ENG423A:
Current Issues in Linguistics

THE MINIMALIST PROGRAM

The Minimalist Program

The Minimalist Program (1995) – the fourth and final formulation of Generative Linguistics

A culmination of nearly forty years of work in the Generativist tradition of linguistics.

Elements of language:

- combinatoriality in terms of sounds, morphemes, words, phrases, and sentences
- Compositionality in terms of meaning
- Discontinuity of linguistic expressions

Assumptions of the Generativist theory

(i) Natural Language: a class of well-formed expressions bearing meaning.

(ii) Recursion: No upper bound to the length and depth of a linguistic expression.

(iii) Indirectness of Sound-Meaning correlation: mediation by syntax.

Common to all the four formulations of GG

Syntactic Structures

(i) All and only the sentences of language

(ii) PS Rules and transformations

(iii) Recursion through generalized/ embedding transformations

(vi) Autonomous syntax: No semantic component

Model:

- Phrase structure rules (with lexical items as the terminal nodes), and
- Transformations, singularly and generalized /embedding

Evaluation measure:

- A condition of generality on grammars
- Simplicity

Standard Theory

(i) How the formal model of grammar can be viewed as a theory of acquisition - Language Acquisition Device or Universal Grammar (the “what” and “how” questions)

(ii) Recursion through phrase structure rules and subcategorization

(iii) Lexicon and lexical insertion

(iv) Deep Structure mapped to Surface Structure through Transformations

(v) Projection rules generating a Semantic Representation from the Deep Structure

LGB: Principles and Parameters

(i) Human knowledge of language and how this knowledge is represented in the mind

(ii) A descriptively adequate theory of language constraining the class of possible languages

(iii) Known differences between languages to be accounted for through universal principles with open parameters

(iv)Human knowledge of language and how this knowledge arises in the mind

(v) An explanatory theory which is compatible with the known facts of language acquisition:

- Inevitability, uniqueness, uniformity, speed of acquisition, Poverty of Stimulus (the logical problem of LA)

(vi) A theory of language acquisition as well as language typology

Beyond Principles and Parameters

A two-pronged reflection on the epistemological problem of language acquisition:

i) Much, or even most, of the knowledge is present prior to any experience.

ii) The knowledge system is much simpler than it superficially appears.

(ii) above forms the basis for much of the Minimalist theorizing.

The Minimalist Program

A cognitive-biological account of the Faculty of Language

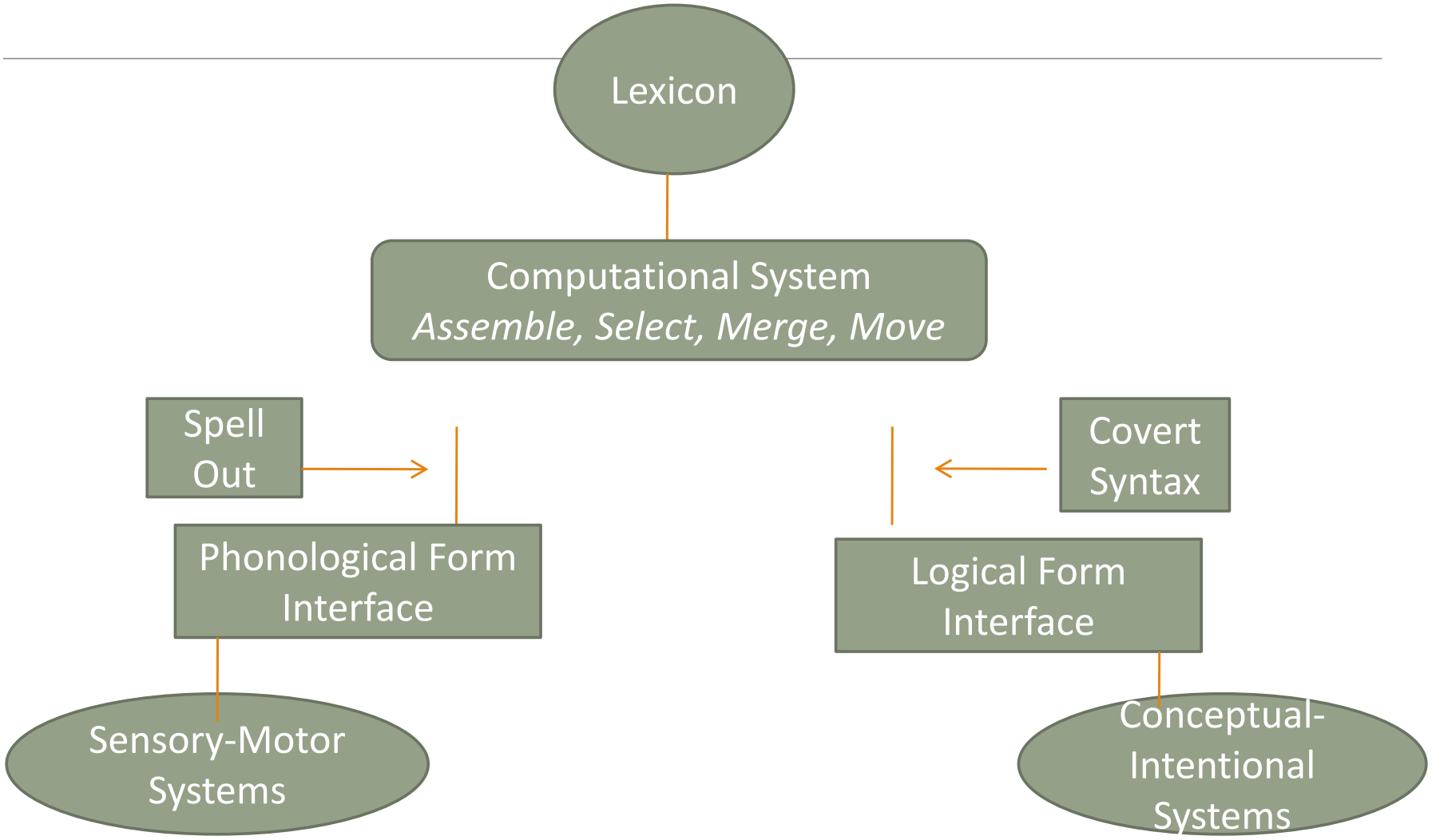
To be claimed to *arise* (evolutionarily) such that it provides an optimal fit with other cognitive systems in which it is embedded.

A theory of the architecture of language such that it works in consonance with other cognitive systems.

Addresses the question of how language evolved in the species

A modular theory of language faculty which is consistent with a biologically informed theory of language evolution

Minimalism: Form of Grammar



Computational System

Operations:

Assemble: assemble arrays of features

Select: select lexical heads

Merge: Structure-building whereby two syntactic objects are combined to form a new syntactic unit. Merge is a recursive operation.

Move: Movements of elements

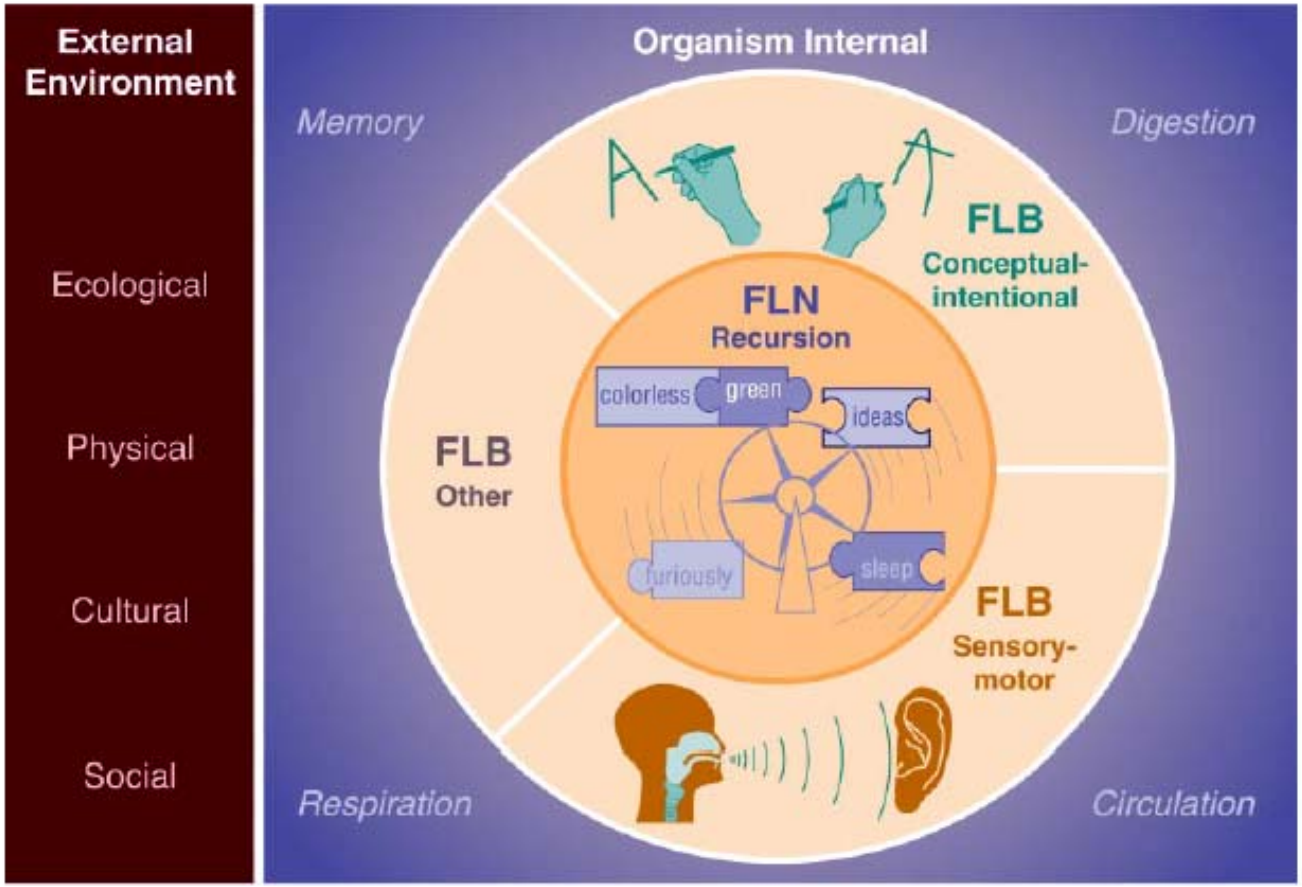
Spell Out: phonological properties are accessed at the interface

Covert Syntax: non-phonological properties or semantic properties are accessed at the relevant interface.

The Narrow Syntax

Faculty of Language

Hauser, Chomsky and Fitch, 2002



Evaluation Metric

The Minimalist explanation has two aspects:

Conceptual minimalism as against methodological minimalism of a formal model of language

Conceptual necessity: Internal and external conditions;

Internal conditions: conditions internal to language faculty

External conditions: some notion of necessity imposed by the cognitive-biological architecture

Argument from conceptual necessity as against the methodological necessity.

Methodological and Substantive (Conceptual) Minimalism: An extract

Q. What stimulated the emergence of minimalist intuitions? Was this related to the systematic success, within the Principles and Parameters approach and also before, of the research strategy consisting in **eliminating redundancies, making the principles progressively more abstract and general, searching for symmetries, etc.?**

Belleti and Rizzi interview of Chomsky in Language and Nature, 2002

Chomsky's Answer

"Actually all of these factors were relevant in the emergence of a principles and parameters approach. . . a framework that accelerated the search for redundancies that should be eliminated and provided a sort of a new platform from which to proceed…

There had already been efforts, of course, to reduce the complexity, eliminate redundancies and so on. This goes back very far**, it's a methodological commitment which anyone tries to do and it accelerated with the principles and parameters (P&P) framework**…

Contd…

. . .However, there was also something different. . . .

Can we make our theories better, can we eliminate redundancies, can we show that the principles are more general than we thought, develop more explanatory theories?

But also:

Is it possible that the system of language itself has a kind of an optimal design. . .

Contd…

…There is a kind of family similarity between the **methodologically-driven effort to improve the theories and the substantively-driven effort to determine whether the object itself has a certain optimal design**….

So there's really two separate questions, similar but separate.

One is: let's make our theories as good as we can whatever the object is.

And the other question is: **is there some sense in which the device is optimal? Is it the best possible solution to some set of conditions that it must satisfy?**

Contd.

…These are somewhat different questions and there was a shift from the first question, which is always appropriate (**let's construct the best theory**), to the second question: **does the thing that we are studying have a certain kind of optimal character?**

That wasn't clear at the time: most of these things become clear in retrospect. Maybe in doing research you only understand what you were doing LATER…first you do it and later, if you are lucky, you understand what you were trying to do and these questions become sort of clarified through time…"

Summing up

Methodological Minimalism: Is our theory of the object optimal?

Conceptual or Substantive Minimalism: Is the object itself optimal?

Answer to the first question: a general, redundancy-free system

Answer to the second question: a system which is designed in such a way as to meet the requirements of the external systems that are using it.

Faculty of Language

Hauser, Chomsky and Fitch, 2002