LINGUISTIC COMMUNICATION & SOCIAL COGNITION

PETER VAN ELSWYK
NORTHWESTERN

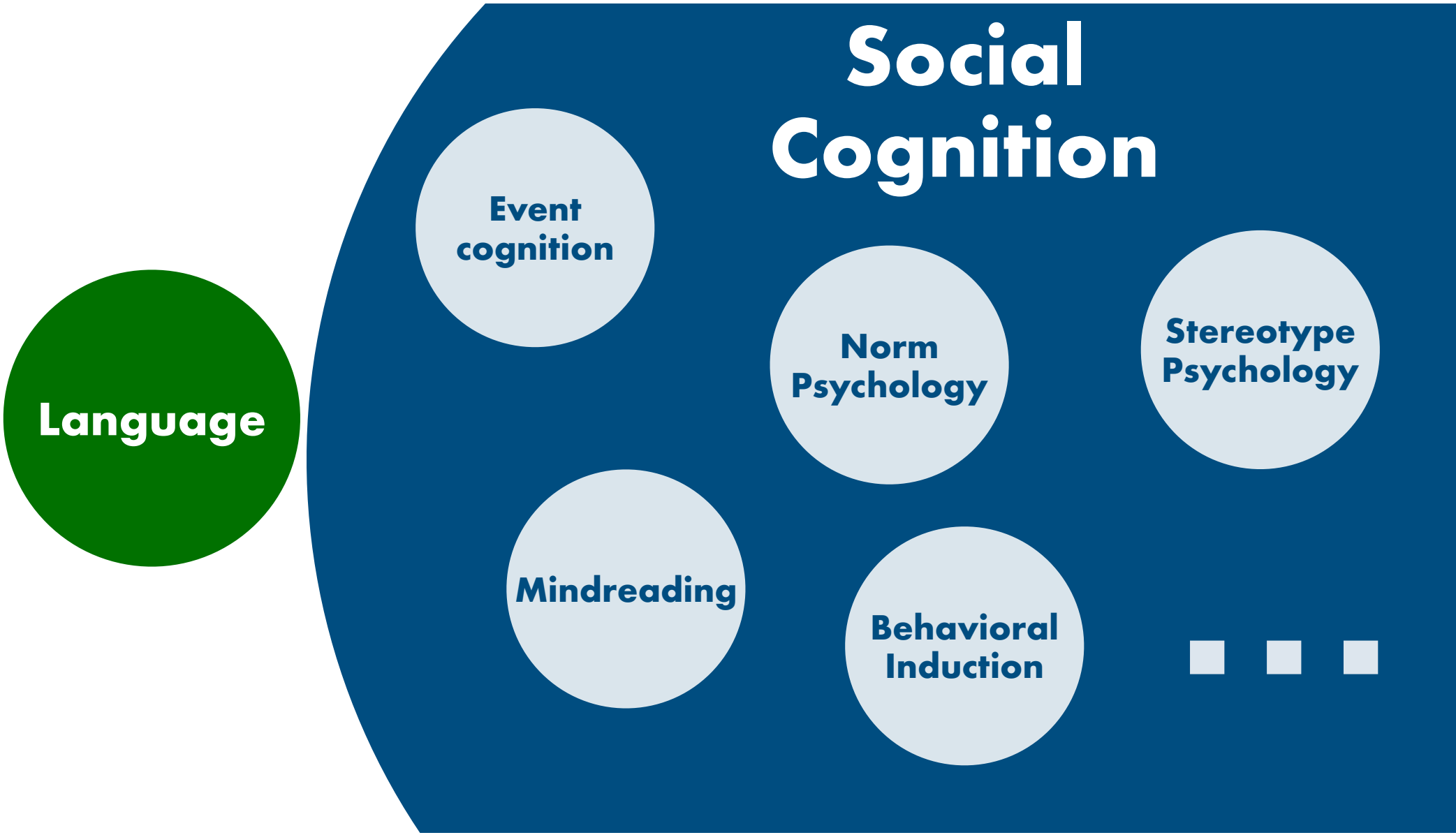
DANIEL HARRIS
CUNY GRADUATE CENTER, HUNTER COLLEGE

DAY 3:

EVENT COGNITION

PETER VAN ELSWYK
NORTHWESTERN

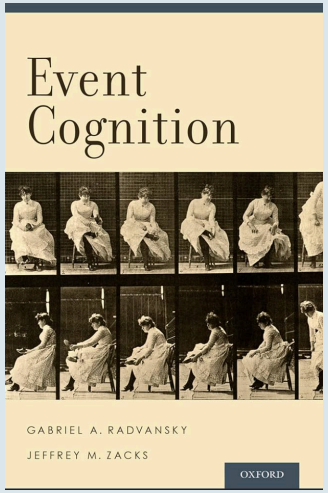
DANIEL HARRIS
CUNY GRADUATE CENTER, HUNTER COLLEGE


Social Cognition
Language
Event cognition
Norm Psychology
Stereotype Psychology
Mindreading
Behavioral Induction

Language

Event Cognition

A domain-general capacity for creating, storing, and updating representations for *events*.



Language

Event Cognition

- Perception
- Memory (Working, Long-term)
- Narrative comprehension
- Psycholinguistics

But what is an *event*?

But what is an *event*?

Happening, episode, experience

But what is an *event*?

An object being in a state or undergoing change at a spatiotemporal location

Stanford Encyclopedia of Philosophy

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Entry Contents

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Events

First published Mon Apr 22, 2002; substantive rev

Smiles, walks, dances, weddings, explosions, hicc
and deaths, thunder and lightning: the variety of th
its ordinary citizens—animals, physical objects, so
sort of things that happen to or are performed by th
been a focus of considerable debate, with implicati
disciplines as well, above all linguistics and the co
that human perception, action, language, and thoug
entities of this sort:

- Pre-linguistic infants appear to be able to dis
adult perception, especially in the auditory r
as events of some aspects of the perceived s
- Humans (and, presumably, other animals) ap
actions, and to bring about events in the exte
- Dedicated linguistic devices (such as verb te
certain proper names) are tuned to events an
structures of other sorts.

Psychonomic Bulletin & Review (2023) 30:2067–2082
https://doi.org/10.3758/s13423-023-02311-4

THEORETICAL/REVIEW

Check for updates

More than a moment: What does it mean to call something an 'event'?

Tristan S. Yates[1] · Brynn E. Sherman[2] · Sami R. Yousif[2]

Accepted: 14 May 2023 / Published online: 5 July 2023

Abstract
Experiences are stored in the mind as discrete mental units, or 'events,' which influence—and are influenced by—attention, learning, and memory. In this way, the notion of an 'event' is foundational to cognitive science. However, despite tremendous progress in understanding the behavioral and neural signatures of events, there is no agreed-upon definition of an event. Here, we discuss different theoretical frameworks of event perception and memory, noting what they can and cannot account for in the literature. We then highlight key aspects of events that we believe should be accounted for in theories of event processing—in particular, we argue that the structure and substance of events should be better reflected in our theories and paradigms. Finally, we discuss empirical gaps in the event cognition literature and what the future of event cognition research may look like.

Keywords Event cognition · Memory · Attention · Prediction error · Perception · Event boundaries

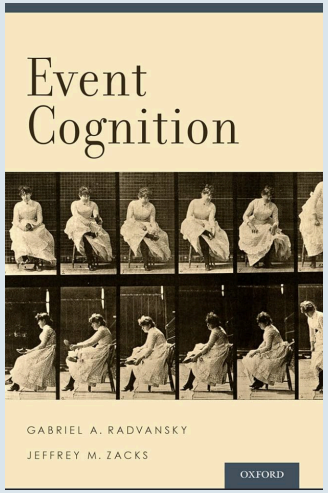
Time is divided into years, which are divided into months, days, hours, and minutes. However, our experience is not represented in these arbitrary units; rather, our lives are divided into *events* which may span moments, months, or decades.

representational similarity measures (Baldassano et al., 2017; Geerligs et al., 2021), and by measuring the influence of temporal structure on memory (Clewett & Davachi, 2017) or perception (Liverence & Scholl, 2012; Meyerhoff et al., 2015; Sher-

Language

Event Cognition

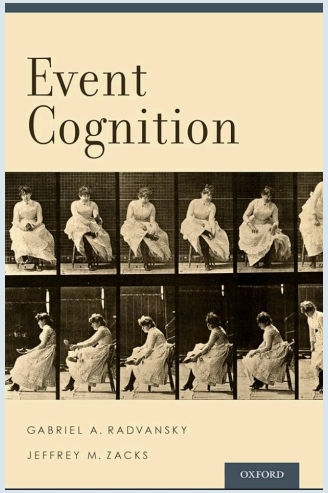
A domain-general capacity for creating, storing, and updating representations for *events*.



Language

Event Cognition

A domain-general capacity for creating, storing, and updating representations for *events*.



How are event representations created?

How are event representations segmented?

How are event representations created?

By segmenting experience into discrete units according to certain properties (e.g. participants, location, goals).

How are event representations segmented?

How are event representations created?

By segmenting experience into discrete units according to certain properties (e.g. participants, location, goals).

How are event representations segmented?

Familiar events are segmented according to an event-type, which acts like a blueprint in representation. Unfamiliar events are segmented through prediction.


CURRY
30


CURRY
30


CURRY
30


CURRY
30


CURRY
30

How are event representations updated?

How are event representations stored?

How are event representations updated?

By detecting boundaries through changes in the properties of the event (e.g. participants, location, goals), and adding predicate-like features to the event representations that further characterize the event.

How are event representations stored?

How are event representations updated?

By detecting boundaries through changes in the properties of the event (e.g. participants, location, goals), and adding predicate-like features to the event representations that further characterize the event.

How are event representations stored?

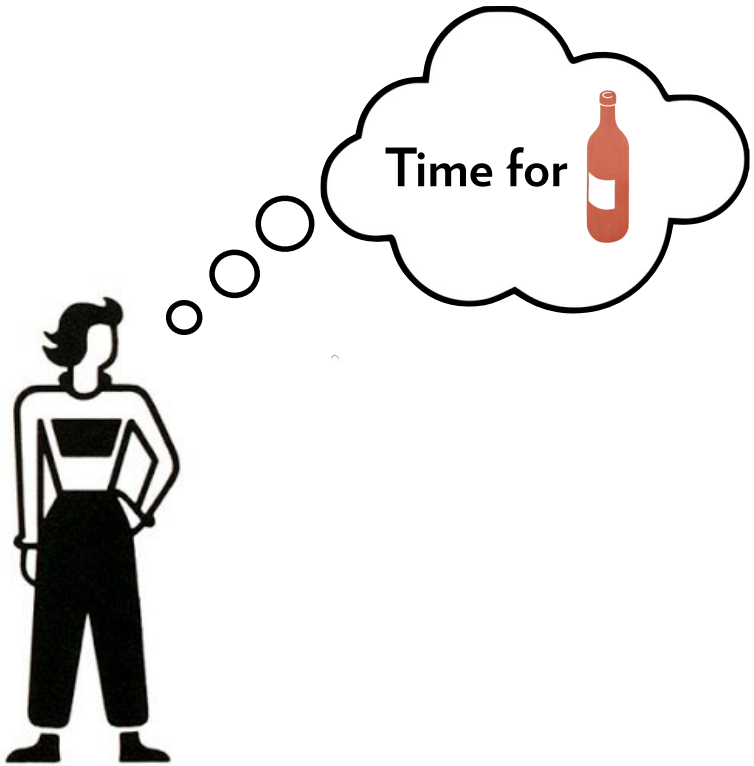
The event representation for the on-going event is privileged in working memory, and is moved to long-term memory when a boundary is detected.

[P]eople's event comprehension systems form predictions about upcoming happenings based on the current event model. When important situation features change… then prediction error spikes. As a result, the current event model is updated and this is experienced as an event boundary.

— Radvansky and Zacks

The location updating effect

Radvansky and Copeland, 2006; Radvansky et al., 2010, 2011; Pettijohn and Radvansky, 2016a,b; Lawrence and Peterson, 2016; Ongchoco and Scholl, 2019



The location updating effect

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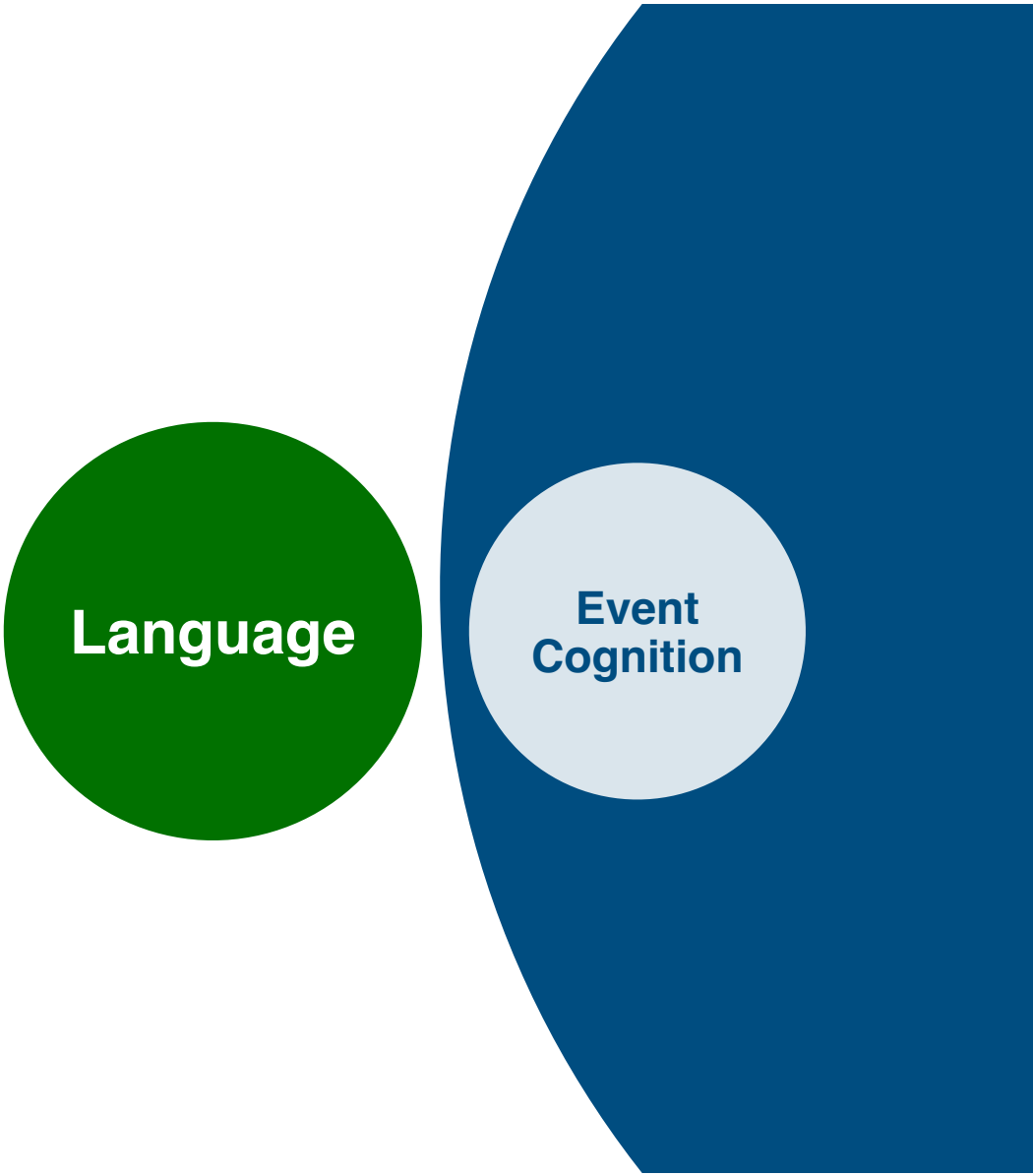
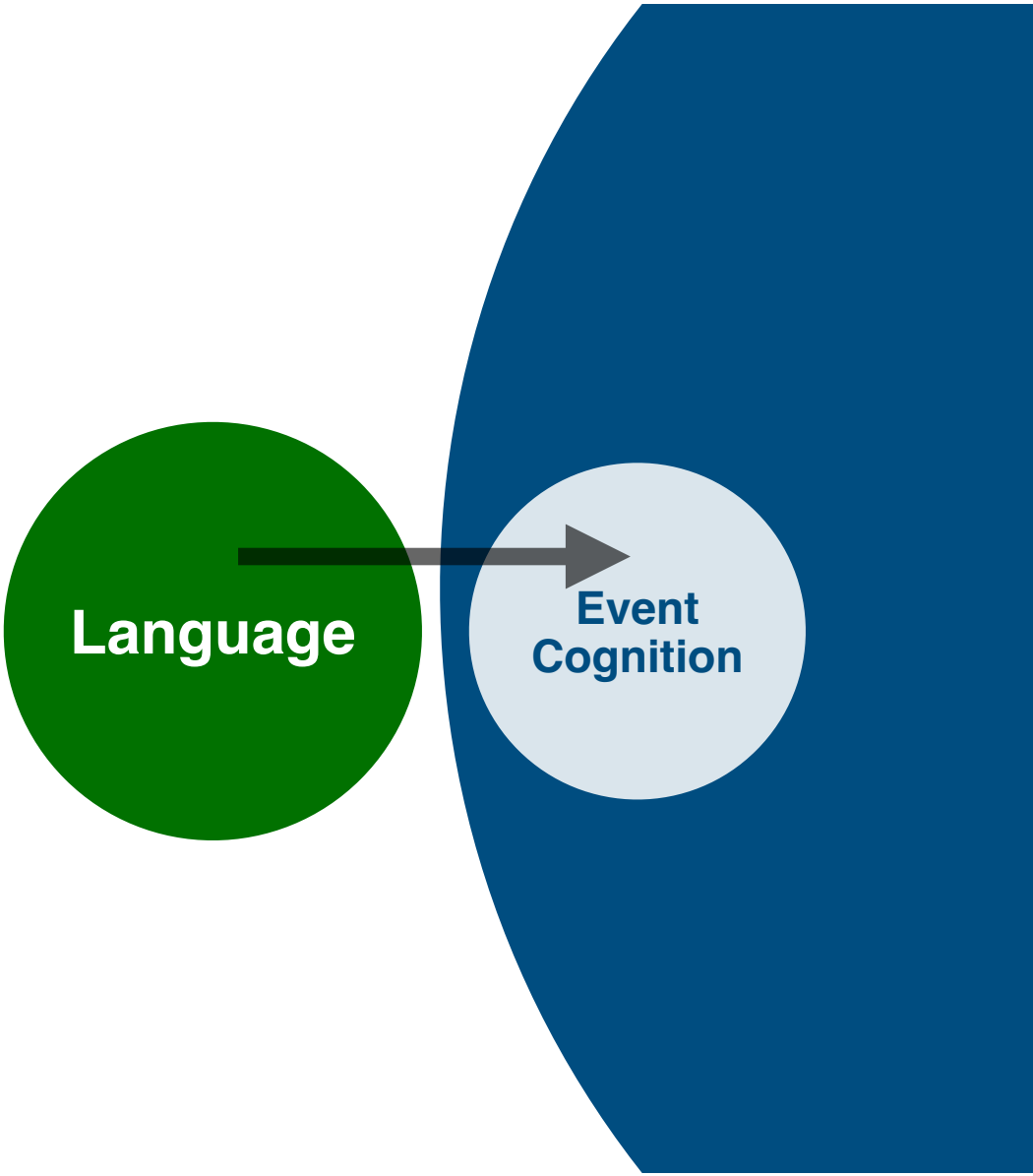

Language
Event
Cognition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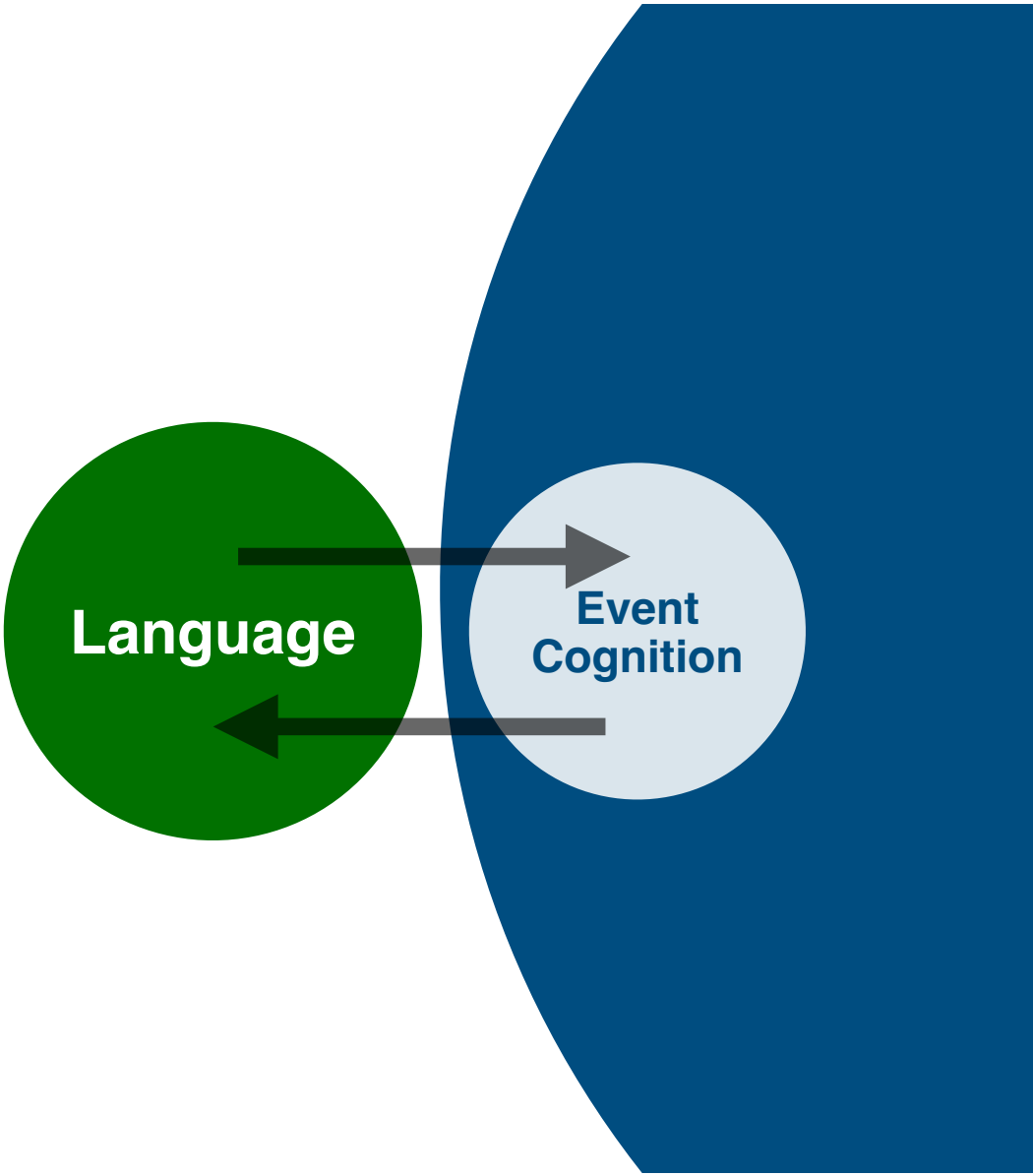

Language
Event
Cognition

HOW EVENT COGNITION INFLUENCES LANGUAGE

HOW EVENT COGNITION INFLUENCES LANGUAGE

Temporality **Performativity** **Enrichment**

HOW EVENT COGNITION INFLUENCES LANGUAGE

Temporality **Performativity** **Enrichment**


Speech
Event

Displacement

The ability of natural language to be about events at times and locations other than the speech event.

Hockett, 1960; Bickerton, 2009

Speech Event

Perspectives on Psychological Science
2024, Vol. 19(6) 978–992

DOI: 10.1177/17456916231180589
www.psychologicalscience.org/PPS

Talking About the Absent and the Abstract: Referential Communication in Language and Gesture

Elena Luchkina[1,2] and Sandra Waxman[1,2]
[1]Department of Psychology, Northwestern University, and [2]Institute of Policy Research, Northwestern University

Abstract
Human language permits us to call to mind objects, events, and ideas that we cannot witness directly, either because they are absent or because they have no physical form (e.g., people we have not met, concepts like justice). What enables language to transmit such knowledge? We propose that a referential link between words, referents, and mental representations of those referents is key. This link enables us to form, access, and modify mental representations even when the referents themselves are absent ("absent reference"). In this review we consider the developmental and evolutionary origins of absent reference, integrating previously disparate literatures on absent reference in language and gesture in very young humans and gesture in nonhuman primates. We first evaluate when and how infants acquire absent reference during the process of language acquisition. With this as a foundation, we consider the evidence for absent reference in gesture in infants and in nonhuman primates. Finally, having woven these literatures together, we highlight new lines of research that promise to sharpen our understanding of the development of reference and its role in learning about the absent and the abstract.

Keywords
absent reference, abstract reference, language acquisition, infants, primates, gesture

Human language permits us to call to mind objects, events, and ideas that we cannot witness directly (e.g., Deacon, 1997). We learn and reason about people we have never met, about time that has not yet passed, and about abstract concepts, such as justice or abelian groups (e.g., Freyd, 1983; Jackendoff, 1997).[1] We readily communicate about such phenomena, learn new information about them, and when (and if) these phenomena ever become perceptually available, we successfully identify them using the knowledge acquired through language.

This ability, which appears to be uniquely human, has long been the focus of inquiry among psychologists, cognitive scientists, and philosophers—from Plato's early work connecting objects, words, knowledge, and knowers (see Scolnikov, 2006, for a review) to Frege, Locke and Russell's inquiries into how we can possibly acquire new knowledge from language alone, in the absence of perceptual information about the referent(s) (e.g., Frege, 1948; Locke, 1847; Russell, 1905). Despite the long and productive history of this inquiry among thinkers and empirical researchers, it remains an open question what cognitive capacities give rise to our ability to learn, reason, and communicate about absent or abstract phenomena from language alone.

We propose that at the heart of this problem is the capacity for linguistic reference—a three-way referential link between words, their referents (if they are real-world phenomena), and mental representations of those referents.[2] By establishing a referential connection between language and mental representations, this link that permits us to form, access, and modify representations on the basis of language input alone, with no perceptual access to the communicated information (for a discussion on the development of linguistic reference, see Bloom, 1993; Clark & Wilkes-Gibbs, 1986; Luchkina & Waxman, 2021; Luchkina & Xu, 2022; Trueswell et al.,

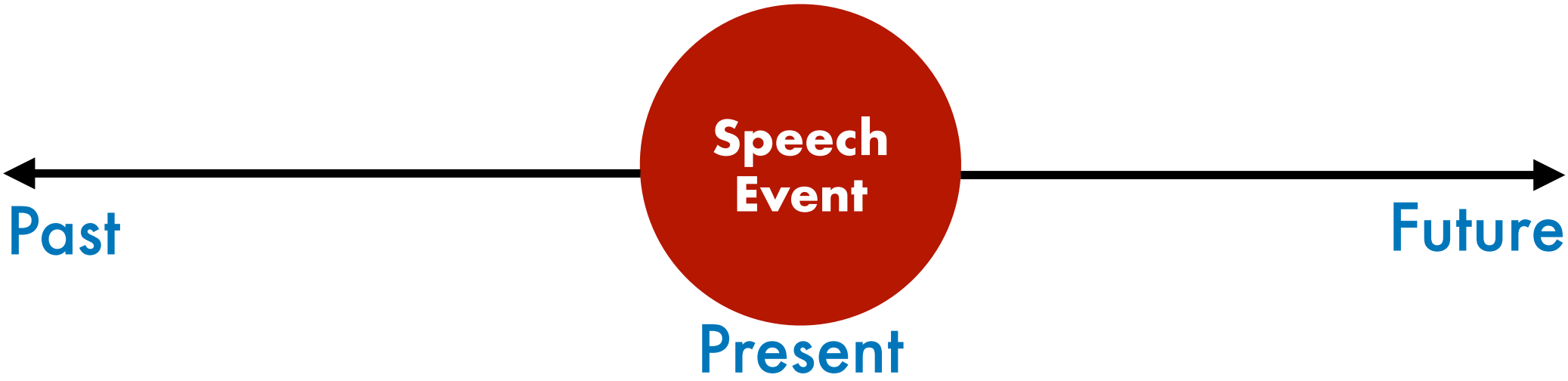
Corresponding Author:
Elena Luchkina, Department of Psychology, Northwestern University
Email: elena.luchkina@northwestern.edu

Speech Event

Most of the empirical evidence on infants' command of absent reference comes from an elegant behavioral paradigm: An infant is first introduced to a novel object and its name (e.g., "Look, a dax!") and then, when the object is hidden, is asked to locate it ("Where is the dax?"). Although infants as young as 12 months comprehend such requests, their ability to carry them out is still fragile: They succeed only when visual "anchors"—perceptually present reminders that are associated with the hidden object—are present.

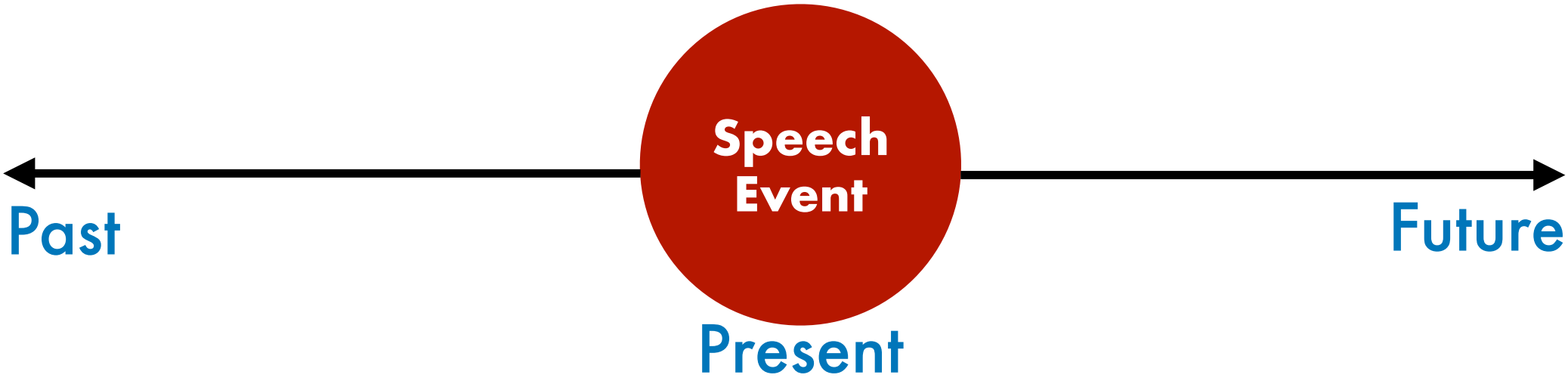
— Luchina and Waxman


Speech
Event



Reichenbach 1947; Dowty 1986; Webber 1988, 2003; Bittner 2007, a.o.

Tense and aspect indicate when the event described by the verb happens relative to the speech event.



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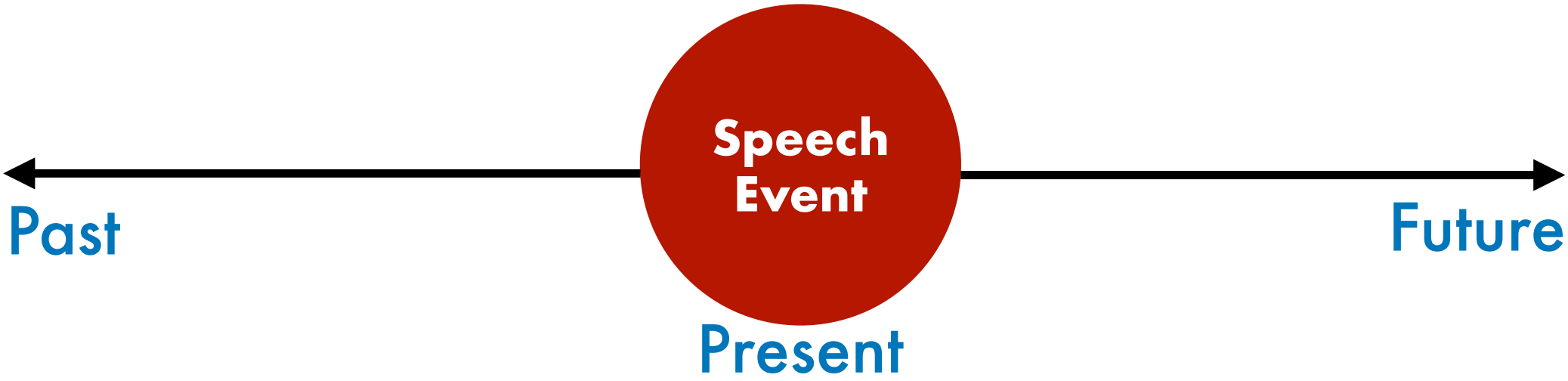

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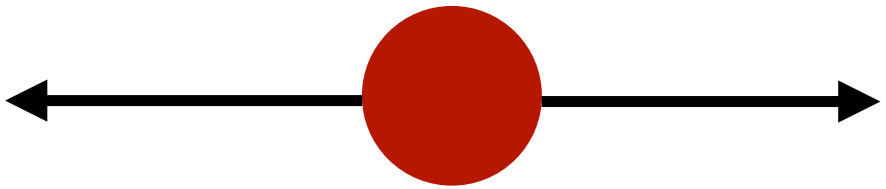
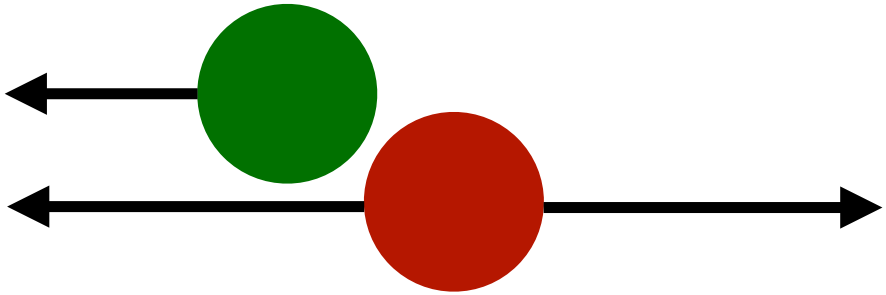


Reichenbach 1947; Dowty 1986; Webber 1988, 2003; Bittner 2007, a.o.



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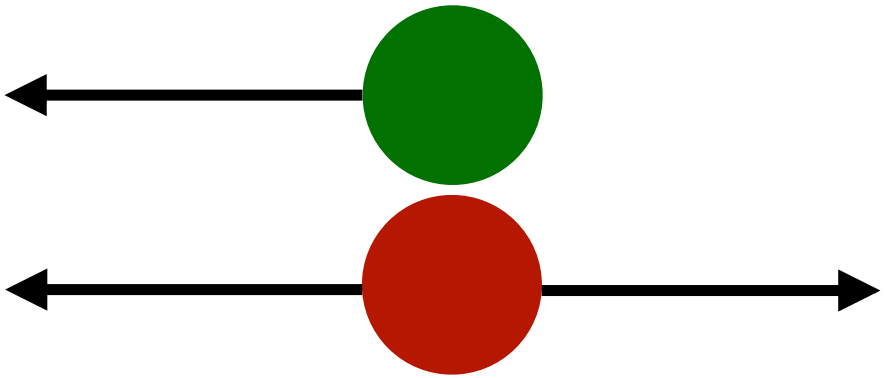
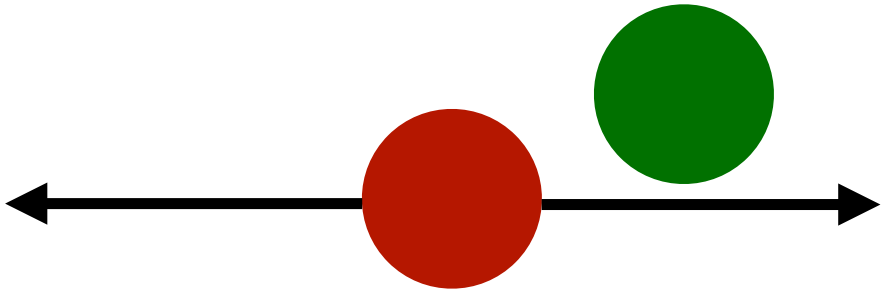


Reichenbach 1947; Dowty 1986; Webber 1988, 2003; Bittner 2007, a.o.



Reichenbach 1947; Dowty 1986; Webber 1988, 2003; Bittner 2007, a.o.

But what about languages without tense?

HOW EVENT COGNITION INFLUENCES LANGUAGE

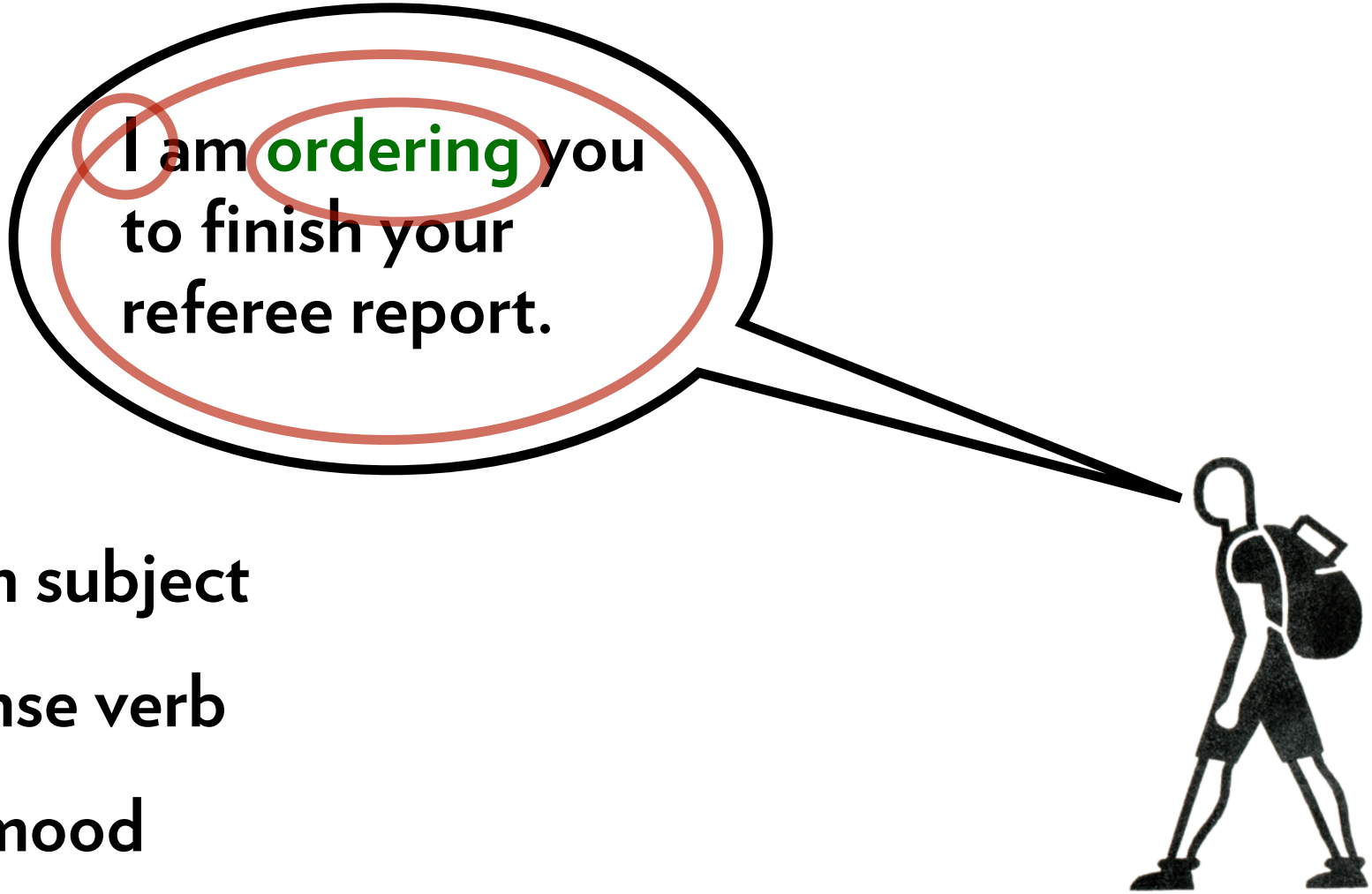
Temporality **Performativity** **Enrichment**

Austin 1962; Vender 1972; Recanati 1987; Condoravdi and Lauer 2011; van Elswyk n.d.

- First person subject
- Present-tense verb
- Indicative mood

Austin 1962; Vender 1972; Recanati 1987; Condoravdi and Lauer 2011; van Elswyk n.d.

Austin 1962; Vender 1972; Recanati 1987; Condoravdi and Lauer 2011; van Elswyk n.d.



- First person subject
- Present-tense verb
- Indicative mood

Austin 1962; Vender 1972; Recanati 1987; Condoravdi and Lauer 2011; van Elswyk n.d.


Speech
Event

DE GRUYTER MOUTON Linguistic Typology 2019; 23(1): 1–58

Egbert Fortuin

Universality and language-dependency of tense and aspect: Performatives from a crosslinguistic perspective

https://doi.org/10.1515/lingty-2018-0018
Received April 02, 2018; revised November 14, 2018

Abstract: This paper presents a cross-linguistic typology of performatives, especially with respect to their relationship with tense and aspect, in the languages of the world. I explore the relationship between performatives and particular tenses and aspects, and touch on the mechanisms underlying such a relationship. The paper finds that there is not one relation between performatives and a particular tense and aspect and there are no languages which have a special (dedicated) performative tense or aspect marker. Instead, performatives are compatible with various tense and aspect markers, even though the use of a present tense seems to be the most common. What counts as the most optimal tense and aspect for performatives depends on the division of labor within the linguistic structure.

Keywords: performatives, verbal aspect, tense, perfective, imperfective, comparative semantics

Speech Event

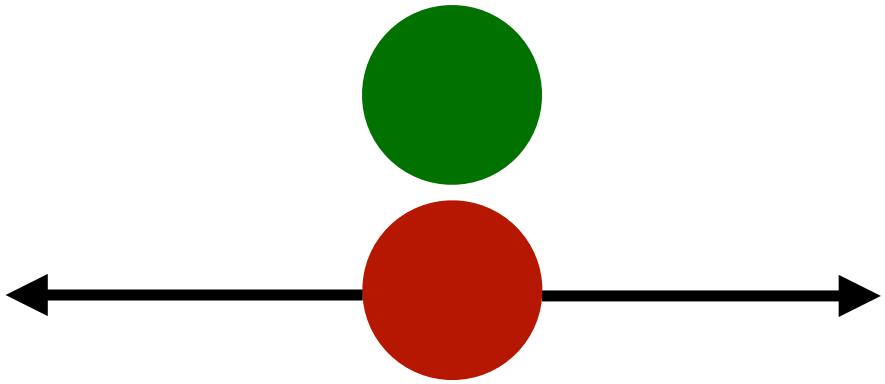
1 Introduction

Austin (1962) introduces performatives such as *I promise* as speech acts which not only describe a given reality, but also change the reality they are describing. Even though Austin argues that the simple present is directly or indirectly inherent to performatives in English, it was noted already in the first half of the twentieth century that some languages express performatives differently, for example by a perfective with a past reading (Koschmieder 1929, Koschmieder 1930 for Biblical Hebrew) or a verb which is morphologically marked as a perfective present tense (Škrabec 1903; Koschmieder 1929, Koschmieder 1930 for Slavic). Especially the use of the perfective past tense is surprising since

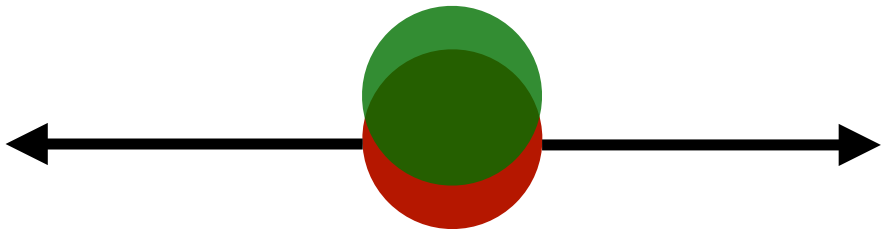
[T]here is not one relation between performatives and a particular tense and aspect and there are no languages which have a special (dedicated) performative tense or aspect marker. Instead, performatives are compatible with various tense and aspect markers, even though the use of a present tense seems to be the most common… [B]ecause of their functional nature, performatives are compatible with various meanings across languages. It is possible that a language selects a meaning for the performative which presents the performative as an instance of coincidence or overlap between the event expressed by the verb and the speech act, in which case a present tense or imperfective (with a strong association with present reference) is used in languages with tense and/or aspect.

— Fortuin

I promise to finish my referee report.



I promise to finish
my referee report.



Anti-displacement

The ability of natural language to be about events determined by the speech event.

van Elswyk n.d.

HOW EVENT COGNITION INFLUENCES LANGUAGE

Temporality **Performativity** **Enrichment**

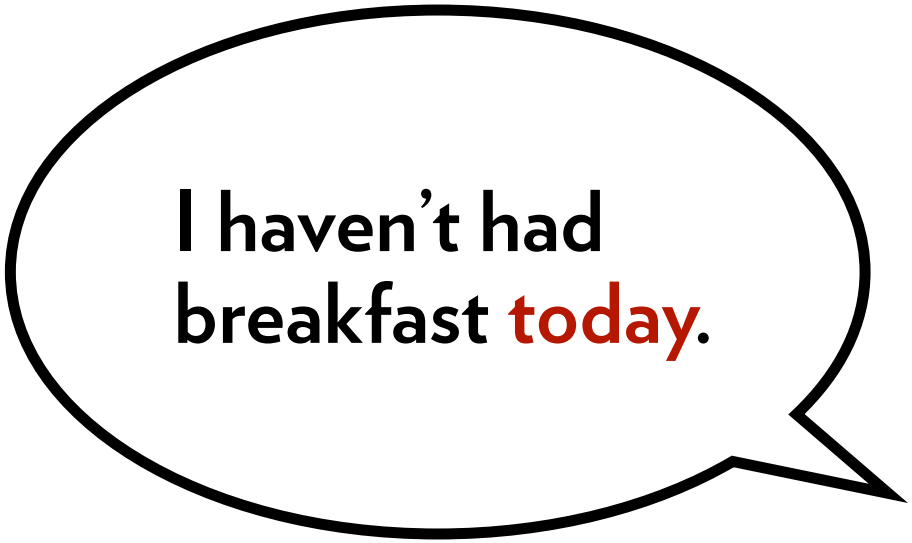
Pragmatic Enrichment

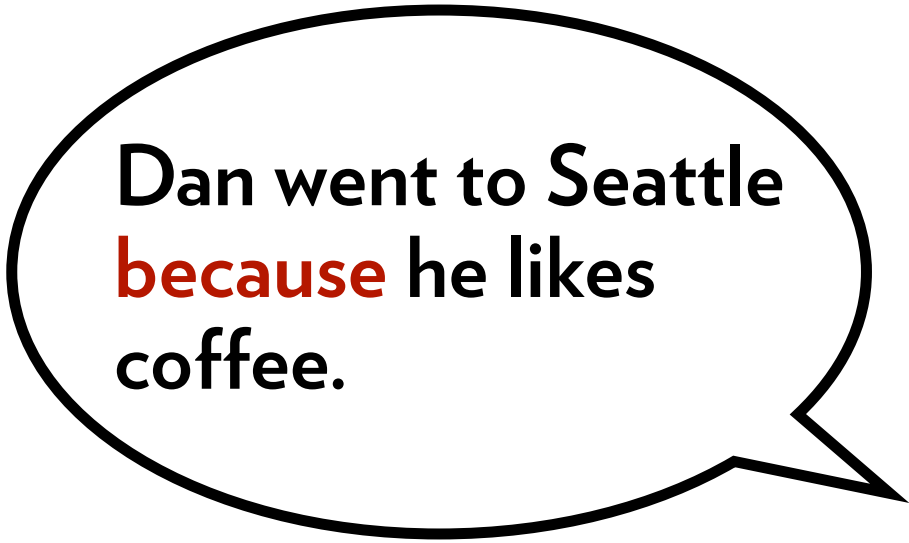
A linguistic phenomena in which the meaning of a word, sentence, or discourse is enriched beyond its conventional meaning.

Bach 1994, Recanati 2011, Cohen and Kehler 2021, *a.o.*


Shane is ready.
I haven't had breakfast.
Dan went to Seattle. He likes coffee.


Shane is ready
to party.


I haven't had
breakfast today.


Dan went to Seattle
because he likes
coffee.

I haven't had breakfast **today**.

Shane is ready **to organize**.

Dan went to Seattle **because** he likes coffee.