



ENG423A: Current Issues in Linguistics

PRINCIPAL FORMULATIONS I

Phrase Structure and Transformations

Basic Formalism:

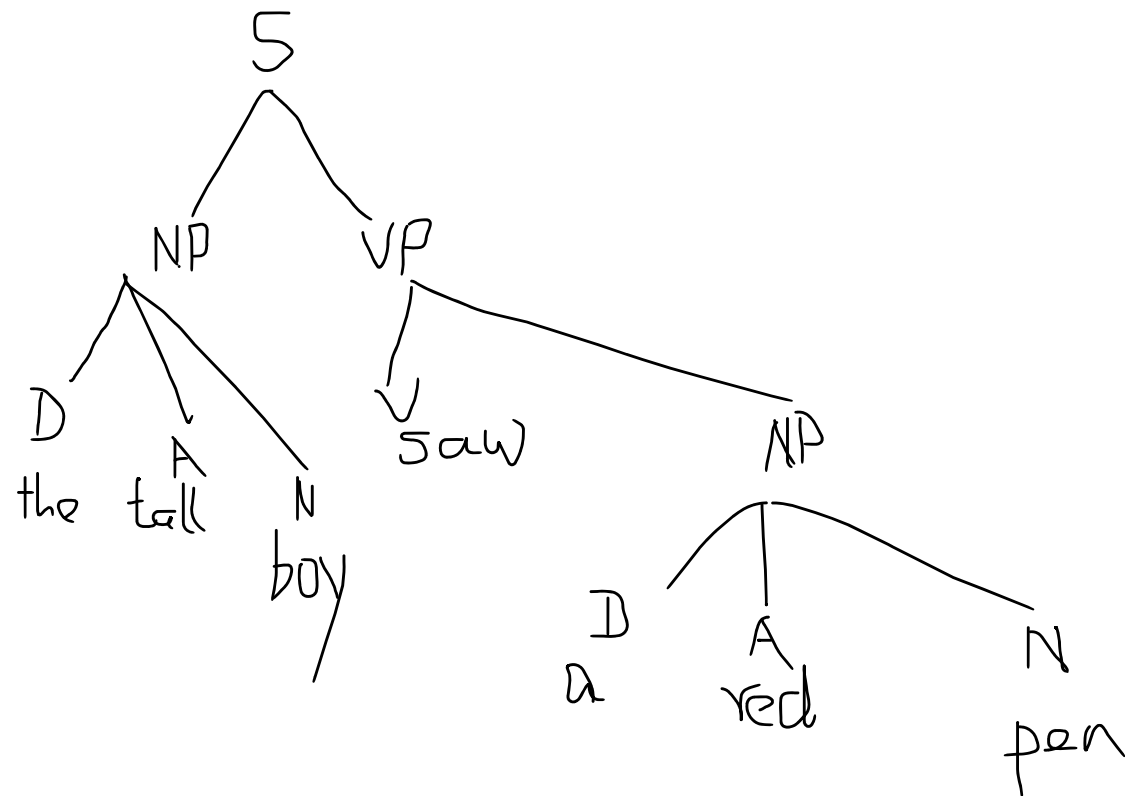
A generative procedure consisting of

- Rewrite rules
- Phrase markers (syntactic trees) generated by the rewrite rules
- Lexical items as terminal nodes of phrase markers
- Transformations that map phrase markers into phrase markers

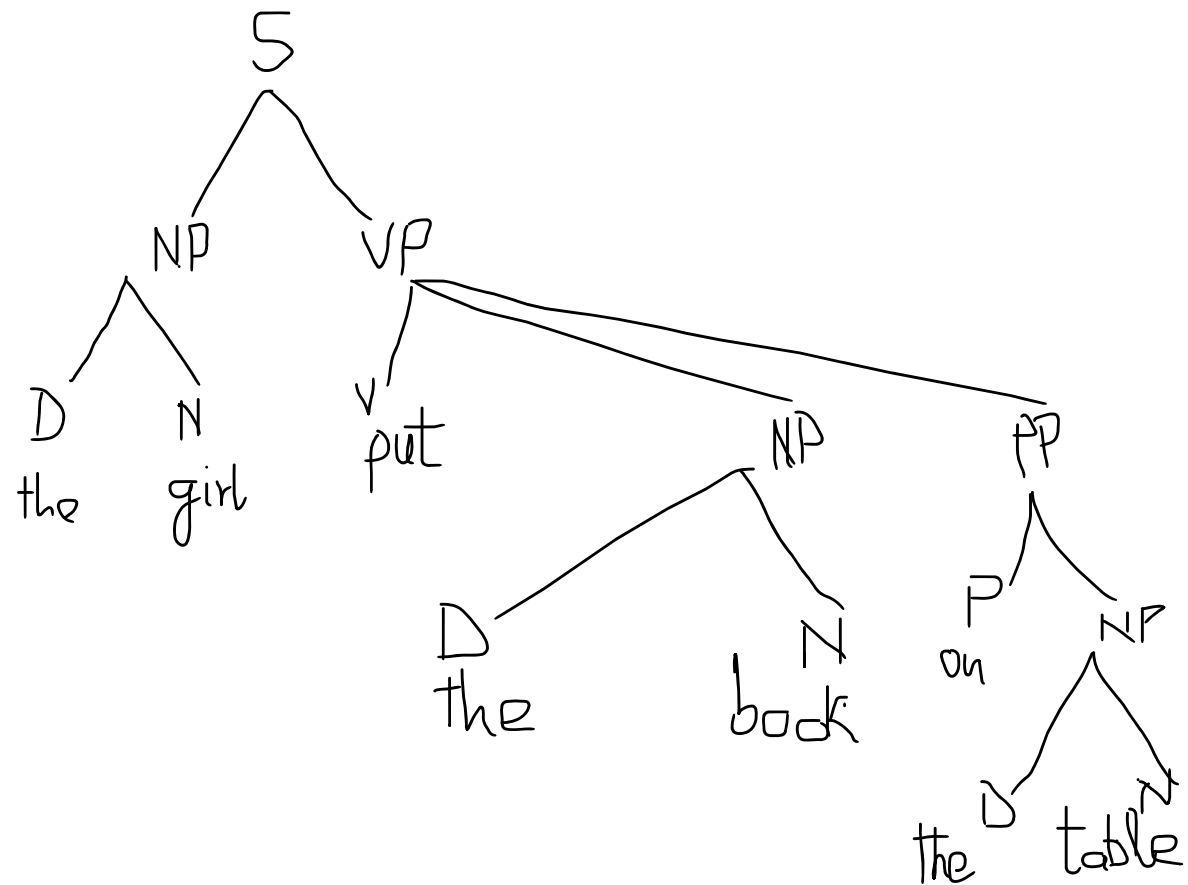
Context Free Phrase Structure Rewrite Rules

S	→	NP VP
VP	→	V (AUX) (NP) (PP)
PP	→	P NP
NP	→	DET Adj N
DET	→	a, an, the, many, some all. . .
Adj	→	good, tall, red, beautiful. . .
N	→	boy , girl, table, book, pen. . .
V	→	run, eat, put, give. . .
P	→	to, from, in, on . . .

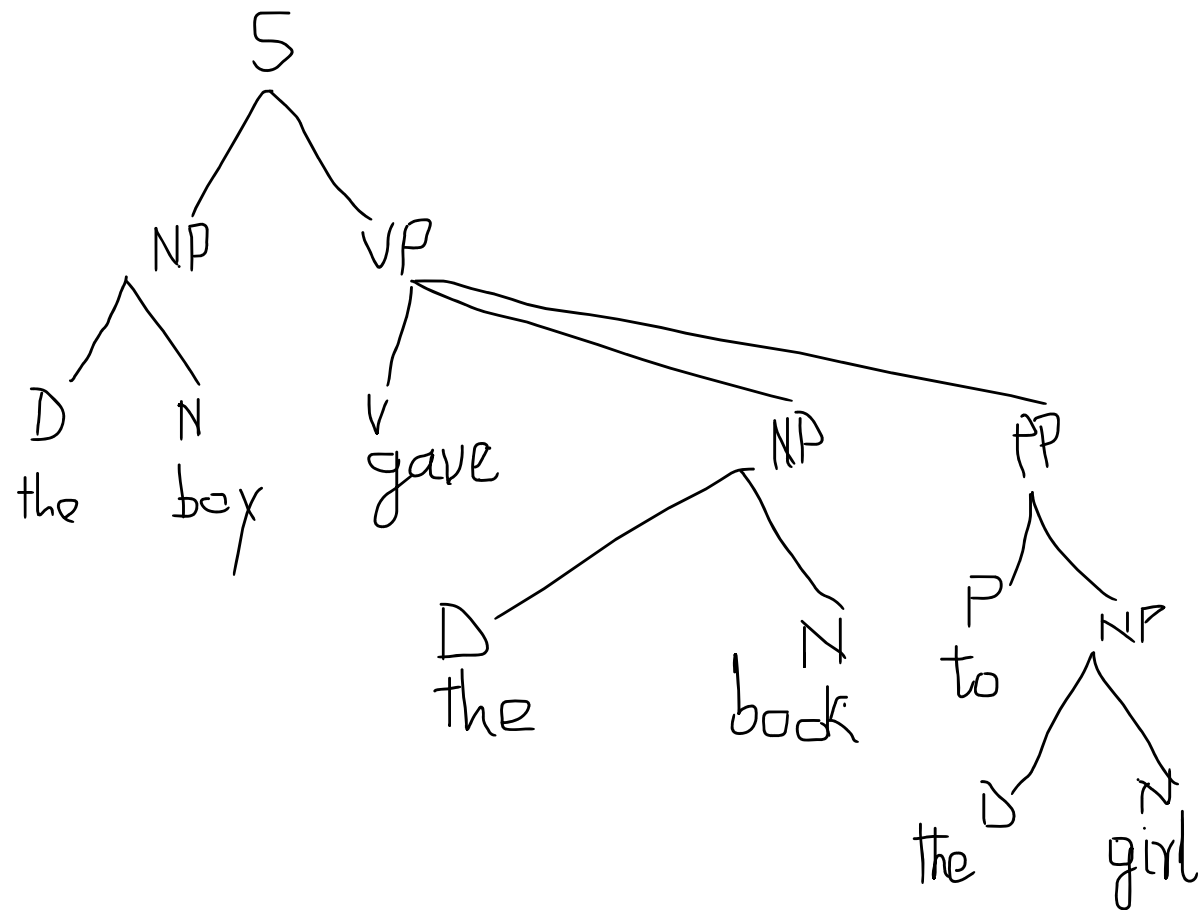
Phrase Marker: The tall boy saw a red pen.



Phrase Marker: The girl put the book on the table.



Phrase Marker: The boy gave the book to the girl.



Transformations

Phrase Structure (Rewrite) Rules, by themselves, cannot handle some of the complexities of language.

Apart from the rewrite rules, we also need derivational rules, i.e., transformations. Why?

- 1) Discontinuities: elements do not always occur in contiguity.

A simple example of discontinuities:

Verbal Affixes

Aux V  Tense (Modal) (have+en) (be+ing) V



I might have been dozing.

Affix Hopping

Why Transformations?

2) Displacements

Q-word displacement and Subject-Aux Inversion

/Ram loves Sita/~ / Who does Ram love? /

/I think Ram loves Sita/~ / Who do you think Ram loves? /

Q-word Movement

3) Similar expressions differing on the surface but having same underlying structure:

/A new artist painted this picture/ ~ /This picture was painted by a new artist/

Passive Transformation

How do transformations work?

A rudimentary transformational mechanism is proposed as a part of the Generative Grammar in *Syntactic Structures* to account for the discontinuities we observe in language.

Phrase Structure Rules generate Phrase markers.

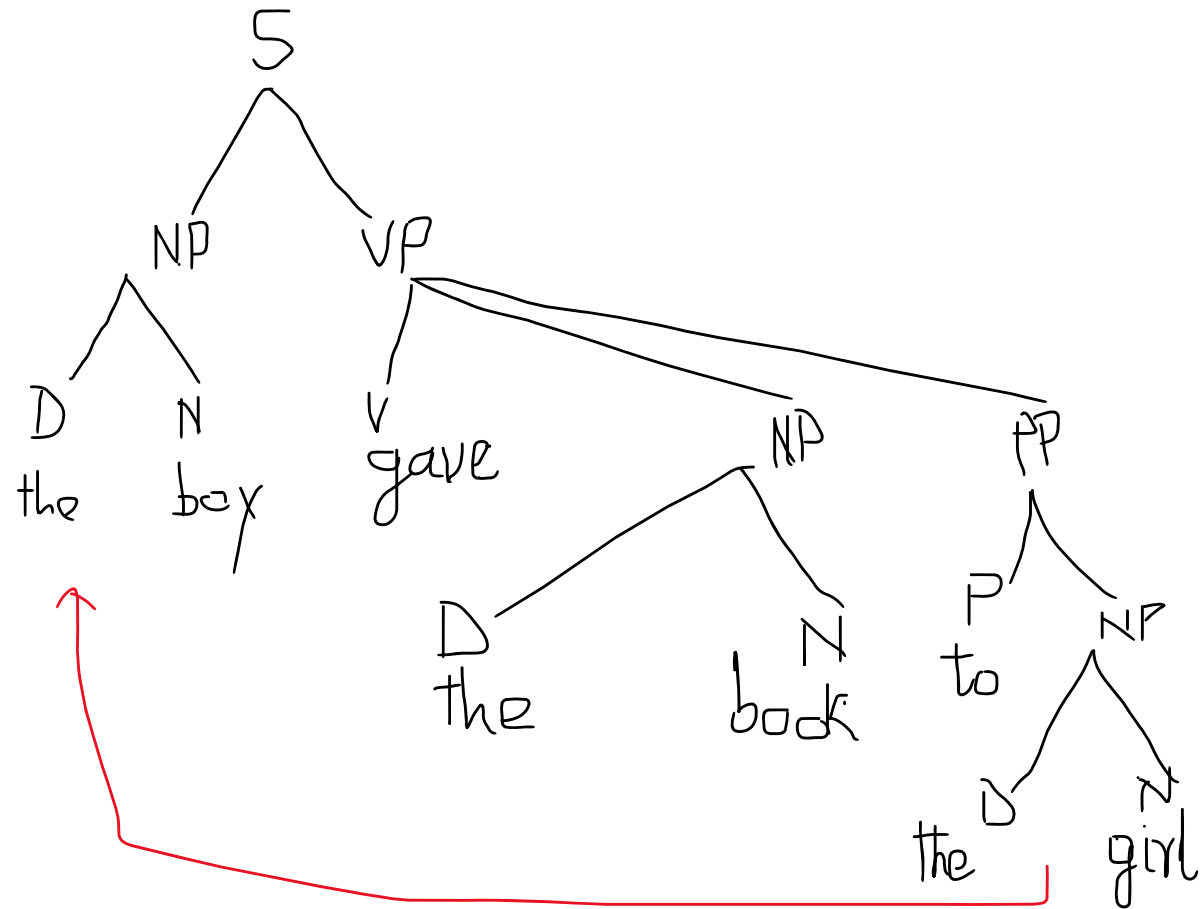
The Transformational mechanism maps phrase markers into phrase markers.

Singularly transformations map a phrase marker into another.

Generalised/Embedding transformations create complex phrase markers out of the simpler ones

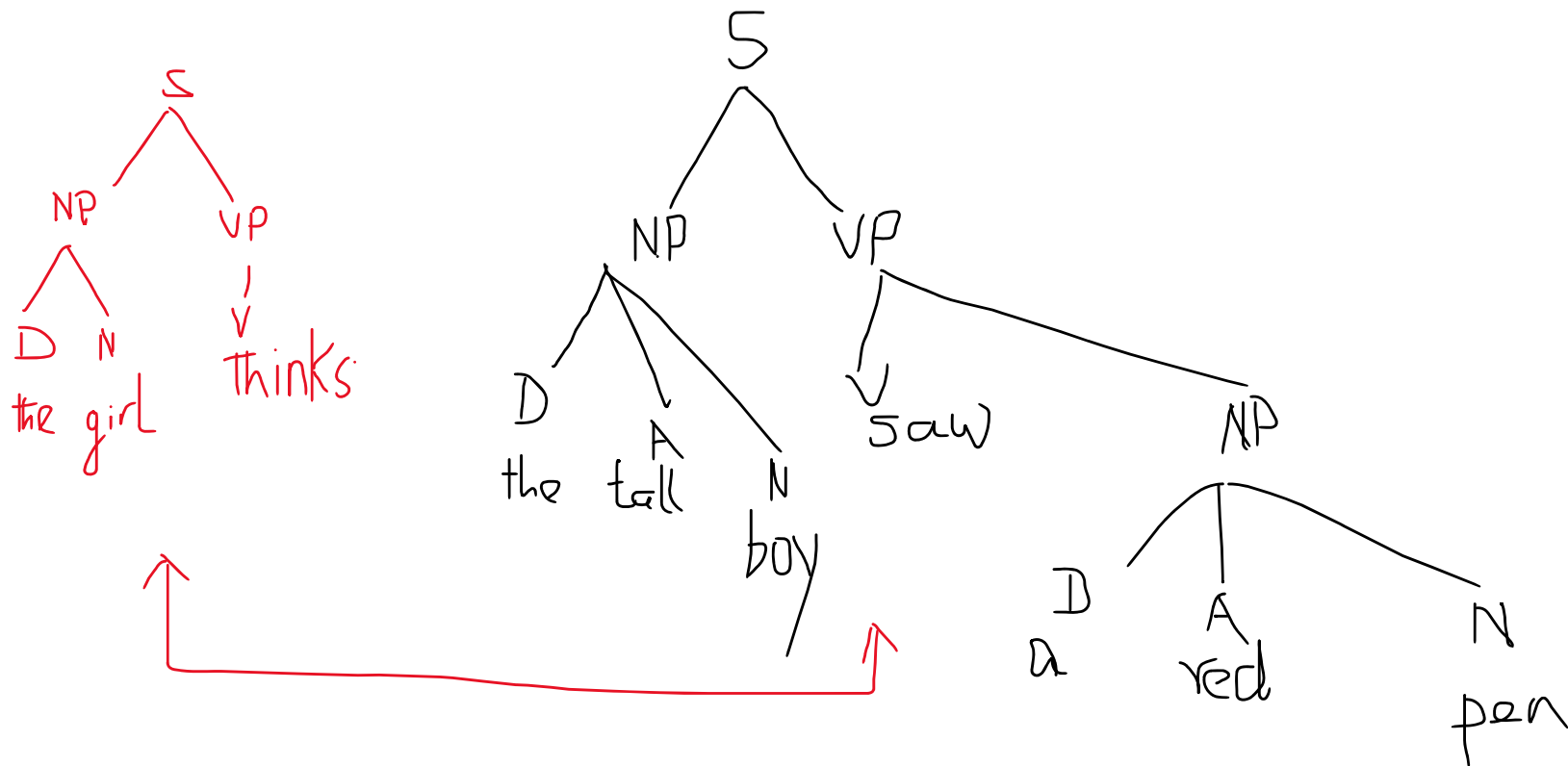
Singularly Transformation:

The girl was given the book by the boy.

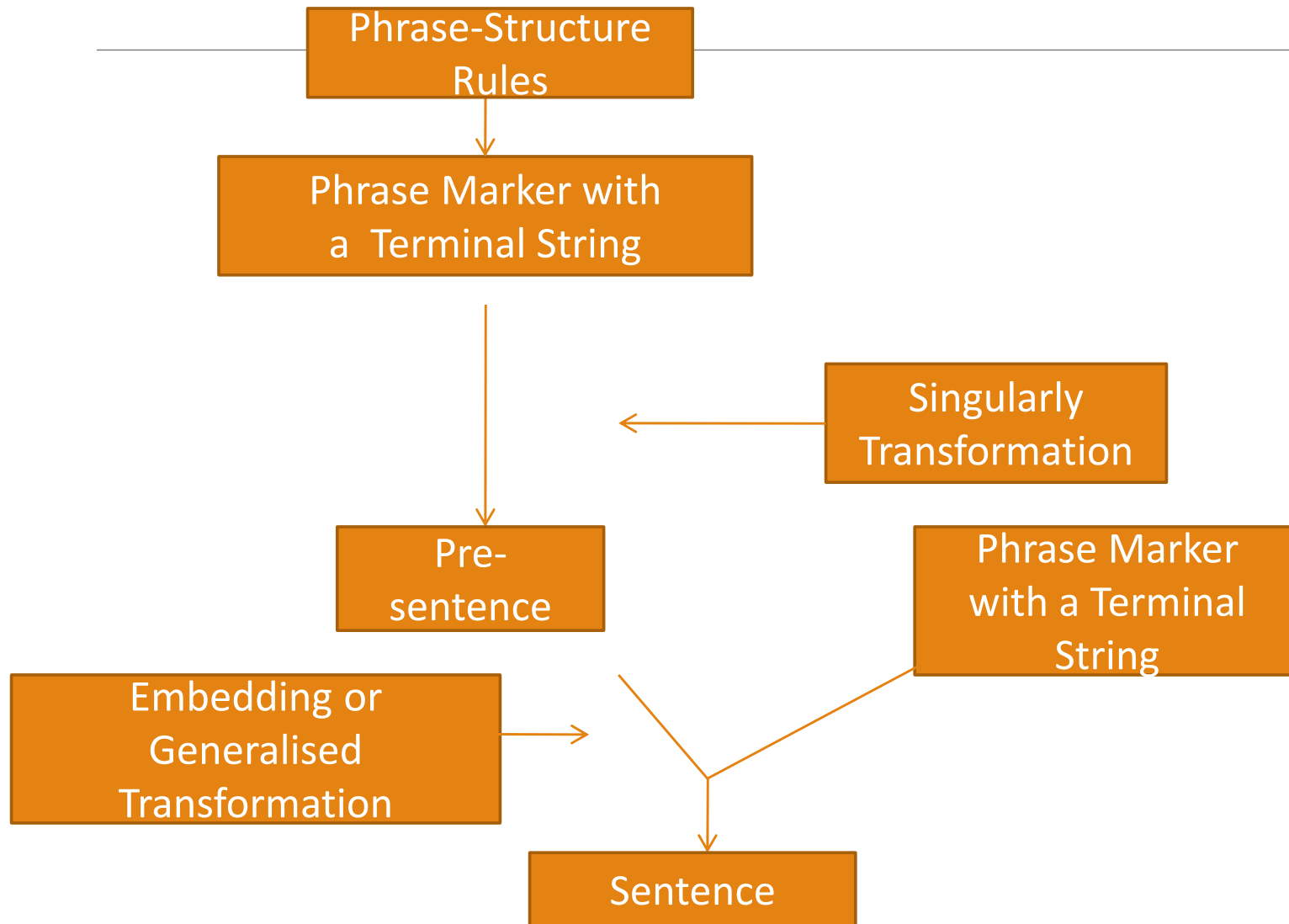


Generalised Transformation:

The girl thinks that the tall boy saw a red pen.



Syntactic Structures: Organisation of Grammar



Evaluation of grammars

Of the several grammars compatible with the data, which ones do we choose and why?

Justification of Grammars:

External condition – the degree of fit with the data

Internal conditions – ‘condition of generality’ and simplicity



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PRINCIPAL FORMULATIONS II

Second Formulation of Generative Grammar

Standard Theory: Aspects of the theory of Syntax (1965)

Methodological commitment: Evaluation of grammars

Observational, descriptive and explanatory adequacies

Epistemological commitment: Language Acquisition Device (LAD) and Universal Grammar

Formal and Substantive Universals

Formal commitment:

Revisiting combinatorial procedures and organisation of grammar

Methodological issues

Evaluation measure: Given competing theories, what criteria choose the best among the available theories?

Recall Syntactic Structures: Justification of Grammars

A) External condition – the degree of fit with the data

B) Internal conditions – ‘condition of generality’ and simplicity

Three levels of adequacy

Standard Theory:

Observational adequacy: Empirical coverage of the actual data

Descriptive adequacy: Coverage of actual as well as possible sentences

Explanatory adequacy: addresses questions of explanation

Conflict between Descriptive and explanatory adequacy – richness and restrictiveness at the same time.

Richness to be in consonance with the known diversity of languages

Restrictiveness so that it can be attributed to the initial state