

Children's comprehension of pronouns and definites

Are children sensitive to contextual requirements?

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Summary: This experiment tests children's comprehension of the requirements of use of pronouns and definites. An adult-like use of definites and pronouns imposes different but related requirements. In the case of definites, a unique referent is required in the context, whereas in the case of a pronoun, the referent in the context has to be salient. In this experiment, we use a novel word task to test 3 year olds' sensitivity to these requirements.

Theory: The analysis of the definite determiner as triggering a presupposition of its referent being unique in the utterance context is the basis for analyses of pronouns in recent accounts (cf. Elbourne 2013; Postal 1966, Schwarz 2009):

$$(1) \llbracket the/it/he/she \rrbracket = \lambda f_{\langle e,t \rangle} : \exists!x[f(x)].\iota x[f(x)]$$

Roberts (2003) argues that pronouns carry an additional saliency presupposition, compared to definites, as shown by the contrast in (2), leading to an analysis of definites as in (1) and an analysis of pronouns as shown in (3) to (5).

(2) *A woman entered from stage left. Another woman entered from stage right.*

a) # *The woman* / \surd *The FIRST woman* / \surd *The SECOND woman was carrying a basket of flowers.* (Roberts 2003:324, example (40))

b) *She was carrying a basket of flowers, while # the woman* / \surd *the FIRST woman* / \surd *the SECOND woman led a goat.* (Roberts 2003:324, example (41))

$$(3) \llbracket it/she \rrbracket = \lambda f_{\langle e,t \rangle} : \exists!x[f(x) \& \text{SALIENT}(x) \& \forall y[\text{SALIENT}(y) \rightarrow y \leq_{\text{SAL}} x]].\iota x[f(x)]$$

$$(4) \llbracket \text{SALIENT} \rrbracket^c = \lambda x.x \text{ is among the salient discourse referents in the context } c$$

(5) The ordering \leq_{SAL} : For all a, b that are discourse referents in c : $a \leq_{\text{SAL}} b$ if (i) b is strongly familiar and a is weakly familiar (ii) b pertains to a more immediate Question under Discussion (QUD) than a and (iii) b is more prominent than a regarding grammatical relations such as topic/focushood etc. (adapted from Robert 2003:334)

In this experiment, we test whether children are sensitive to the uniqueness and salience of referents in their comprehension of pronouns and definites.

The Experiment: The experiment was set up in such a way that an experimenter and a child are skyping with Froggy on a laptop. Froggy is visiting his grandmother and has forgotten to bring his toys. The task is to help Froggy, by packing the toys that he wants in a suitcase. The experimenter displays three cards which depict unfamiliar objects (Froggy's toys) between the child and the laptop: Two of the objects look the same and one is different (see (6)). Then the experimenter makes salient one of the toys by talking about it ("This one is interesting!"): either the unique toy or one of the non-unique toys, or no toy at all. Froggy then delivers the test sentence, which involves either a pronoun ("Pack it in the suitcase"), a definite ("Pack the blicket in the suitcase"), or an indefinite ("Pack a blicket in the suitcase").

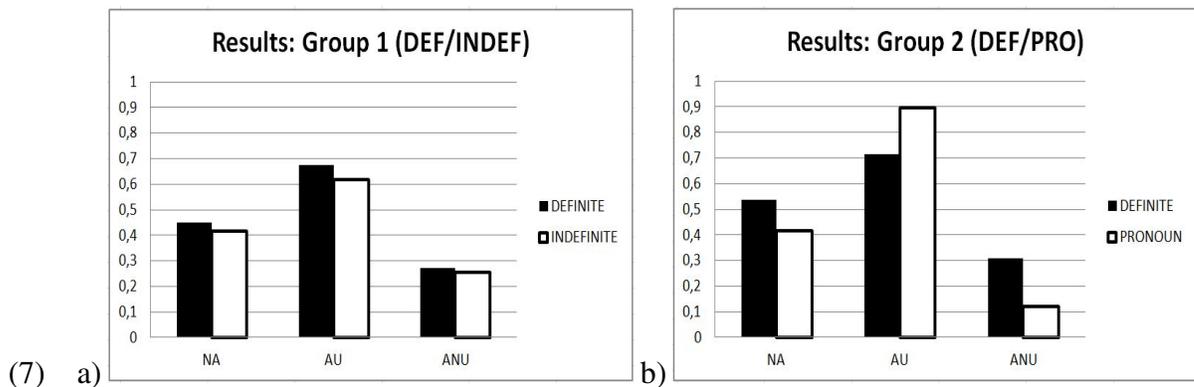


Salience conditions: Experimenter talks about 1) none of the toys (NA) 2) the unique toy (AU) or 3) one of the none-unique toys (ANU).

a) Target sentence (Group 1): Pack {the blicket/a blicket} in the suitcase.

b) Target sentence (Group 2): Pack {the blicket/ it} in the suitcase.

With this novel word task, we make sure that children rely on their understanding of definites and pronouns to find out which toy Froggy intended: In the case of the definite article, children should pick the unique toy (i.e. the oddball), whereas in the case of a pronoun, they should pick the toy the experimenter made salient (i.e. the toy that the experimenter singled out). Children were divided in two groups: In group 1 (DEF/INDEF), children heard target sentences including the definite article or the indefinite article to test for a potential definite overuse as reported in previous studies (cf. Van Hout et al 2010, Karmiloff-Smith 1979). In group 2 (DEF/PRO), children heard target sentences with the definite article or a pronoun (see example toys and items in (6)). If children understand the uniqueness requirement of definites (and lack thereof for indefinites), they should pick the unique toy when they hear the definite article, whereas they should be at chance at picking the unique toy in the case of the indefinite article. In group 2, we expect children to behave the same way for the definite article, but when hearing a pronoun, they should only pick the unique toy when it is made salient. A statistical analysis was conducted with a generalized mixed model in R.



(7) a) The results in (7a) for group 1 and (7b) for group 2 demonstrate the percentage of children picking the unique toy in the three salience conditions were either no toy is made salient (NA), the unique toy is made salient (AU) or one of the none-unique toys is made salient (ANU).

As expected for group 2, children pick the unique toy almost always when it is made salient (AU), whereas they almost never pick the unique toy when one of the non-unique toys in made salient (ANU). However, there is no difference between picking the unique toy when the definite article is used as opposed to when an indefinite article is used in group 1.

Conclusion: As in previous studies, 3 year olds demonstrate considerable difficulty in distinguishing between the indefinite and the definite article. They however seem to understand the saliency requirement of the use of pronouns. Thus, children seem to understand the requirements on pronouns, but seem to have a hard time with distinguishing between the requirements on the definite article and the indefinite article. Adult data will complement the present results.

Selected References

- Elbourne, Paul. 2013. *Definite Descriptions*. Oxford University Press, Oxford. · Karmiloff-Smith, A. 1979. *A Functional Approach to Child Language: A Study of Determiners and Reference*. · Postal, Paul. 1966. On so-called 'Pronouns' in English. In F. Dinnen (ed). *Report on the Seventeenth Annual Round Table Meeting on Linguistics and Language Studies*. Washington, DC: Georgetown UP. 177-206. · Roberts, Craige. 2003. Uniqueness in Definite Noun Phrases. *Linguistics and Philosophy* 26:287-350. · Schwarz, Florian. 2009. *Two Types of Definites in Natural Language*. PhD thesis: University of Massachusetts Amherst. · Van Hout, Angeliek et al. 2010. Asymmetries in the Acquisition of Definite and Indefinite NPs. *Lingua* 120:1973-1990.