Formalizing Construction Grammar in Tree Adjoining Grammar

Construction Grammar (CG) articulates intuitions about lexical properties of words and phrases. More importantly, it stresses the fact that syntactic structure can have a contribution to meaning. One of the major claims of Construction Grammar is, thus, that sentence meaning is obtained by the combination of word meaning with the meanings of the constructions that the words appear in.

On the other hand, Tree Adjoining Grammar (TAG) is a mathematical formalism that encodes the clausal combinatorics of syntax. That is, for a given set of lexical and subclausal phrasal units, a TAG defines all the possible bigger clauses and sentences for the language. It does so in a very mathematically constrained way, making crucial use of its name-giving operation, adjunction (or "adjoining").

At first glance these two grammar formalisms may seem incompatible, but it turns out that the difference of the two approaches can be seen as an asset. I will present a comparison of CG and TAG, not so much contrasting them as competitors, but trying to bring together their mutual advantages. I will attempt to show a way towards formalizing CG's linguistic intuitions into TAG's rigorous mathematical framework.

References:
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