Computational Modeling Syntaxfest Indiana University

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Overview

- Formal/Mathematical/Computational Modeling
- Categorial Grammars and Parsing
- Proof Theory and Formal Grammars
- Unification
- Identifiability in the Limit

Formal/Mathematical/Computational Modeling

From now on I will consider a *lan-guage* to be a set (finite or infinite) of sentences, each finite in length and constructed out of a finite set of elements.

(Chomsky (1957), Syntactic Structures, Mouton.)

- Partee, ter Meulen & Wall (1993), Mathematical Methods in Linguistics. Kluwer.
- van Benthem & ter Meulen (eds.) (1997),
 Handbook of Logic and Language. MIT
 Press and Elsevier.
- Kracht (2003), The Mathematics of Language. Mouton de Gruyter.

Categorial Grammars and Parsing

- Nederhof & Satta (2004), "Tabular Parsing." In: Formal Languages and Applications.
- Pullum & Gazdar (1982), "Natural Languages and Context-Free Languages."
 In: Linguistics and Philosophy. 4(4): 471-504.
- Shieber (1985), "Evidence Against the Context-freeness of Natural Language."
 In: Linguistics and Philosophy. 8(3): 333-343.

Proof Theory and Formal Grammars

- Retoré & Lecomte, (2001) "Extending Lambek grammars: a logical account of minimalist grammars." ACL-EACL. http://retore.chez.tiscali.fr/boulot/
- Tiede (2003), "Proof Theory and Formal Grammars Applications of Normalization." In: Foundations of the Formal Sciences II. Kluwer.

Unification

- Buszkowski & Penn (1990), "Categorial grammars determined from linguistic data by unification." Studia Logica (49):431–454.
- van Benthem (1995), Language in Action. MIT Press.

Identifiability in the Limit

- Jain, Osherson, Royer & Sharma (1999),
 Systems that Learn. 2nd ed. MIT Press.
- Kanazawa (1998), Learnable Classes of Categorial Grammars. CSLI Publications.
- Retoré & Bonato (2001), "Learning rigid Lambek grammars and minimalist grammars from structured sentences." 3rd Workshop on Learning Language in Logic. http://retore.chez.tiscali.fr/boulot/