

TYPE AND THEMATIC FIT IN LOGICAL METONYMY

Alessandra Zarcone¹, Sebastian Padó², Alessandro Lenci³

¹alessandra.zarcone@ims.uni-stuttgart.de, ²pado@ims.uni-stuttgart.de, ³alessandro.lenci@ling.unipi.it

^{1,2}Institut für Maschinelle Sprachverarbeitung, Stuttgart, Germany, ³Dipartimento di Filologia, Letteratura e Linguistica, Università di Pisa, Italy

A TYPE-DRIVEN HYPOTHESIS (PUSTEJOVSKY 1995)

Jack Kerouac began the book around 1949 ⇨ *writing the book* [logical metonymy]
Jack Kerouac began his journey across America ⇨ no covert event

- * **The Trigger Question:** When do covert events arise?
 - ⇨ type-clash (E**V**ent-selecting verb + E**N**tity-denoting object)
 - ⇨ longer RTs (e.g. Traxler et al. 2002)

- * **The Range Question:** Where do covert events come from?
 - ⇨ artifacts are associated with events (qualia) in the lexicon
book → *reading* / *writing*

Kerouac was an amateur wrestler. He always enjoyed a good fight ⇨ *fighting the fight*
Kerouac was a wrestling fan. He always enjoyed a good fight ⇨ *watching the fight*

- ✓ preserves compositionality and the generative power of the lexicon
- ✗ limited to artifacts, underestimates the range of covert events
- ✗ rigid, not suitable to model effects of context and discourse
- ✗ logical metonymy seen as an “anomalous” case

A THEMATIC-FIT HYPOTHESIS (ZARCONE ET AL. 2013)

The baker finished the icing ⇨ *spreading* / eating
The child finished the icing ⇨ *spreading* / *eating*

- * **The Trigger Question:** When do covert events arise?
 - ⇨ low thematic fit (expectation for an event-denoting object)
 - ⇨ computational models of thematic fit (no type)

- * **The Range Question:** Where do covert events come from?
 - ⇨ knowledge of typical events / participants used to build expectations about upcoming input (McRae & Matsuki 2009, Elman 2011)
 - ⇨ thematic fit determines the covert event

- ✓ more flexible (but still constrained) lexical representations
- ✓ context- (and discourse-) sensitive
- ✓ early, dynamic generation of lexical expectations
- ✓ logical metonymy as a “normal” instance of composition

EXPERIMENT: DISENTANGLING OBJECT TYPE AND THEMATIC FIT

* Motivation:

- ⇨ Contrasting type and thematic fit theories
- ⇨ What is the trigger of the logical metonymy?

* Procedure and design:

- ⇨ 2x2 (EN vs. EV obj., high vs low thematic fit)
- ⇨ self-paced reading

* Novelty:

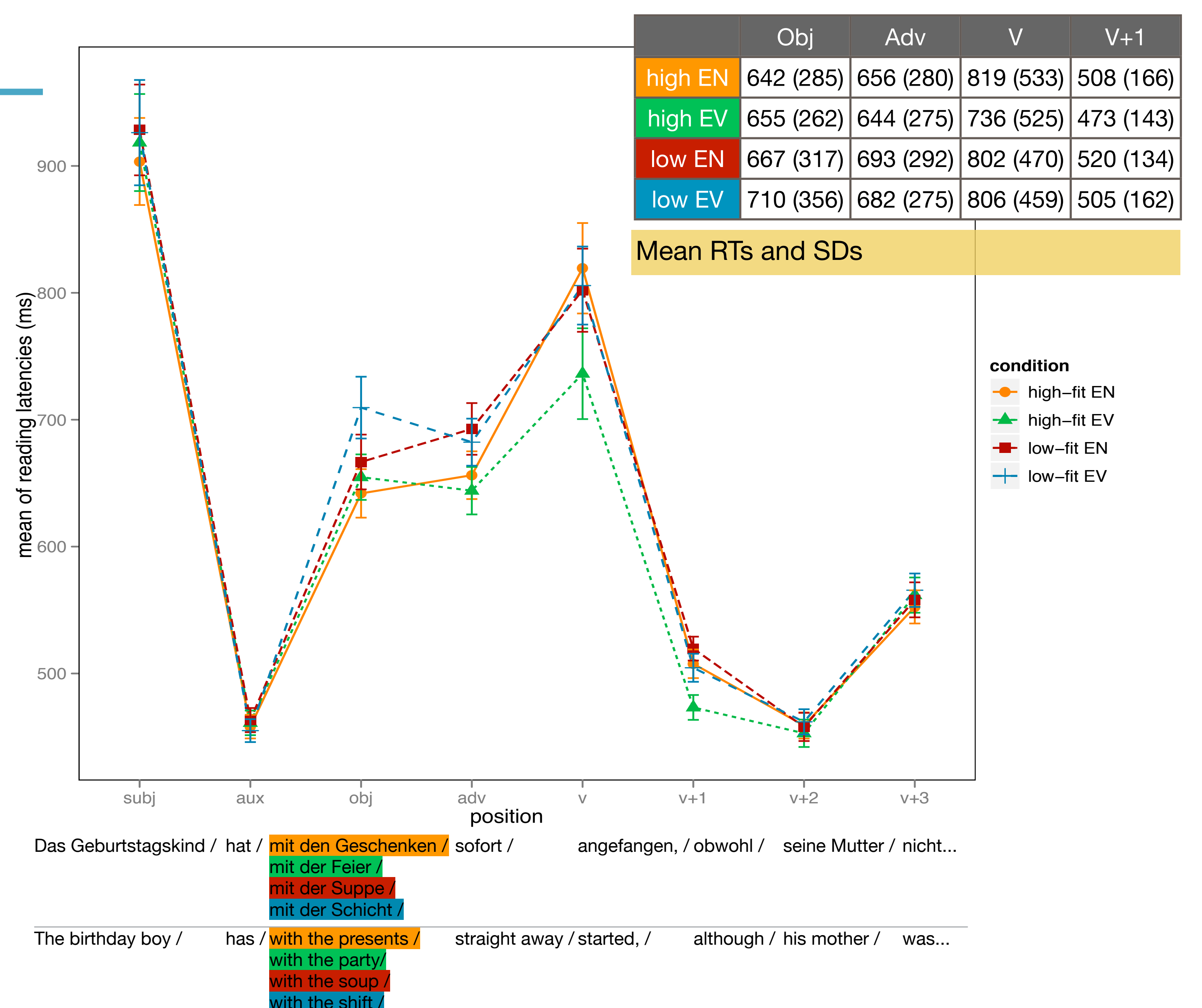
- ⇨ participle-final word order in German, metonymic verb measured in all four conditions (as opposite to Traxler et al. 2002)
- ⇨ manipulating BOTH thematic fit and type

* Results:

- ⇨ Obj.: longer RTs for EV objects (*) and for low-thematic fit objects (*)
- ⇨ Adv.: longer RTs for low-thematic fit objects (*)
- ⇨ V: longer RTs for EN objects (*), interaction with thematic fit (*)
- ⇨ V+1: effect of object type (***) and thematic fit (**)

Quickest condition: EV obj. + high thematic fit

- ⇨ Revision of the Thematic-fit Hypothesis



A WORDS-AS-CUES ACCOUNT FOR LOGICAL METONYMY (ZARCONE ET AL. 2014)

- * **Lexical Hypothesis:** can not account for the effect of thematic fit ⇨ too rigid, not context- and discourse-sensitive enough

- * **Thematic-fit Hypothesis:** can not account for the effect of type ⇨ long RTs for EN objects, although they can be modulated by varying the thematic fit

* A Words-as-cues Account:

- ⇨ both semantic type and thematic fit contribute to the expectation building process
- ⇨ metonymic verbs's selectional properties drive expectations for high-typicality EV objects
- ⇨ contextual cues update expectations for high-typicality covert events
- ⇨ a more dynamic model of lexical access in context (expectations based on contextual cues) (Word-as-cues paradigm, Elman 2011)

We need to account for type AND figure out **how type and thematic fit interact**, cognitively and computationally

- ⇨ towards a two-level model to account for the interaction of type and thematic fit

“Double signature” parallel to figurative language:

- * Early effects reduced by context support
- * Late effects even in presence of a supporting context
 - ⇨ metaphor and metonymy (Bambini & Resta, 2012; Schumacher & Weiland, 2011)
 - ⇨ late effects in logical metonymy not explainable with surprisal effects (Delogu et al. 2013)

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