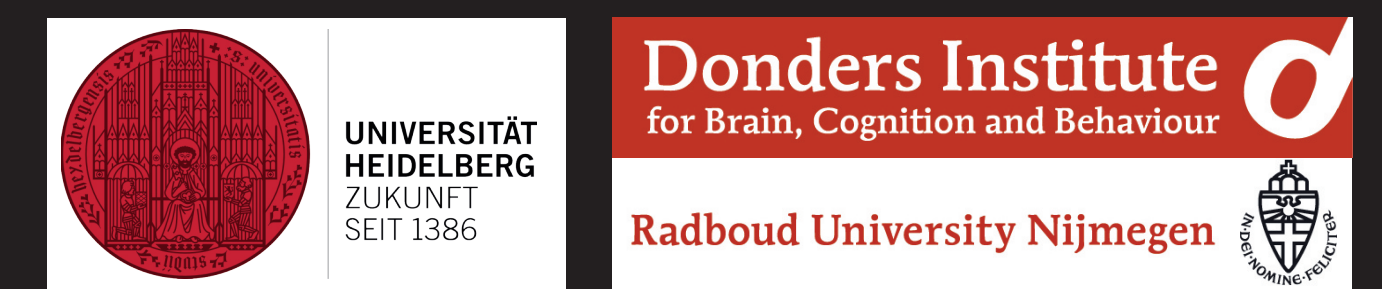# 'Progressive' priming in sentence production: conceptual and form-related features of progressive aspect in Dutch

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Introduction

Speakers tend to reproduce previously used constructions (structural priming), under specific circumstances (cf. Pickering & Ferreira, 2008, Bock & Loebell, 1990). But to what extent do speakers also reproduce conceptual information which is expressed in previously uttered sentences?

The core grammatical category of progressive aspect in Dutch allows the investigation of conceptual versus form-related aspects of priming. Grammatical (or viewpoint) aspect expresses a temporal perspective on an event (Dahl, 2000, Flecken & Gerwien, 2013). This information is conceptual in nature, and needs to be specified during message planning (cf. Levelt, 1989). While the overt marking of aspect on the main verb of a sentence is obligatory in some languages (e.g., English), it is optional (e.g., Dutch), or not marked at all in others (e.g., German).

Research questions

Can the temporal perspective expressed by progressive aspect in a sentence (conceptual information) be primed, in a language in which use is optional? If so, are form features of the construction alone sufficient to elicit the effect?

Test case:

- L1 and L2 speakers of Dutch perform a hidden sentence priming task

- Dutch progressive aspect, form contains preposition + determiner:
  Piet is een brief aan het schrijven 'Pete is a letter at-the write'
  Pete is writing a letter

Experiment 1 and 2

Method

Hidden priming design (memorization/recall task); subjects read aloud sentences and describe pictures (cf. Bock & Loebell, 1990)

Materials

Critical stimuli: 3 prime types embedded in finite sentences (N = 30); 30 pictures showing causative events (pretested for eliciting progressive marking in an unprimed event description task);

Filler stimuli: 210 filler trials (half pictures/sentences); filler sentences describe states / characteristics or locations (no ongoing events)

Procedure

1 critical trial every 6-7 filler trials; 3 randomized lists: each target picture preceded by each prime across lists
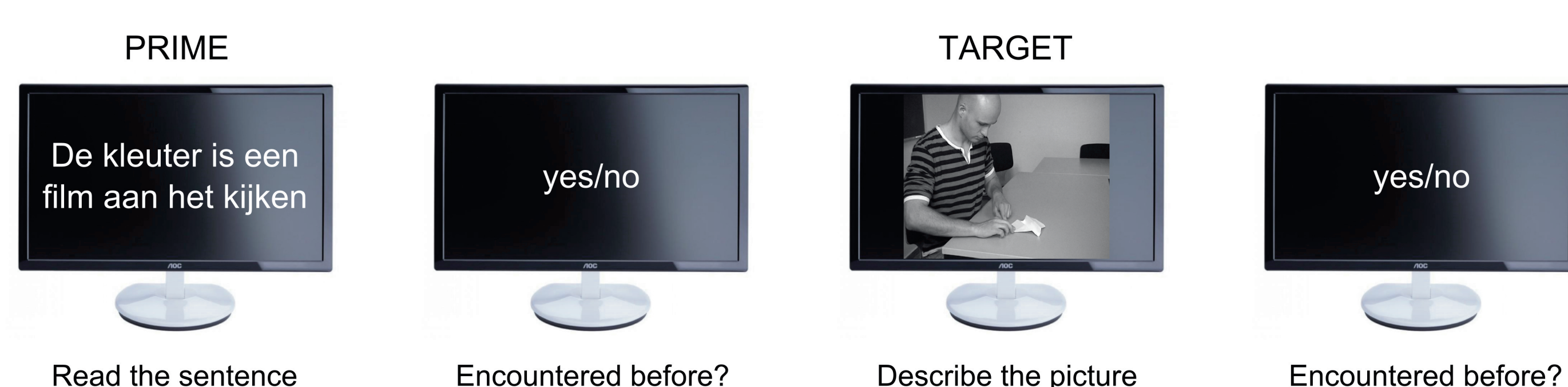
Participants

Experiment 1: 45 native speakers of Dutch
Experiment 2: 30 German L2 speakers of Dutch (intermediate – advanced proficiency; all university students)

3 prime types

Prime type	Example	Prime-target overlap
non-progressive event description with unmarked verb	de buurvrouw koopt een oven	conceptual feature: event (thematic) structure
progressive event description with progressive verb	de kleuter is een film aan het kijken	conceptual features: event (thematic) structure and temporal perspective form features: preposition + det + V
prepositional locative at-the verbal complement at-the dative at-the	het kasteel staat aan het water de muzikant werkt aan het stuk de man geeft een bloem aan het kind	form features: preposition + det

Procedure

PRIME — De kleuter is een film aan het kijken — Read the sentence
— yes/no — Encountered before?
TARGET — Describe the picture
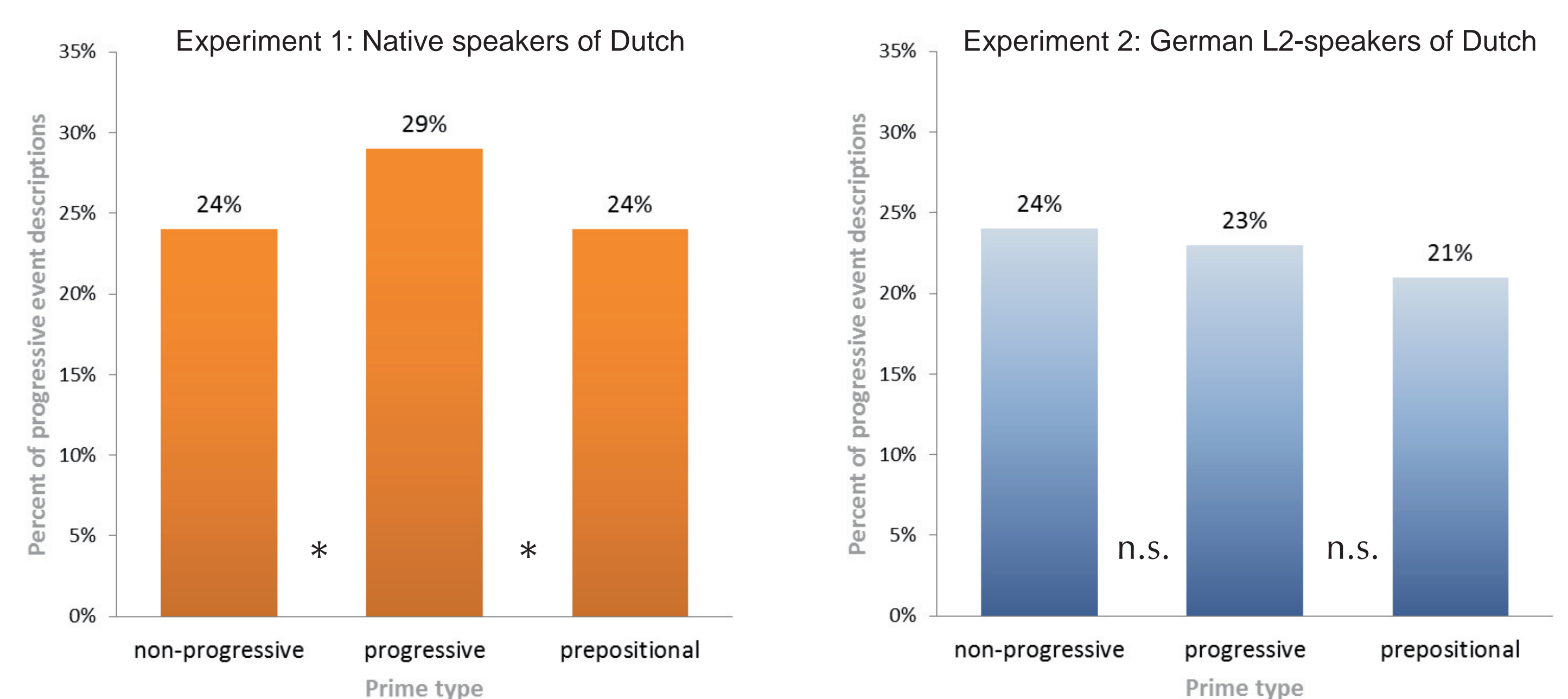— yes/no — Encountered before?

Results

Experiment 1

- Only full sentences were analyzed (98%); in total 74% non-progressive and 26% progressive event descriptions

- Linear Mixed Effects Models (R, lme4), non-progressive prime coded as base level; random intercepts and slopes for subject and items

- Only the **progressive prime** (conceptual and form overlap with the target) elicits **significantly more** progressive event descriptions (p = 0.01)

- Participants do not always re-use the prime's constituent structure fully, they frequently produce intransitive sentences (30%)

Experiment 2

- Only full sentences were analyzed (96%); in total 77% non-progressive and 23% progressive event descriptions, statistical analysis as in Experiment 1

- No significant priming effects for the German L2 speakers of Dutch

Experiment 1: Native speakers of Dutch — non-progressive 24%, progressive 29% (*), prepositional 24% (*)

Experiment 2: German L2-speakers of Dutch — non-progressive 24%, progressive 23% (n.s.), prepositional 21% (n.s.)

Conclusions

Taken together, the results of Experiment 1 and 2 suggest that in native speakers of Dutch the progressive event perspective can be primed, but only if prime and target show total form overlap plus conceptual overlap.

The priming effect is partly due to form features of the prime (constituent structure and order, repetition of preposition + determiner, number of thematic roles), but given the fact that German L2 speakers of Dutch do not show a priming effect, we conclude that the progressive's temporal perspective of 'ongoingness' (conceptual feature), besides form features, is also primed in native speakers of Dutch.

In a third experiment of this series, none of the prime types elicited progressive event descriptions for pictures showing motion events (L1 Dutch). This further suggests that an important basis for the priming effect reported here is the conceptual information specified during message generation.

References

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