

# Processing discourse referents in Mandarin active and passive SOV sentences

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## Introduction

Mandarin Chinese is a SVO-language. The default is that NP1 encodes agents and NP2 encodes patients or themes. However, SOV is also possible, by use of markers. Frequent are *bèi*, which yields a passive, and *bǎ*, which yields an active resultative construction. The mapping of conceptual roles to linear positions is exactly opposite in the *bèi*- and in the *bǎ*-construction (*bèi*: Agent → NP2; *bǎ*: Agent → NP1).

How does information derived from these two markers affect the *interpretation* of preceding, and the *prediction* of following referents? We employed a visual world study in which we manipulate animacy of referents following the markers (Kamide et al. 2003).

## Hypotheses:

**Referent prediction:** animate referents should be predicted more in the *bèi*-condition than inanimate referents in the *bǎ*-condition (Li et al. 1993).

**Referent interpretation:** more attention to referents preceding markers, if initial role assignment in passives (N before marker = agent) is revised (Huang et al. 2013); no difference, if role assignment awaits infos from markers.

## Method

**Participants:** 28 Mandarin native speakers; students at Heidelberg University; low to medium knowledge of German

**Materials:** Sentence pairs (N=16) with identical beginnings (NP1), but different continuations were created: in the *bèi*-condition (passive) an animate, in the *bǎ*-condition (active) an inanimate referent followed NP1

*zhè gè chū shī de qī zǐ bèi dǎi tú bǎng jià le*

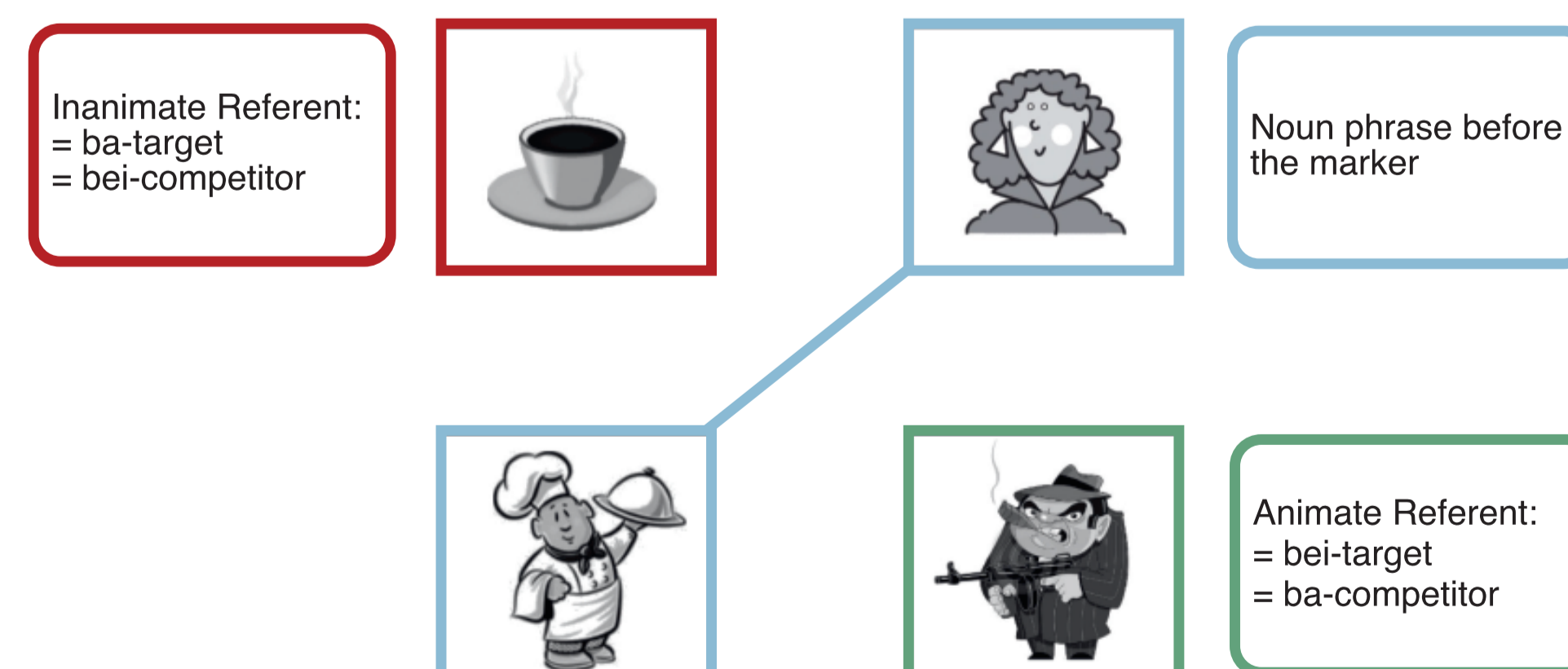
This chef's wife (by the) gangster kidnapped

*zhè gè chū shī de qī zǐ bǎ kā fēi zhǔ le*

This chef's wife (the) coffee made

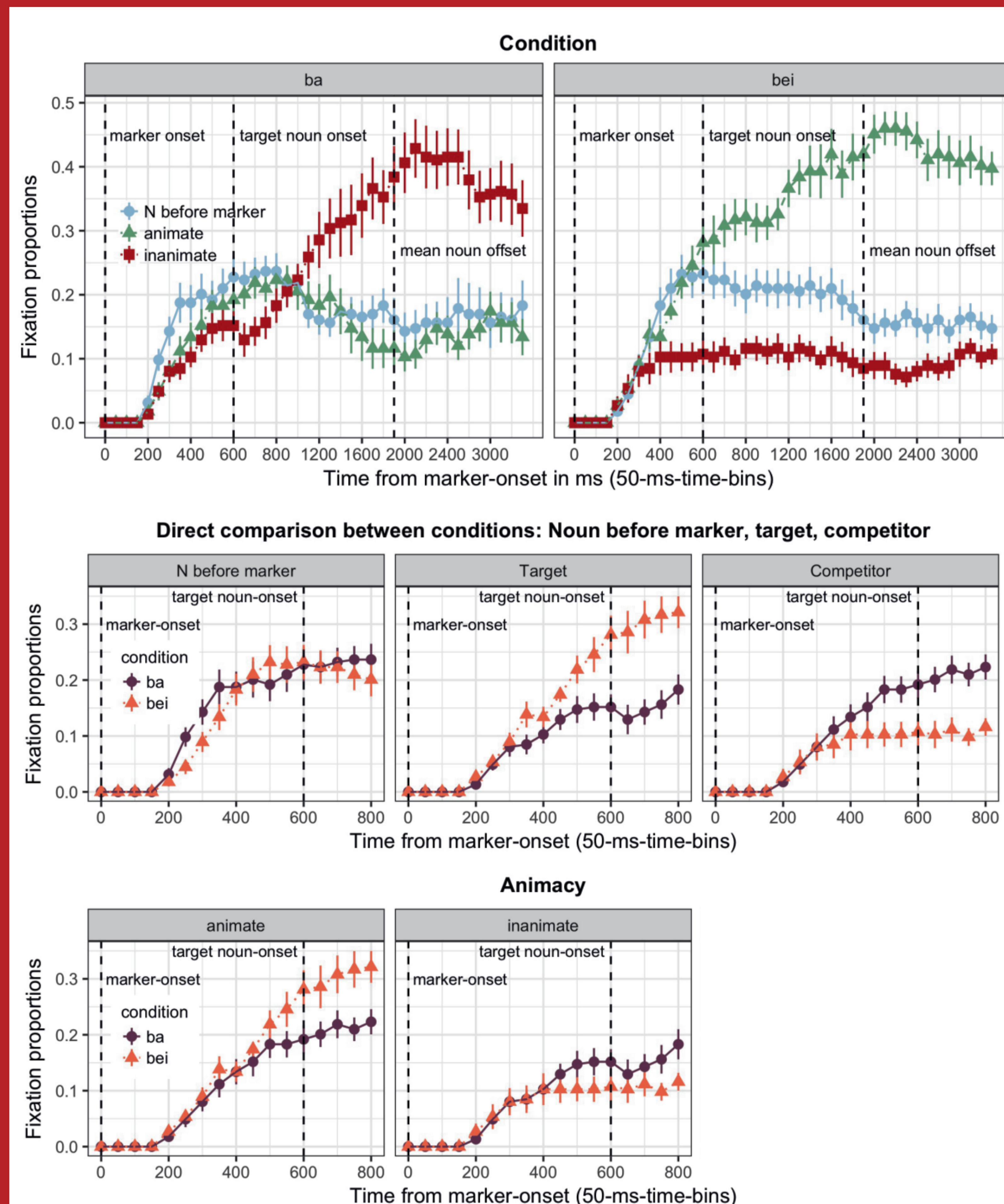
Filler items (N=16) were similar to critical items, but nouns mentioned after *bèi/bǎ* were never present in the visual display.

Only one pair partner per list, 8 from each condition (all fillers). Trials were randomized.



**Task:** Listen to sentences. After each trial participants had to give a yes/no answer to a question testing event structure comprehension.

## Results



Growth curve analysis (Mirman 2014) revealed:

- attention to targets: a main effect and a difference in curvature
- attention to competitors: a main effect and a difference in curvature
- attention to nouns preceding markers: no effect
- attention to animate referents: a main effect and a difference in curvature
- attention to inanimate referents: a difference in curvature

## Discussion

### Evidence for prediction:

As soon as information is derived from the markers, it is used to predict upcoming referents. This implies an event representation that at least specifies causal relations between entities before the following noun is perceived. However, since *bèi* is more constraining and, thus, more reliable than *bǎ* in terms of animacy features (cf. Li et al. 1993), Mandarin speakers are more likely to link a visual animate referent to the yet-to-be-filled agent slot in their event representation than they are to link an animate referent to a patient slot, or an inanimate referent to theme slot.

### No evidence for revision of initial role assignment:

In both conditions, the nouns preceding the markers receive the same amount of attention after the markers are encountered. Thus, argument linking may be postponed until enough evidence is provided by the markers. This might be a temporal strategy induced by our design. If so, however, this can be interpreted as processing flexibility, which temporally inhibits the general agent-first-preference (cf. Li et al. 1993).

## References

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