Introductory comments

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Unpacking the title of the workshop...

- Types
- Tokens
- Roots
- Functional structure

Types

Parallel history in linguistic theory:

- Descending from Carlson's (1977) work on kinds/generics.

- Descending from Martin-Löf's (1984) Intuitionistic Type Theory (a.k.a. Constructive or "Modern" Type Theory – includes work by Cooper & colleagues, Asher & colleagues, Chatzikyriakidis & Luo).

Types

Data that got me interested in types:

- "Weak" nominals
- "Layered" adjectival modification
- Pseudo-incorporation
- Nominalization (both deverbal and deadjectival)
- Computational semantic models of modification

Types across lexical categories

- The type/token distinction is long established in the generics literature.
  - Kinds modeled as (abstract) entities.
- The distinction has gained considerable traction in the "events"/verb semantics literature.
- Much less work in the "property"/adjective domain.
- Less still in relation to location/prepositions.

From types to tokens

- ▶ Token realizations of kinds ($\approx$ types) were essential in Carlson's work to ensure certain existential entailments.

- ▶ A key development for the type/token literature: Zamparelli's (1995) layered DP.

  - ▶ A twist in the use of Carlsonian kinds: As semantic values for N, not DP.

  - ▶ Functional structure given the job of "tokenizing" kinds.

  - ▶ Minor adaptations permitted phrase composition below NP (e.g., McNally & Boleda 2004).

  - ▶ Natural extension to verbal domain with aspect/tense.

  - ▶ Natural extension to adjective domain with degree morphology and tropes?

From kinds (and types) to roots

- The "layered DP/VP" literature in semantics has not interacted much with the "roots" literature in syntax (as far as I know...).
- But the following connection looks fairly obvious:
  - Type ≈ root.
  - Token ≈ (part of the) functional structure.

The bigger picture

- ► When speaking, we categorize at the same time as we refer.

- ► The system for signaling categories (including ad hoc, complex categories) is as much a part of language as is the system for referring using those categories, but it seems to have distinct properties.

- ► Our syntax/semantics interface should reflect this.

  - ► Systems such as Cooper's Type Theory with Records and Asher's (2011) combination of Type Composition Logic with intensional logic move in the right direction (from semantics).

  - ► The "roots" literature moves in the right direction (from syntax).

Open questions

- Do roots have meanings?
    - If they do, how should we model that meaning? Can a version of Martin-Löf type theory help us? A conceptual semantics? A distributed (vector-based) semantics as used in NLP?
    - If roots don't have meanings on their own, or only *post hoc* via rational reconstruction, then what? See e.g. Carston (2018) on this issue...
- What does functional structure contribute to meaning?
    - Besides "tokenizing" type-level expressions, what other meaning-related jobs does it have?
- How should our answers to these questions influence our analysis of the lexicon and the syntax/syntax interface?

Some answers, some more questions

- How do our grammatical tools for categorization work?

    - Roberto: From entities to exemplars to subkinds.

    - Carla: Event types vs. kinds; Top down vs. Bottom up? "Arbitrary" vs. "cluster-based"

    - Fabienne: Evidence for how we represent certain classes of events

- Assuming that we have category labels that allows us to talk about kinds/classes of things, how do we move from types to tokens?

    - Ora: How to relate/glue together (putatively) kind-denoting expressions to other (putative) kind-denoting expressions. Existential disclosure?

    - Luisa: What is the implication of *zero* for kinds? Can a kind be realized by the bottom element?

    - Gillian: The relation of the linguistic material pointing to kind(-like) "stuff".

Some answers, some more questions

- How can root meaning by hijacked by grammar?
  - Cristina: Roots can step in to do the job of functional vocabulary items, when the latter are lacking.
  - Andrew: Tropes to degrees...

I'm looking forward to your answers!