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Hypergraph languages of bounded degree. (English. English summary)

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The authors study the generative power of two types of hypergraph rewriting grammars: the context-free hypergraph grammar or CFHG grammar and the separated handle hypergraph grammar or S-HH grammar. With additional restrictions these formalisms may also generate families of hypergraph languages with bounded degree, of graph languages, of graph languages with bounded degree, of trees, and of strings.

Restricted to hypergraph languages of bounded degree the CFHG grammars are more powerful than the S-HH grammars. Together with some known results this yields: (1) for hypergraph languages in general, the corresponding hypergraph language families **CFHG** and **S-HH** are incomparable; (2) for hypergraph languages of bounded hyper-degree, the family **S-HH** is a proper subfamily of **CFHG**; (3) for graph languages, the family **CFHG** is a proper subfamily of **S-HH**; and (4) for graph languages of bounded degree, the families **CFHG** and **S-HH** coincide. For strings and for (ranked) trees, a result similar to (4) holds. *Peter R. J. Asveld* (NL-TWEN-C)