

Introduction

On the basis of a decomposition approach (e.g. Pinker & Ullman 2002), we investigate how highly fluent non-native speakers (NNS) of English respond to morphologically complex items compared to native speakers (NS) and what this may reveal about the nature of non-native processing of morphological information.

Previous research on non-native processing of morphology suggests differences in terms of:

- the use of declarative knowledge over decomposition (e.g. Bowden et al. 2010)
- the degree of reliance on surface orthographic factors (e.g. Heyer & Clahsen 2015)
- possibly a longer duration of the morphosyntactic analysis process (cf. Bosch et al. 2016)

All three points have an effect on a NNS's ability to discriminate sufficiently between form-related and morphologically related items but this may apply particularly in short-lag priming studies such as masked priming.

Thus, if presented with a longer-lag task (i.e. delayed priming):

- does this allow for any discrimination between form and morphological/structural overlap
- can conclusions be drawn from this for the status of decomposition in non-native processing?

Research Questions

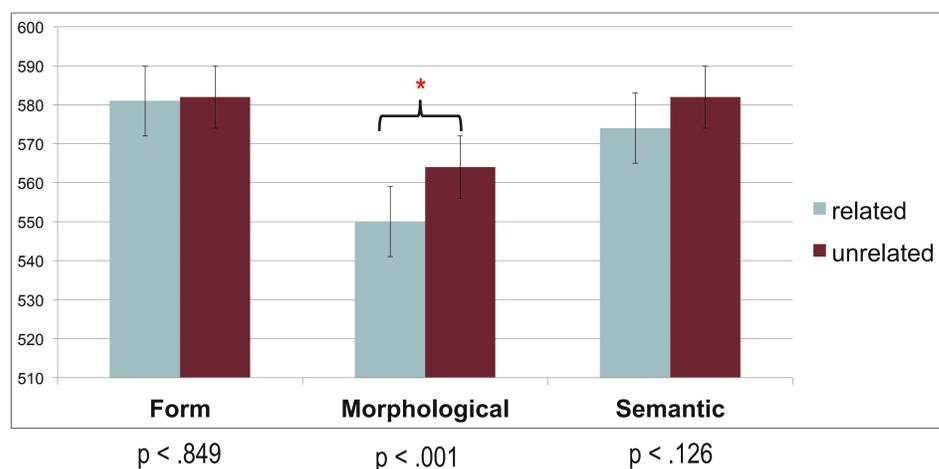
- Will highly fluent non-native speakers show the same pattern as native speakers when exposed to morphologically complex words in a delayed priming paradigm?
- If form priming is found, as suggested by previous studies,
 - is there a difference between the degree of priming in form and morphology conditions?
 - why does form prime for non-native speakers when it does not have any facilitation effect for native speakers?

Predictions

Three possibilities:

1. Due to high proficiency, NNS will show a similar pattern to NS (i.e. only facilitation for morphologically related items).
2. NNS will show similar facilitation effects for form and morphology conditions as indicated by previous research.
3. The longer lag time in delayed priming may result in a difference between the facilitation for form and morphologically related items.

Experiment 1: Native Speakers

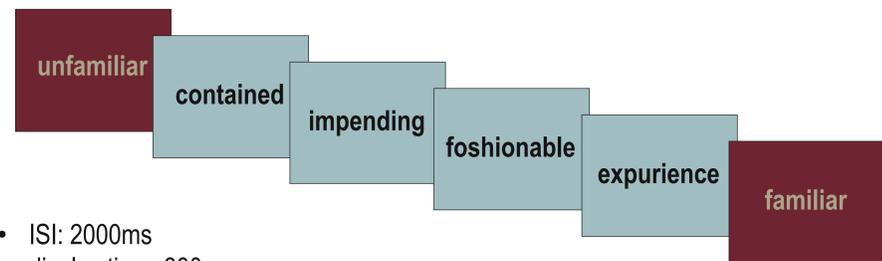


Key Findings

- (a) Overall the data provides substantial evidence for morphological decomposition for both NS and NNS participants.
- (b) Our data shows no facilitation in either group for semantically related items and strong priming effects ($p < .001$ for both groups) in morphological conditions confirming that the facilitation is not mediated by semantic relationships but is purely structural.
- (c) However, while L1 speakers predictably do not show facilitation in the form condition, L2 speakers show significant priming ($p = .021$).
- (d) In addition, our data shows significant differences in the degree of priming between form and morphological conditions ($p < .001$) with greater facilitation for the latter.
- (e) The degree of priming suggests a difference between pure form overlap and morphological relationship.

Experiment Design

- visual delayed priming task with English morphologically complex items
- 5-7 items between prime and target
- participants respond to all items (pure LD task)



- ISI: 2000ms
- display time: 800ms

Stimuli and Participants

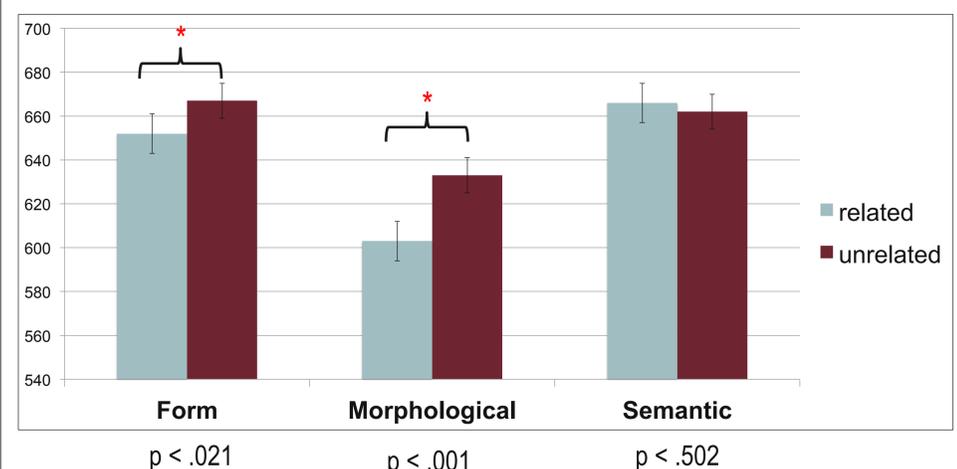
	Morph 1	Morph2	Form	Semantics
Prime	unhealthy	inactive	increased	soundless
Target	healthy	active	creased	silent

- 48 morphologically complex items
 - 24 prefixed with *un-* (12 adjectives/12 adverbs)
 - 24 prefixed with *in-* (12 adjectives/12 nouns)
- 24 semantically related items and 24 form-related items
- 48 morphologically complex real-word fillers
- 144 non-words
- all items matched for word class, frequency and degree of complexity

Participants

- 52 adult native speakers of English (average age: 20) who were undergraduate students at the University of Oxford, UK
- 54 Bengali/Hindi native-speaking L2 learners of English (average age: 15) in English-medium education at Shri Shikshayatan School, Kolkata, India

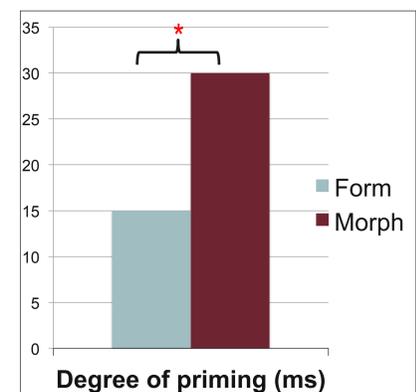
Experiment 2: Non-native Speakers



Discussion

Possible causes:

- NNS show greater sensitivity to form overlap and this primes to a certain degree but is not as strong an effect as morphological relations
- NNS are attempting to decompose items with form overlap
 - they are less experienced with the morphological possibilities
 - they treat items which are not decomposable for NS participants in a similar way to items which are morphologically complex



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Selected References

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