

Reduction and unification in (typed) natural language ontology

Kristina Liefke

Ruhr-University Bochum

Natural language semantics uses many different kinds of objects, incl. individuals, propositions, properties, situations, events, and kinds. Simple type theories tame this 'zoo' by assuming only a small number of primitive objects (e.g. individuals, situations), and obtaining all other objects via constructions out of these primitives. By distinguishing subtypes (or sorts), these theories straightforwardly obtain more finely-grained types (e.g. concrete vs. abstract individuals), allowing them to explain selectional restrictions (e.g. *eat an apple* vs. *#eat an opinion*) (i). However, this strategy blocks an easy account of selectional flexibility (i.e. why some predicates accept different-type arguments; e.g. *remember {the girl, that she was dancing}*) (ii) and of semantic relations between such arguments (e.g. why *remember that she ...* entails *remember the girl*) (iii).

My talk answers this challenge by unifying intuitively distinct types in a single higher-rank type, whose objects code the lower-type objects. This unification allows the same-type interpretation of expressions from different grammatical categories, immediately explaining (ii) and – through the internal structure of the new objects – (iii). Selectional restrictions (see (i)) are explained through the particular lexical semantics of the embedding predicate and its interaction with the new, higher-type object.