



# ENG423A: Current Issues in Linguistics

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## GOALS OF LINGUISTIC THEORY II

# Goals of Generative Linguistic Theory

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1. What is knowledge of language?
2. How does knowledge of language arise in the mind?
3. How is knowledge of language put to use?
4. What are the neurobiological correlates of the knowledge of language?
5. How did knowledge of language evolve in the species?

# Language is not optimally designed for use

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## 3. How is knowledge of language put to use?

Linguistic theory is a theory of competence and not a theory of performance.

Language is not optimally designed for use:

- Ambiguity
- Redundancy
- Multiple embeddings
- Underspecification
- Garden Path Sentences

# Design for use

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The argument rests on the assumption that language is decontextualized.

All the instances of ‘imperfections’ cited in the argument cease to be imperfections if language is contextualized as the context would readily fill the gaps.

To Chomsky’s credit, when he spoke of linguistic creativity, he also spoke of another feature of language – Structure Dependency

# Structure Dependency

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Operations/procedures in language are sensitive to certain structural constraints.

These constraints can be stated only in structural terms.

Context of use is irrelevant to this notion of structure dependency

The structural constraints are also invariant across languages – the foundation of a Universal Grammar as a structural notion.

# Structure Dependency

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1. The baby seems to be asleep.
2. The baby seems asleep.
3. The baby seems to be sleeping./\*The baby seems sleeping.

1. Ram saw Sita with her best friend's husband.
2. R saw S and her best friend's husband.
3. Who did R see S with ?/ \* Who did R see S and?

1. I believe that R would marry S.
2. I believe the claim that R would marry S.
3. Who do you believe that R would marry?/ \*Who do you believe the claim that R would marry?

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## Question 4

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Q 4. Neural structures underlying language – neural cells fire in patterns.

What do these patterns reveal about the neurological basis of language and other cognitive abilities.

Linguistic representations and processes in the brain, e.g., the basis of phonological, morphological, syntactic and semantic combinatoriality in the brain.

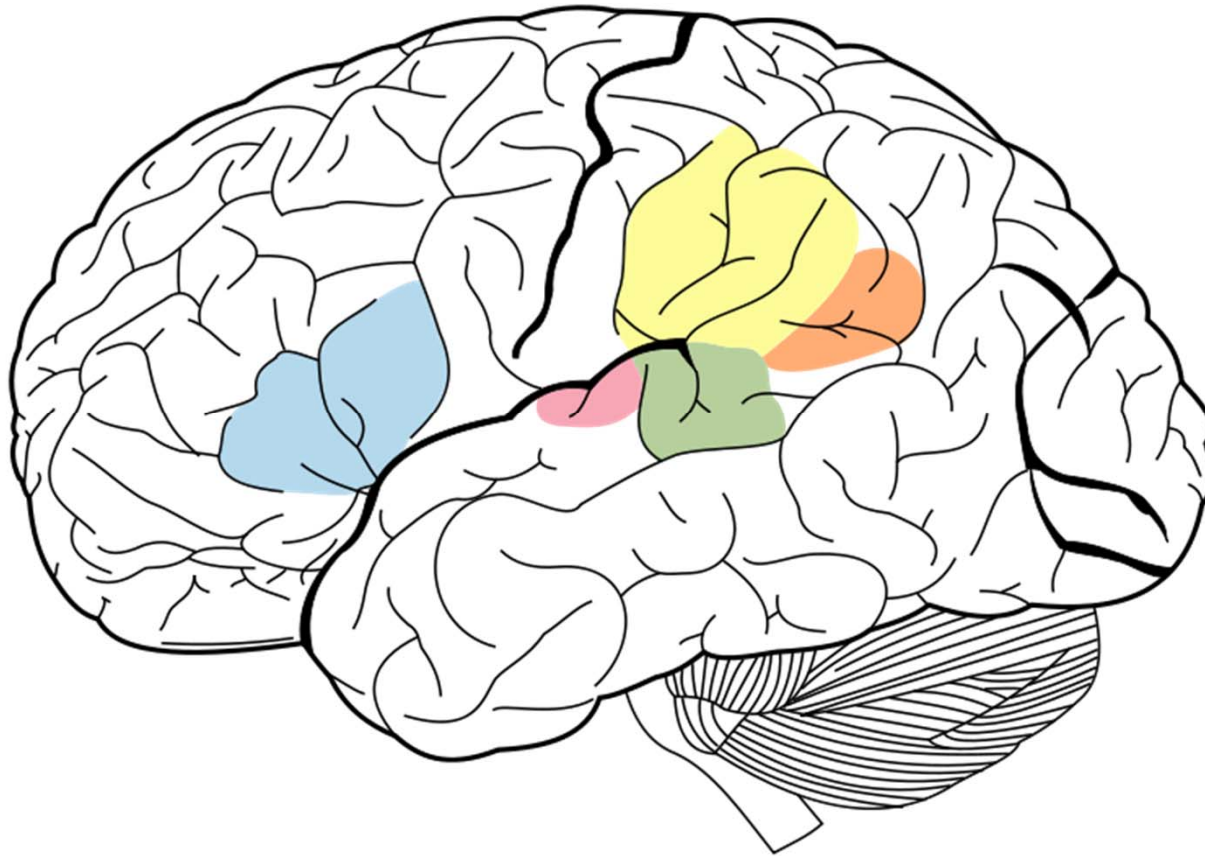
This question has triggered a rich body of research on the neural architecture of language.

A huge leap forward from the classical views on localisation, according to which small parts of the cerebral cortex are devoted to language.



# Localisation in the brain

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# Processing view

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Language is acknowledged to be one of the most complex cognitive functions

To be able to look for the neurological correlates of language, you need to minimally have a set of hypotheses about how language works.

A processing view of brain functions as against a static view of localisation.

Activation of several distinct areas in brain dedicated to different cognitive functions that are implicated in the working of language.

## Question 5

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### 5. How did language evolve in the species?

The received view: Language is an adaptation – an evolutionary mutation that enhanced the possibility of survival for the race.

Chomsky advocates a theory of evolution that argues for a pluralist approach to evolution.

Continuity or discontinuity: A sudden emergence of language

An *exaptation* rather than an adaptation

The notion borrowed from Stephen Gould

# What is Generative Grammar

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The starting point for Gen linguistics:

A reaction to the descriptive linguistic tradition which was very emphatic about the question of what individuates a lg.

Born out of the **discovery** in the 1950s that language is a set of algorithmic procedures – **generating infinite strings through finite means.**

# A Generative Grammar

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A finite set of procedures that generates/produces all and only the grammatical sentences of a language.

All and only the grammatical sentences : An infinite set

- a) A specification of the combinatorial and interpretive rules
  - b) A specification of the way the grammar is organized
- (a) and (b) subserving the twin goals of linguistic theory  
– Q1 (Language Specific Grammar) and Q2 (Universal Grammar)

# Principal formulations

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At least four principal formulations of Generative Grammar in Chomsky

**Syntactic Structures:** Phrase Structure and Transformations  
(1957)

**Standard Theory:** Transformational Grammar (1965)

**Lectures on Government and Binding:** Principles and Parameters  
(1982)

**The Minimalist Program:** Conceptual and Methodological Minimalism  
(1995)

# Assumptions of the theory

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- (i) Natural Language is a class of well-formed *meaning* bearing expressions.
- (ii) There is no upper bound to the length and depth of a NL expression.
- (iii) Sound-Meaning correlation is indirect, and is mediated by syntax.

Common to all the four formulations of Generative Grammar

Syntax – structural relations between elements in the linguistic string

**Supplementary viewing of lectures by Evan Ashworth.**

# Syntactic Structures

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Two aspects of the Generative Grammar:

a) Combinatorial and interpretive rules

b) Organization of Grammar

(a) and (b) subserving the twin goals of linguistic theory –  
Q1 and Q2

Syntactic Structures:

A finite set of procedures that generates all and only the  
grammatical sentences of a language.



# Phrase Structure and Transformations

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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

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S	→	NP VP
VP	→	V (NP) (PP)
PP	→	P NP
NP	→	DET A N
DET	→	a, an, the, many. . .
A	→	good, tall. . .
N	→	boy , girl. . .
V	→	run, eat, put. . .
P	→	to, from, in . . .