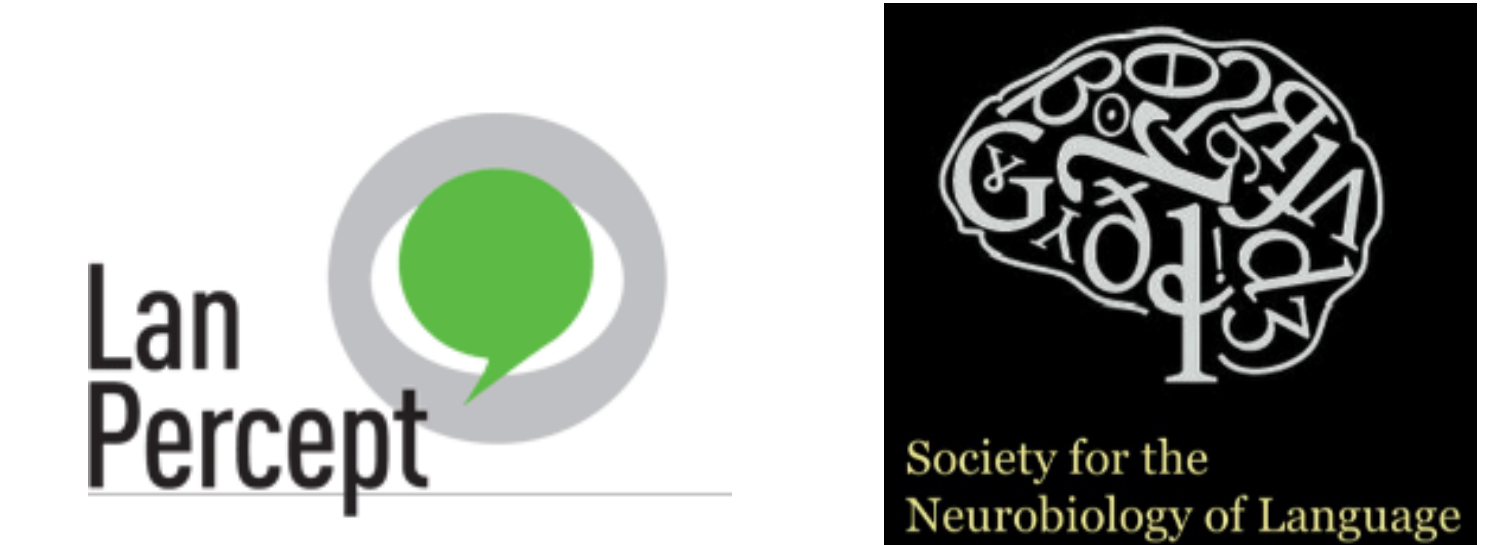


Dynamic interactions between frequency and predictability in sentential context



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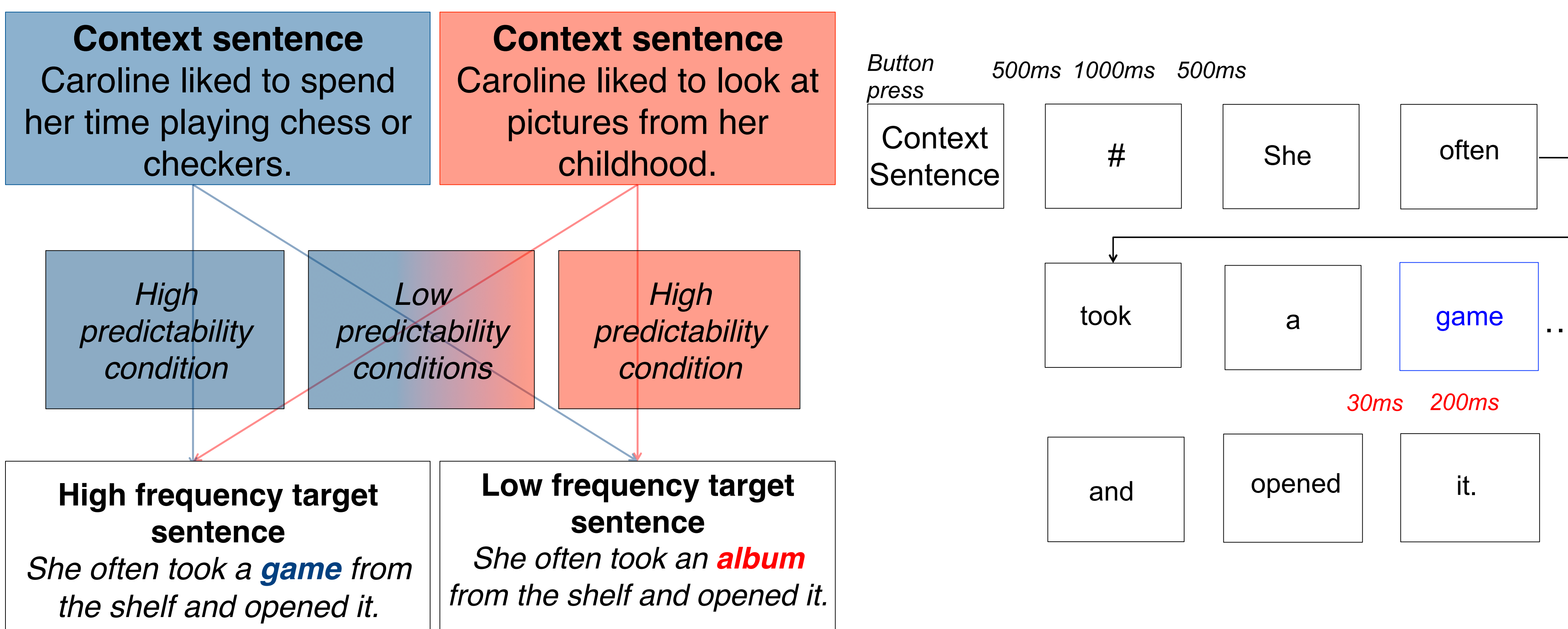
Introduction

- How and when does context facilitate lexical access?
- Lexical access is indexed by word frequency effects (e.g. Penolazzi et al., 2007)
- Timing of interactions between word frequency and context predictability may inform at what point of word processing higher-level contextual information starts to play a role
 - **N400** investigations of the interaction show diminishing modulations, especially to low frequency words, as preceding sentential context increases (Van Petten & Kutas, 1990, Halgren et al., 2002, Dambacher et al., 2006).
 - **ERPs < 250 ms** Interactions at early windows may indicate that sentential predictability could mold expectations for a specific upcoming word form (Dambacher, et al., 2009).

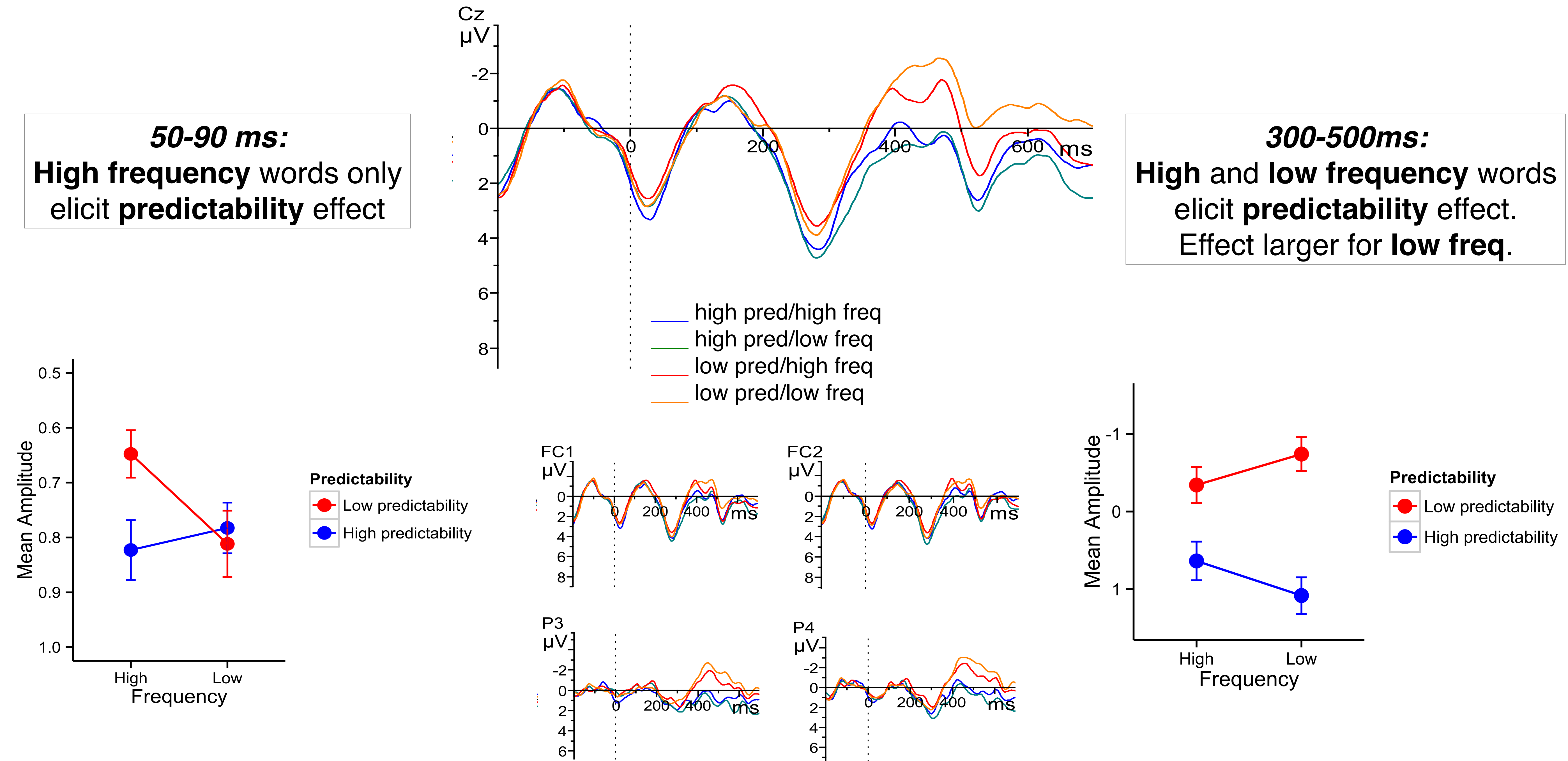
Methods

- Modified Dambacher et al. (2009) procedure: SOA = 200 + 30ms (from 250 + 30ms)
- **Predictability** of target word (provided by context sentence) – high vs. low
- **Frequency** of target word – high vs. low
- 144 pairs of sentences in German, read by 23 native speakers

Design and Procedure



Results



Conclusions

- Both high and low frequency words benefitted from supportive contexts
- The timing of the interactions between frequency and predictability led to the conclusion that high frequency words were (at least partially) activated and accessed earlier than low frequency words
- At very fast presentation rates the N400 seemed to reflect graded early and later stages of word recognition, depending on word frequency (in accordance with Dambacher et al, 2006)
- Replicated early indices of predictability, as well as contextual influences on lexical access from the earliest moments of activation up to N400 windows, even at faster, natural reading rates.

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