Dutch children’s acquisition of morpho-phonological alternations in plural formation

Tania S. Zamuner*, Annemarie Kerkhoff†, Paula Fikkert*, Ellen Westrek*
*Radboud University Nijmegen, †Utrecht University

ABSTRACT
In Dutch, word final neutralization of voicing causes an alternation between singulars and plurals: e.g. one [bet] ‘bed’ ~ two [beden] ‘beds’. Dutch-learning children were tested on their production of /t/ and /d/ in different morphological contexts. Children tended to produce /d/ as [t] in bi-morphemic words (e.g. [beten]), whereas they correctly produced /d/ in mono-morphemic words (e.g. [bed] ‘bed’). Children were also more accurate at positing singulars for novel plurals with /t/ (e.g. [slatten]) than for novel plurals with /d/ (e.g. [sladden]). This finding suggests that 3 yr-olds have not yet learned about the phonotactics of voicing neutralization in relation to morpho-phonological alternations.

RESULTS: Part A

An ANOVA revealed a main effect of voicing (responses were more accurate for words with /t/), a main effect of morphology (responses were more accurate in mono-morphemic words), and a significant interaction between voicing and morphology. There was no effect of age.

Error Analysis
74% (20 out of 27) of errors comprised children’s producing /d/ as [t] (e.g. /beten/ ‘beds’ was produced as [bettn]).

CONCLUSIONS
Do young children learning Dutch correctly produce voicing in non-alternating versus alternating contexts?

METHOD
Subjects
Eighteen 30-32 month-old Dutch-learning children.

Stimuli
4 bi-morphemic words with /t/:
petten ‘caps’
bedden ‘beds’
water ‘water’
ridder ‘knight’

Procedure
Picture-naming task: Children were presented with pictures of familiar objects using PowerPoint.

RESULTS: Part B

An ANOVA revealed a main effect of voicing (responses were more accurate for plural with /t/). There was also an effect of age.

Error Analysis
Almost all errors comprised children’s producing a plural rather than a singular (e.g. repetition of [slatten] /[sladden]/).

In a few cases, singulars without codas were produced (e.g. [slad]).

A perception test showed that these same children were aware of the singular / plural contrasts in these non-words.

CONCLUSIONS
Dutch-learning children fail to reliably produce voicing in alternating contexts (Part A).

Dutch-learning children are better at producing singulars when given non-words with intervocalic /t/ (non-alternating) than non-words with intervocalic /d/ (Part B).

These results suggest that children have not yet fully acquired knowledge of voicing neutralization or morpho-phonological voicing alternations, even at a very late stage (44 months).

We find no support for the claim that early knowledge of phonotactics may aid the acquisition of alternations.

References

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* Radboud University Nijmegen, †Utrecht University