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Title: Towards a formalization of Role and Reference Grammar

Abstract: Role and Reference Grammar (RRG) is a theory of the grammar of natural language which has been developed as a descriptive tool for the analysis of typologically distinct languages, and which takes into account the interaction between syntax, semantics, and pragmatics. While RRG already contains a number of formal elements such as the syntactic templates and the logical structures, it lacks a thorough formalization, which makes it difficult to study its formal properties or to develop a computational implementation.

In the talk, we present an outline of how a formal framework for RRG could look like. Our approach adopts and extends concepts from Lexicalized Tree Adjoining Grammars for the specification and composition of syntactic templates. We introduce two general operations, sister adjunction and wrapping substitution, for the composition of elementary syntactic trees, which in turn are defined by means of tree constraints in the so-called metagrammar. The elementary trees are linked to frame-based semantic representations, for which composition basically means unification. We furthermore show how the operator projection of RRG, which reflects the scopal properties of functional operators, can be integrated into a single tree representation by adding appropriate node and edge features. The talk also includes a brief discussion of the formal properties of the framework developed so far.