

Opting out as a measure of meta-linguistic awareness in children

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Meta-linguistic awareness

Widely investigated in SLA (Schmidt 1990; Ellis 2003; Krashen 1981)
 Primary language acquisition is often assumed to occur implicitly (Wijnen 2013)
 Phenomenal (P-) vs. access (A-)awareness (Cleeremans 2008; 2011)
 Typically measured using direct subjective methods (Timmermans & Cleeremans 2015)

Measuring meta-linguistic awareness

Verbal reports and confidence judgement task are inadequate
 For young children, indirect objective methods might be necessary
 Opt out paradigm (Hampton 2001), used to measure awareness in animals, seems suitable

Research Question

Can the opt out paradigm be adapted to a linguistic context as an indirect objective measure of meta-linguistic awareness?

Participants

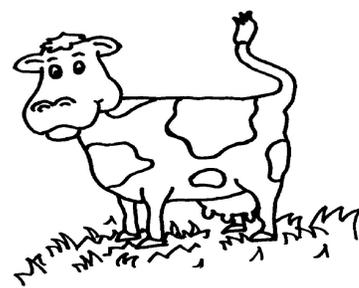
26 Dutch speaking adults (18 females, $M = 22;9$); 48 Dutch speaking kindergartners (24 females, $M = 5;5$)

Phase 1: learning a rule

Picture matching task
 Sometimes Dutch nouns are replaced by a pseudoword
 Replacement follows a correspondence rule:
 A pseudoword receives the same determiner as the Dutch noun
 Dutch has definite determiners (*de* or *het*) and indefinite determiners (*een*)



In het gras staat het paard.
 'The horse is standing in the grass.'



In het gras staat de pano.
 'The pano is standing in the grass.'

	Adults			Children		
	M	SD	Range	M	SD	Range
Definite article	8.23	2.37	3-12	6.10	1.43	4-10
Indefinite article	6.27	1.43	3-9	6.10	1.52	3-9

Adults detected the correspondence rule ($OR = 2.20$, 95% CI = 1.21 ... 4.32, $z = 2.340$, $p = 0.019$)
 Correspondence rule would be too difficult for the children

Phase 2: awareness of a rule

Training

Picture matching task with rewards

2 points for a correct answer
 0 points for an incorrect answer

Test

Auditorily presented sentence with a blank screen

In het gras staat een ...
 'A ... is standing in the grass.'

1 point for opting out
 Move to the next item

2 or 0 points for opting in
 Hear a full sentence and
 choose a picture

	Adults			Children		
	M	SD	Range	M	SD	Range
Definite article	2.04	2.71	0-12	6.04	3.75	0-12
Indefinite article	5.19	4.62	0-12	6.04	3.59	0-12

Adults were aware of the rule ($OR = 11.07$, 95% CI = 1.86 ... 65.92, $z = 2.696$, $p = 0.007$)
 Every child opted out and opted in

Conclusion

The opt out paradigm seems suitable to tap into meta-linguistic awareness in children
 Our next step is to combine the opt out phase with a miniature language learning phase,
 allowing children to adapt their strategic behavior to a learnable rule

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