

Knowledge Engineering for NLP

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Clausal semantics

Overview

- Why clausal semantics?
- What's a clause?
- Our strategy
- Corpora and precision grammars

Why clausal semantics?

- Illocutionary force correlates with syntactic form
- MRS representations should include all semantic information that is syntactically marked
- Illocutionary force is ‘predicated of’ situations — i.e., the rest of the MRS

Aside: Perlocutionary, Locutionary, Illocutionary

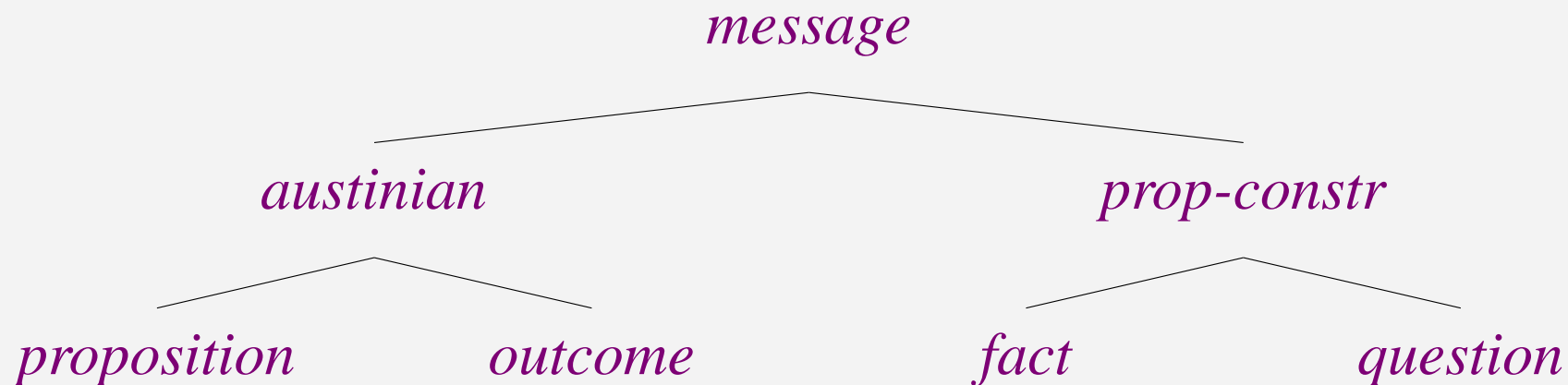
- locutionary act: The act of saying something
- illocutionary act: The act of asking, asserting, commanding, etc. by saying something
- perlocutionary act: The act of getting someone to do or believe something by asking, asserting, etc. something

What's a clause?

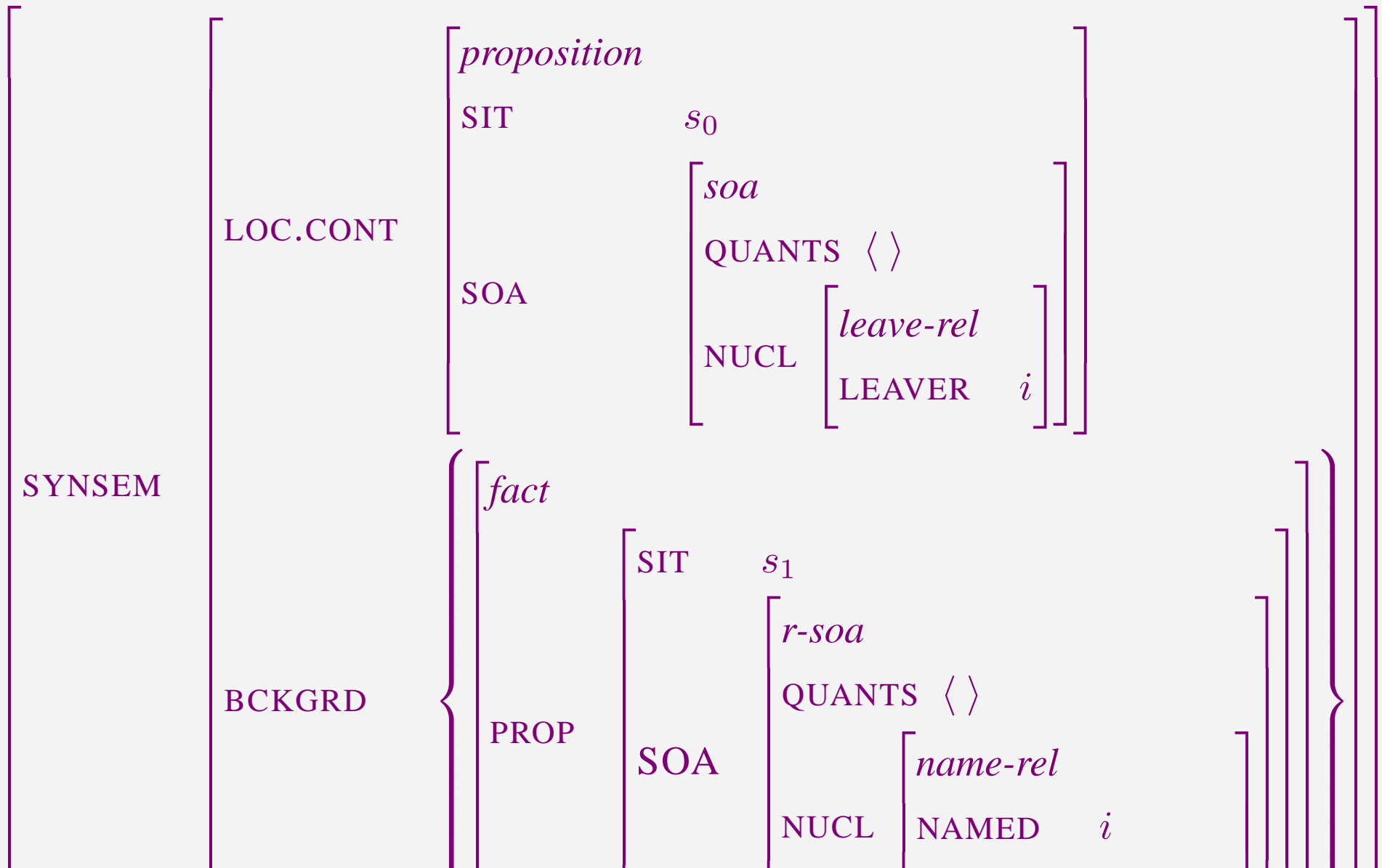
- Syntactically complete
- Expresses some illocutionary force
- Contrasts with fragments, some of which can also carry illocutionary force.
- Marking of illocutionary force is often associated with the clause as a whole or with its head verb.
- Clauses can be matrix or embedded.
- Embedded clauses carry messages, too.

Clausal semantics: Messages

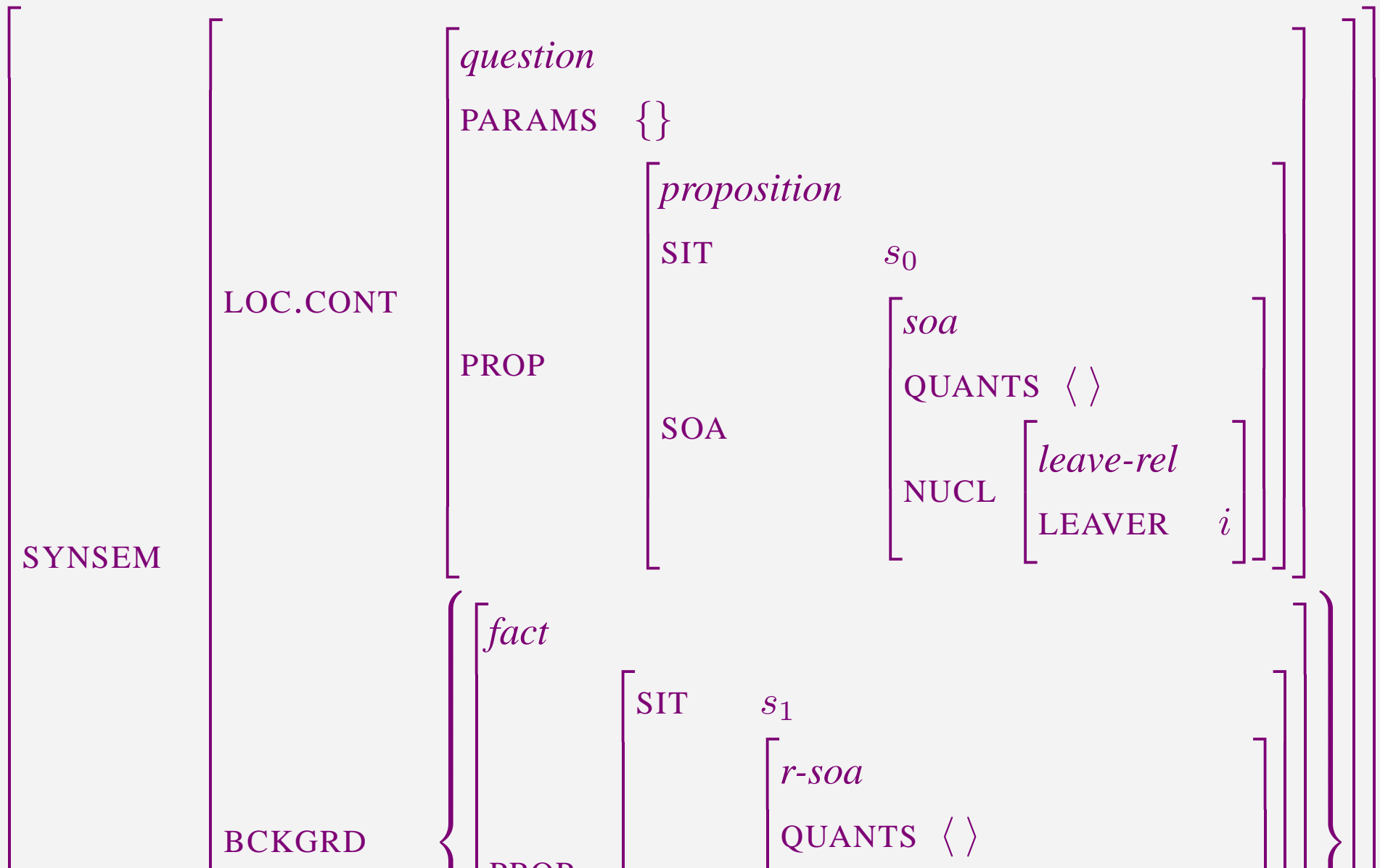
- “*Message* is the semantic type that is the most basic to communication—its (maximal) subtypes constitute the descriptive contents of basic illocutionary acts such as assertion, querying, commanding, exclaiming and the like.” (Ginzburg & Sag 2000:121)
- Partial hierarchy under *message*:



Clausal semantics in recursive representation (1/2)



Clausal semantics in recursive representation (2/2)



Our general strategy (1/2)

- Represent illocutionary force with a feature of events, called 'SF'.
- Possible values of SF: command, prop-or-ques, proposition, question
- Subject-attaching/discharging rules set SF to 'command' or 'prop-or-ques'
- Further up the tree, complementizers, selecting heads, or unary constructions can constrain things further.

Our general strategy (2/2)

- Allow lexical items to introduce information about possible clausal semantics
 - English inverted auxiliaries are [INV +], English yes-no rule is sensitive to this.
 - English imperative clauses (a kind of head-opt-subj phrase) require [FORM base] heads.
- How do we avoid getting a parse of *Did Kim leave?* which is just [SF prop-or-ques]?

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