Summary

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Type theory with records for natural language semantics,
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Summary

Outline

Functions and unification

- tools of formal semantics: functions, binding, . . .
- tools of formal grammar: feature structures, unification, . . .

Types and possible worlds

- ▶ types rather than sets of possible worlds
- ▶ finer grain for representation of content: distinct types can have the same extension
- ▶ better to have too fine a grain than too coarse a grain
- ▶ distinction between positive and negative propositions

Structured objects

- types are structured objects, in particular record types
- if you have fine grain, you probably want structure – otherwise difficult to give identity conditions
- structure is important for semantic coordination and learning

Unified theory of speech events, content and dialogue

- ▶ TTR is a general type theory used for analysis of speech events (syntax), content (semantics) and dialogue
- ▶ this points towards an explanatory theory of how cognitive evolution led to linguistic ability
- ▶ we gave some indication that our ability has developed for basic event perception and reasoning about events, shared with non-human animals

Some things we are currently working on

- ▶ probabilistic TTR
- ▶ concept acquisition by robots
- ▶ semantic coordination and language acquisition in dialogue
- ▶ relating TTR to neural implementation
- ▶ implementation of TTR tools
- ▶ semantic benchmarks
- ▶ emotion and meaning
- ▶ relating language and music