition speakers have while hearing or reading a sentence with subject pronouns. In other words, we definitely wanted to replicate a natural situation in real life. This brought us to the second question, namely how to tap first intuitions in an experimental setting. The method normally used to retrieve such data is the Picture Selection task. Although widely and effectively used, this method has one main limitation: It cannot neutralize the effect of grammar explicit knowledge. With this task participants are faced with three or four possible answers and have to evaluate the most suitable one. In other words, the test interposes an additional layer between the stimulus (the test item) and the reaction to it (the preferred picture out of a set of possible alternatives). We developed instead a new method, the *Coloring Book* (Author2 *et al.*, 2016), implemented as a computer/iPad application that looks like a coloring game, yet indirectly elicits intuitions about interpretation. Participants hear or read a stimulus containing coloring instructions (3) and they simply have to color the "correct" item on a coloring plate.

We tested three different populations (1) on their preferences in antecedent selection (i.e. subject/object in the matrix clause) for the pronouns *ze/die* (Dutch) in 3 types of clauses (2). Adult Dutch L1 made a clear distinction between the two forms: *die* was exclusively associated with the preceding object. Van Kampen (2010)'s analysis of Dutch subject pronouns thus seems to be supported by empirical evidence. Dutch pre-schoolers showed no significant difference between the two pronouns. New preliminary results with older children reveal a distinction between the two forms developing with age. This findings are in the line with van Kampen (2004)'s claim that discourse anaphora are late on the acquisition schedule. Finally, a pilot conducted with Dutch L2-speakers' provided more target-like results for Italian/Spanish L1 than for English L1-speakers, which may be explained by the fact that pronouns in English are ambiguous. Spanish/Italian L2 speakers of Dutch appear to be facilitated by an L1 with a similar system.

Concluding: a new method for testing language comprehension – the *Coloring Book* – provided empirical evidence for the claim that Dutch has different pronominal forms associated with distinct pragmatic interpretations. Theoretical implications for these differences and additional results will be discussed during the talk.

1: Populations tested

10	adult Dutch L1
34	children Dutch L1
27	Dutch L2 (L1: Italian, Spanish, English)

2. Materials

2 conditions: ze, die

3 sentence types: a) two main clauses separated by *and*; b) two main clauses separated by a period; c) a main clause followed by a subordinated clause.

3: Test sample

Stimulus: *Het acrobatmeisje fietst naast de danseres, terwijl ze/die met een blauw lint zwaait.*

“The acrobat cycles next to the dancer, while she waves a blue ribbon.”



4: Results

