Having one or three uncles: equally acceptable. A study about number mismatches in nominal Right-Node-Raising in German

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Background: The phenomenon of right-node-raising (RNR) (*Joe likes __ and John hates pizza.*) [1; 2] does not restrict the category or constituent status of the omitted expression (see 1.a) [3]. Attested mismatches in RNR, which are investigated here (see 1.b), are not explained by syntactic accounts such as ATB-movement or multiple dominance [2]. Mismatches contradict the claimed condition of RNR that the omitted expression must be phonologically identical to the target expression [4], see (1.b). However, Christ's [5] introspective work on German RNR states that there is a gradual decrease in acceptance of number mismatches of nouns, which depends on the noun class. Moreover, based on French and English data for verbal mismatches, Shiraïshi et al. [6] claim that RNR only demands lexeme identity. In contrast to verbal mismatches, we investigate noun mismatches in German RNR empirically for the first time. Following Christ [5], we investigate if the complexity of plural inflection affects the acceptability of German noun mismatches in RNR, meaning the more morphemes are used to form a plural, the less acceptable RNR becomes.

Method: *Acceptability rating* We differentiated three types of plural forms in our mismatch condition: Syncretic plural (2.a, e. g. *Onkel→Onkel*), suffix plural (*-e*) (2.b, e. g. *Fisch→Fisch-e*), suffix and umlaut plural (*-e* + umlaut) (2.c, e. g. *Ast→Äst-e*). A high rating for syncretic plural and low(er) rating for suffix or suffix and umlaut or a significant difference between suffix versus suffix and umlaut would support the theory of graduality. A high rating of each of the categories would support lexeme identity. We also tested these forms in a matching context (2.d-2.f). 48 participants recruited from Prolific saw each 24 items and 48 fillers, which they rated on a slider scale ranging from totally unacceptable to totally acceptable (internally coded 0-100).

Results: For the plural categories tested here, the LMM [7] (forward coded) did not show a significant gradual effect of complexity of plurals on the acceptability of RNR in German noun mismatches, but a significant main effect for mismatches being rated lower than matches ($t(1078)= -4{,}61$, $p<0.05$) (see Tab. 1). All three categories show a high acceptability for both matches and mismatches (Fig. 1).

Discussion: We don't find any evidence for Christ's [5] account, not seeing a different rating between plural categories. On the contrary, constant acceptability throughout categories is speaking in favor of Shiraïshi et al.'s [6] theory of lexeme identity. Nevertheless, we plan further experiments with more irregular plural forms investigating if there is instead a turning point in acceptability.

(1) a. *Tim ist für ~~Atomkraft~~ und Tom ist gegen Atomkraft.*
Tim is for nuclear power and Tom is against nuclear power.
b. *Hans hat eine ~~Maus~~ und Peter hat mehrere Mäus-e.* (Christ, 2011: 383)
Hans has one ~~mouse.~~SG and Peter has several mouse.PL-PL.

(2) a. *Niklas hat einen und Benjamin hat vier Onkel.* (Syncretic mismatch)
Niklas has one and Benjamin has four uncles.PL
b. *Jasmin fängt einen und Leonie fängt sieben Fisch-e.* (Suffix mismatch)
Jasmin catches one and Leonie catches seven fish-PL.
c. *Sebastian sammelt einen und Nele sammelt zehn Äst-e.* (Suffix and *Umlaut* mismatch)
Sebastian gathers one and Nele gathers ten branch-PL
d. *Niklas hat drei und Benjamin hat vier Onkel.* (Syncretic match)
Niklas has three and Benjamin has four uncles.
e. *Jasmin fängt vier und Leonie fängt sieben Fisch-e.* (Suffix match)
Jasmin catches four and Leonie catches seven fish-PL.
f. *Sebastian sammelt vier und Nele sammelt zehn Äst-e.* (Suffix and *Umlaut* match)
Sebastian gathers four and Nele gathers ten branch-PL.

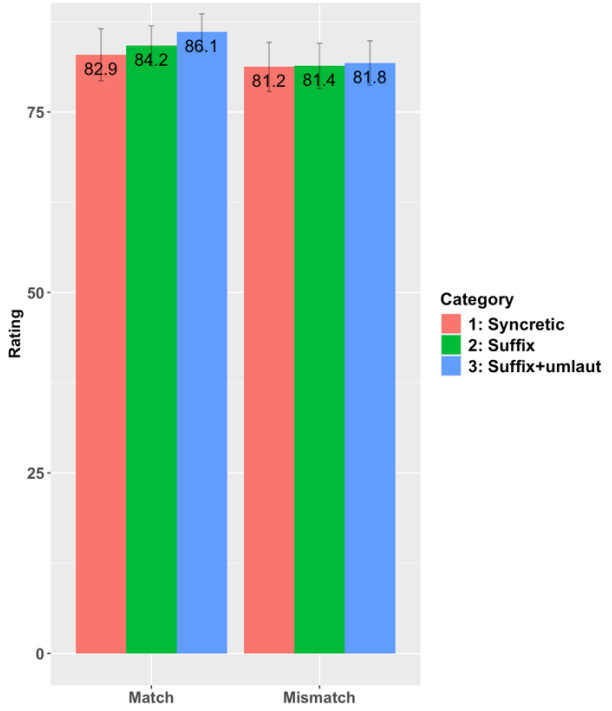

Figure 1 Mean acceptability ratings for the six tested conditions, errorbars show standard deviation.

*Table 1 Fixed effects of the linear mixed model (lmer(Rating~Match*Category+(1|ID)+(1|Noun).*

	Estimate	t-value	p-value
Intercept	84.41	51.4	<0.05
MatchMismatch	-2.93	-4.61	<0.05
Syncretic_vs_Other	-1.27	-0.86	>0.05
Suffix_vs_SuffixUmlaut	-1.92	-1.30	>0.05
MatchMismatch:Syncretic_vs_Other	1.13	0.72	>0.05
MatchMismatch:Suffix_vs_SuffixUmlaut	1.52	0.97	>0.05

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