



Towards a new typology  
of meaning alternations  
at the lexicon-discourse interface

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# Towards a new typology of meaning alternations at the lexicon-discourse interface

1. types of meaning alternations
2. evidence
  - a) electrophysiology
  - b) coordination/copredication
3. dynamic meaning construction at the lexicon-discourse interface
  - a) concept retrieval
  - b) referent shift

# Towards a typology of meaning alternations

(1) *The espresso wants to pay.*

(2) *My grandmother read Goethe.*

(3) *Tim puts down the beer.*

(4) *The baby drinks the bottle.*

(5) *Paul is a hyena.*

(6) *Fred began the book.*

# Towards a typology of meaning alternations

*Tim puts down the beer.*

*My grandmother read Goethe.*

*The baby drinks the bottle.*

*The espresso wants to pay.*

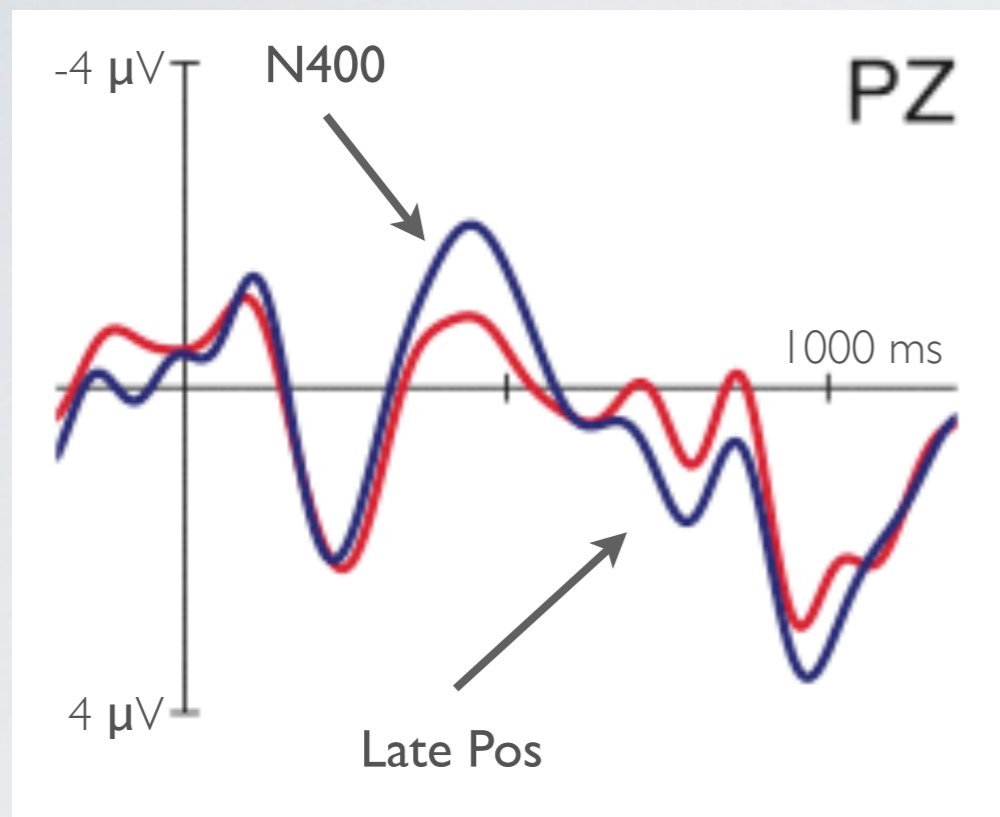
*Paul is a hyena.*

*Fred began the book.*

EVIDENCE I:

ELECTROPHYSIOLOGICAL DATA

# EVENT-RELATED BRAIN POTENTIAL (ERP)



Schematic illustration

- ➔ Which mechanisms contribute to meaning construction?  
(e.g., Burkhardt 2006, 2007; Brouwer et al. 2012; Schumacher, & Hung 2012)
- ★ Contextual expectation & N400
- ★ Accommodation & Late Positivity

CASE I:  
*THE ESPRESSO WANTS TO PAY*

- ★ creative, non-routinized meaning alternation: *the espresso, the ham sandwich, the hepatitis, ...*
- ★ contextual support (*restaurant, hospital, ...*) as a prerequisite (cf. Nunberg 1995 - but see Schumacher 2014 for counterevidence)
- ★ type conflict:  $pay(e,x), person(x) \leftrightarrow espresso(x), liquid(x)$

# Property-for-Person With Contextual Support

## 1. Meaning alternation:

Die Kellnerin fragt den Barkeeper | wer gerne bezahlen möchte. | Der Barkeeper | antwortet | dass | **der Espresso** | gerne | bezahlen | möchte.

*The waitress asks the barkeeper who wanted to pay. The barkeeper answers that **the espresso** wanted to pay.*

## 2. Literal Control:

Die Kellnerin fragt den Barkeeper | was heute ausgegangen ist. | Der Barkeeper | antwortet | dass | **der Espresso** | heute | ausgegangen | ist.

*The waitress asks the barkeeper what was short in supply today. The barkeeper answers that **the espresso** was short in supply today.*



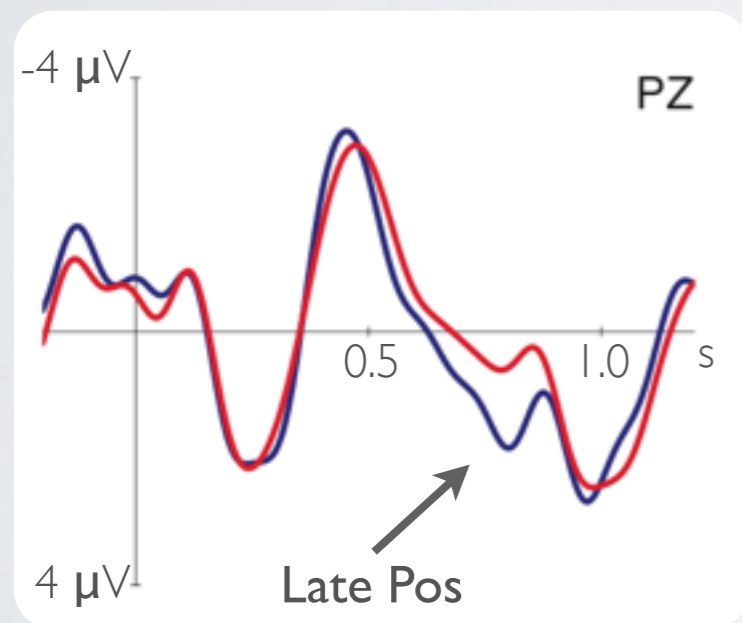
# Property-for-Person With Contextual Support

## I. Meaning alternation:

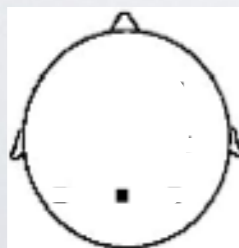
The waitress asks the barkeeper | who  
wanted to pay. | The barkeeper | answers |  
that | **the espresso** | wanted | to | pay.

## 2. Literal Control:

The waitress asks the barkeeper | what  
was short in supply today. | The barkeeper |  
answers | that | **the espresso** | was | short in  
supply | today.



- ▶ **Late Positivity** (650-800 ms) for meaning alternation: type presupposition has to be accommodated



# Property-for-Person With Contextual Support

- ★ meaning alternation is computationally demanding
  - ★ Late Positivity suggests that meaning shift exerts costs
  - ★ updating of discourse representation
    - ▶ predicate requires animate argument ( $pay(e, x)$ ) → telic role of *espresso*:  
 $drink(e, \mathbf{x}, y)$  (Pustejovsky 1995)

## CASE 2: *READING GOETHE*

- ★ routinized metonymy: producer-for-product expressions (*reading Goethe, listening to Chopin, ...* )
- ★ Does cognitive routine impact the processing of metonymy?

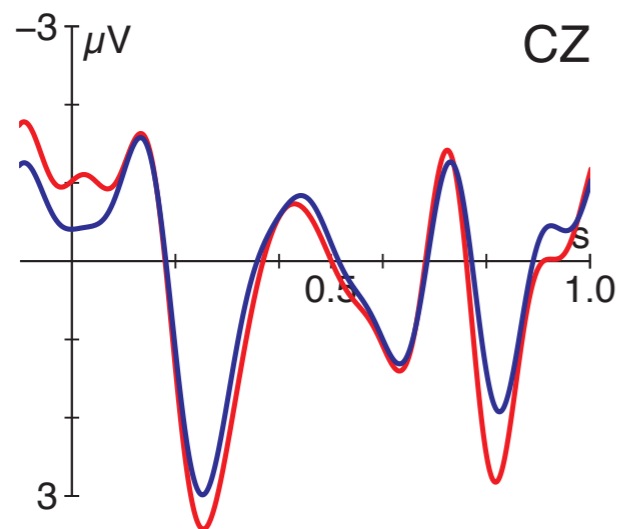
# Producer-for-Product With Contextual Support

## 1. Metonymy:

*What | did | the student | read |  
during a meeting? | He | read |  
**Goethe** | during a meeting.*

## 2. Control:

*Who | did | the ancestor | meet |  
during a meeting? | He | met |  
**Goethe** | during a meeting.*



- ▶ no significant differences
- ▶ type presupposition is met by lexical relation (producer-for-product rule or qualia)

# Interim Conclusion

- ★ meaning alternations are not always computationally demanding (cf. producer-for-product)
- ★ less routinized alternations engender costs (cf. property-for-person)
  - ➔ require referential shift
  - ➔ discourse based operation associated with type accommodation & discourse updating (Late Positivity)

EVIDENCE 2:

COPREDICATION & COORDINATION TESTS

# Interim Conclusion

★ Copredication and coordination tests (e.g., Cruse 1986; Copestake & Briscoe 1995)

(1) a. #*The ham sandwich at table 2 paid and was stale.*

b. *The ham sandwich at table 2 paid and went home.*

(2) a. *Tim's grandma had read Dickens before she met him at a party.*

b. *Tim's grandma had read Dickens before she placed it on the shelf.*

- ▶ discourse-pragmatic consequences of alternations
- ▶ referential shift only in (1)  $\Rightarrow$  discourse updating
- ▶ both meanings maintained in (2)  $\Rightarrow$  no discourse-internal modification

## Further cases

Content-for-Container (*beer*)

Producer-for-Product (*Goethe*)

Container-for-Content (*bottle*)

Property-for-Person (*espresso*)

Metaphor (*hyena*)

**No cost**

**Late Positivity**



## Accounting for the differences

- Discourse-dynamic consequences  $\Rightarrow$  copredication indicates that both meanings are accessible in lexical selection in (3); in (4) only the shifted meaning is accessible

(3) a. *Peter put down the beer and drank it a few minutes later.*

b. *Peter put down the beer and accidentally knocked it over a few minutes later.*

(4) a. *#Johnny drank the bottle and dropped it.*

b. *Johnny drank the bottle and chocked on it.*

(5) a. *#Paul is a hyena; it really is aggressive.*

b. *Paul is a hyena; he really is aggressive.*

## Further cases

Content-for-Container (*beer*)

Producer-for-Product (*Goethe*)

Container-for-Content (*bottle*)

Property-for-Person (*espresso*)

Metaphor (*hyena*)

**No cost**

➔ Meaning alternation qua lexical information / underspecification?

**Late Positivity**

➔ Referential shift & discourse updating

# Dynamic meaning construction

## ❖ meaning alternation

- ★ engages distinct operations

- ★ is situated at lexicon - discourse interface

- ➔ meaning selection relies on rich lexical representation

- ★ type A (producer-for-product, ...): no processing demands for type selection

- ★ type B (complement coercion; cf. Kuperberg et al., 2010: N400): event retrieval

- ➔ referential shift / discourse updating

- ★ type C: discourse updating demands

- ★ referential shift (property-for-person, ...)

- ★ referent deletion (nominal metaphor)

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