

# Noun Capitalization: Can Dutch readers benefit from it?

## THREE THEORIES

Noun capitalization:

- 1 helps syntactic parsing of written sentences [7]
- **2** pre-activates words from mental lexicon [8]
- 3 helps to activate words based on its shape [9]

Theory 1 makes unclear predictions for Dutch, whereas theory 2 & 3 would predict a slowdown

CONDITIONS capitalization rules darkening them

Three conditions: **N** normal Dutch spelling **C** following German noun H nouns highlighted by

15 native Dutch participants, Eye-Link Portable Duo, participants received no payment, the experiment took 30 minutes

\* Eye-tracking study (N=15): German noun capitalization slows down reading process in Dutch  $\rightarrow$  does not seem to be a reading aid \* NP type plays important role: the **slowdown** for capitalized NPs was smaller for NPs with a determiner compared to NPs without \* Previous research has a methodological bias: comparing common spelling against the uncommon  $\rightarrow$  unfair comparison \* Caution interpreting results  $\rightarrow$  avoid presenting consensus

### **FUTURE RESEARCH**

In this, and previous studies, we've compared common against uncommon spelling, which is a biased comparison. Possibly we could test native participants in similar languages reading exactly the same text. If we find Germans to read faster compared to other countries, this might indicate noun capitalization is a reading aid.<sup>1</sup>



1 Obviously, this requires a very large sample of participants, closely related languages (like Dutch, Danish and German), highly controlled transla-tions (same length, same complexity, etc.) and similar participants (e.g. same education level, etc.). However, if this is all controlled for, we should not expect any differences in reading speed between participants from different countries.

# STIMULI

Participants read 6 texts paragraph-wise

- The texts (see website):
- are about various topics,
- have the same length &
- the same complexity,
- contain 5 NP-types (e.g., DET+NOUN), each type is used at least 4x per text,
- no proper nouns (except sentence initial)

# **ROLE DETERMINER**

Second LMM shows: • speed-up due to the determiner is present across all conditions • the effect of capitalization is stronger when there is no determiner present  $\rightarrow$  indicates that the determiner, signalling an NP, seems to be important for processing

### C>N & N=H

First linear mixed-effects model (LMM) shows:

- significant longer fixation on capitalized nouns compared to normal condition
- no significant differences between the normal and highlighted condition  $\rightarrow$ highlighting nouns does not seem to be a productive mechanism in Dutch

Go to www.tabu.pol.works for references, stimuli and more results

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