

Lexical entries & clauses

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The problem

The inadequacy of PS-rules

- a. * John devoured.
John fainted.
- b. * Cezanne fainted the apple.
Cezanne painted the apple.
- c. * John ate the apple the pear.
John gave the woman the apple.

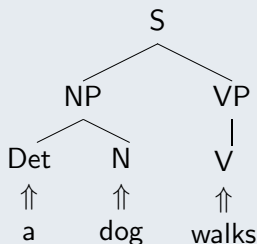
A lexical entry for *fox*

PHONOLOGY	faks
DEFINITION	member of one of many <i>Canidae</i> species
CAT	N
COUNT	+

The plan

- 1 Augment lexical entries with something we call an *argument structure*, which represents the meaning of an open class word as a *predicate*, and identifies the **roles** and **grammatical functions** of the predicate's arguments.
- 2 The argument structure of a predicate constrains lexical insertion

Lexical Insertion

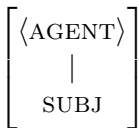


Argument structure

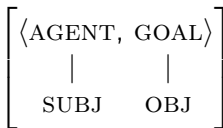
sing	[⟨AGENT⟩]
slap	[⟨AGENT, GOAL⟩]
love	[⟨EXPERIENCER, STIMULUS⟩]
give	[⟨AGENT, THEME, RECIPIENT⟩]

Subcategorization

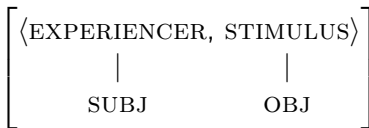
sing



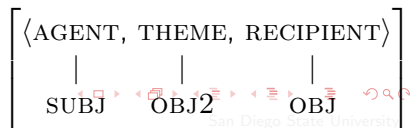
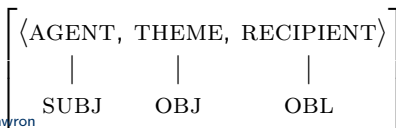
slap



love



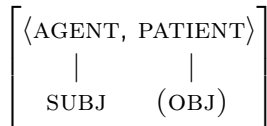
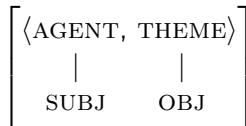
give



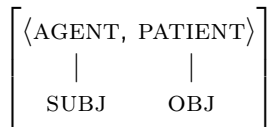
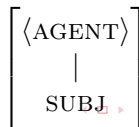
Valence alternation I

- a. John ate the apple.
John ate.
- b. John devoured the apple.
* John devoured.
- c. John is melting the snow.
The snow is melting.

eat

melt₁

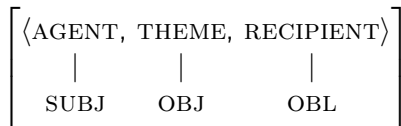
devour

melt₂

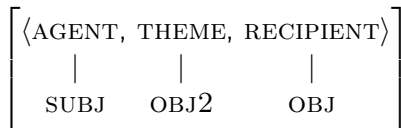
Valence alternation II

- a. John gave Mary his old radio.
 John gave his old radio to Mary.
- b. John made the log into a canoe.
 John made a canoe out of the log.

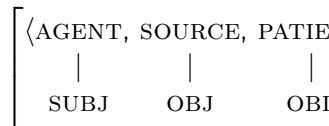
give



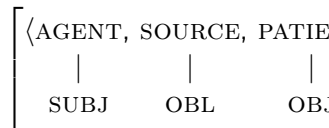
give



make

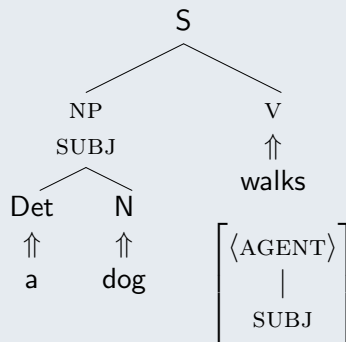
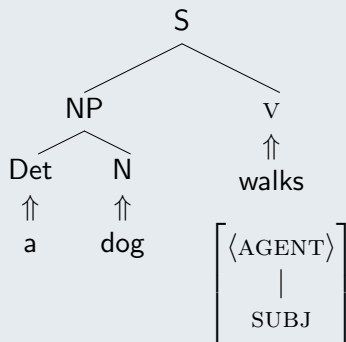


make



Amendments

Lexical Insertion



Principles for annotated PS-rules

$$S \rightarrow \text{NP } V \text{ (NP) (NP) (PP)}$$

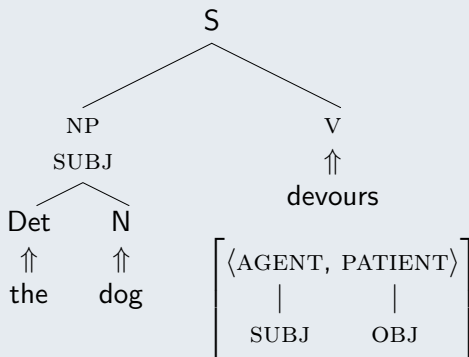
SUBJ OBJ OBJ2 OBL

Well-formedness

- a. **COMPLETENESS:** Every obligatory Grammatical Relation in the subcategorization of a Verb must be assigned to a clause-mate of the Verb.
- b. **COHERENCE:** Every non-adjunct Grammatical Relation assigned to a clause-mate of a verb *V* must be present in the subcategorization of *V*.
- c. **UNIQUENESS:** No Grammatical Relation assigned more than once by a single verb.

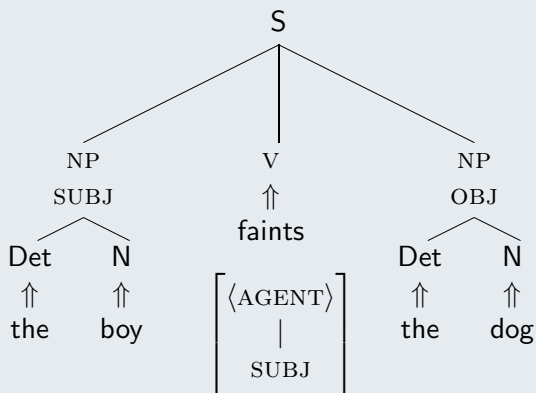
Violations I

Completeness



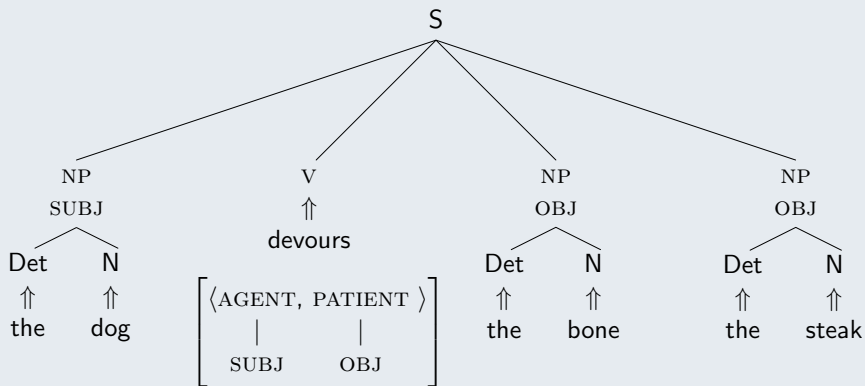
Violations II

Coherence



Violations III

Uniqueness



Uniqueness in English

- a. No new principle is really needed to rule the sentence on the previous slide. The PS-rule already SAYS there can be only one object:

$$\begin{array}{ccccccc}
 S & \rightarrow & NP & V & (NP) & (NP) & (PP) \\
 & & \text{SUBJ} & & \text{OBJ} & \text{OBJ2} & \text{OBL}
 \end{array}$$

- b. This is because, for the simple examples we've looked at, English does not really require a uniqueness principle. For simple clauses with canonical word order, it generally assigns unique phrase structure positions for the argument grammatical functions.
- c. Other languages don't work this way. In case marking languages with free word order, for example, there is no single phrase structure position assigned to subjects. The uniqueness principle has some bite.
- d. Also in more complicated English sentences, with “movement” (raising, Wh-questions), the uniqueness principle has bite.