Application of Scattered context grammars in linguistics

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Abstract: A scattered context grammar is an enhanced version of a context-regulated grammar where several rules can be applied simultaneously in a single derivation step. One of the possible applications is in the field of linguistics, as in many English sentences, words depend on each other but their position in a sentence may vary and there can be a number of words (even sentences) between them. Scattered context grammars have properties which turn out to be very convenient for analyzing such sentences.

The talk will first explain the definition of scattered context grammars including some examples of how it could generate sentences. Then it will focus on ways that scattered context grammars – slightly modified into transformational scattered context grammars – can be used for transforming English sentences into different sentences, while still being grammatically correct. The examples of transformations include: transformation of a positive sentence into a negative one, a statement into a question, change of the subject of a sentence, changes in inflection, clauses with words "neither" and "nor", interrogative clauses and sentences with question tags.