ENG423A:
Current Issues in Linguistics

EXTERNALIST LANGUAGE DESIGN

Externalist Language Design

Conceptual Semantics (Ray Jackedoff, 1990; 2002)

Augmentation of grammar to include the conceptual structure

First steps towards articulating a theory of Faculty of Language that does away with the distinction between *linguistic lexicon* and *conceptual lexicon* (ontology)

Semantics equated with the conceptual component

Conceptual component as procedural rather than interpretive

Ray Jackendoff, 2002: Foundations of Language

Goal of Conceptual Semantics

To investigate "…how linguistic utterances are related to human cognition, where cognition is a human capacity that is to a considerable degree independent of language, interacting with the perceptual and action systems as well as language."

The lexical meaning and the conceptual representation of the referent are integrated into "lexical concepts".

Conceptual Semantics is thus claimed to be not just a linguistic theory, but a theory on human cognition.

What is conceptual structure?

Conceptual structure is not a part of language per se – it is a part of thought.

It is the locus for the understanding of linguistic utterances in context, **incorporating pragmatic considerations and "encyclopedic knowledge"**.

It is the cognitive structure in terms of which meaning making and reasoning take place.

A grammar of sentential concepts

1) Lexical concepts cannot consist of a set of instances but must consist of a finite set that can be augmented or expanded in a rule-governed way in view of novel experiential inputs.

2) Sentential concepts cannot be listed but must be generated on the basis of a finite set of primitives and principles of combination.

3) At least two kinds of procedures in the conceptual space:

   a) categorization yielding lexical concepts, and augmenting the existing lexical concepts

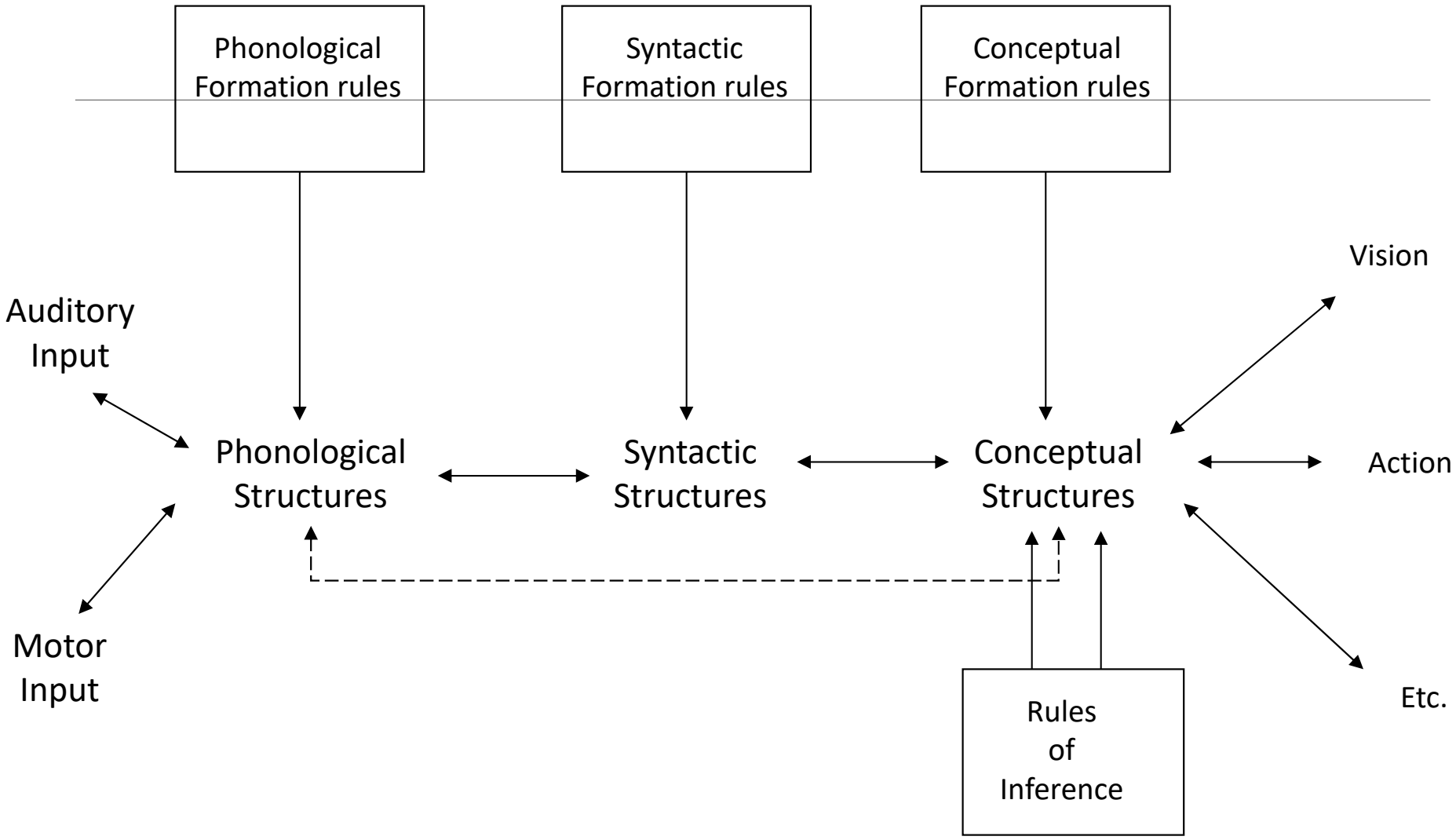
   b) composition of sentential concepts from lexical concepts

Problem of concept acquisition

The logical problem of language acquisition extended to concept acquisition

An argument from the logical problem of concept acquisition in both lexical and sentential domains to posit an innate conceptual structure.

A theory of acquisition and development of conceptual structure


Phonological Formation rules
Syntactic Formation rules
Conceptual Formation rules
Vision
Auditory Input
Phonological Structures
Syntactic Structures
Conceptual Structures
Action
Motor Input
Rules of Inference
Etc.

Elements of conceptual structure

1) **Categories:**

   Universal semantic categories: Event, State, Thing, Path, Place, Property

2) **Function-Argument organization:**

   The conceptual category Place can be elaborated as a Place-Function plus an argument belonging to the category Place.

   [PLACE] ⟶ [$_{\text{Place}}$ PLACE-FUNCTION ([THING])]

   (under the table)

Elements of conceptual structure

[PATH] → [$_{Path}$ PATH-FUNCTION ([THING/PLACE])]

(to the house/from under the table)

[EVENT] → [$_{Event}$ EVENT-FUNCTION ([THING], [PATH])]

(Ram went to Bombay)

[STATE] → [$_{State}$ STATE-FUNCTION ([THING], [PLACE])]

(The cat is on the mat.)

[STATE] → [$_{State}$ STATE-FUNCTION ([THING], PATH)]

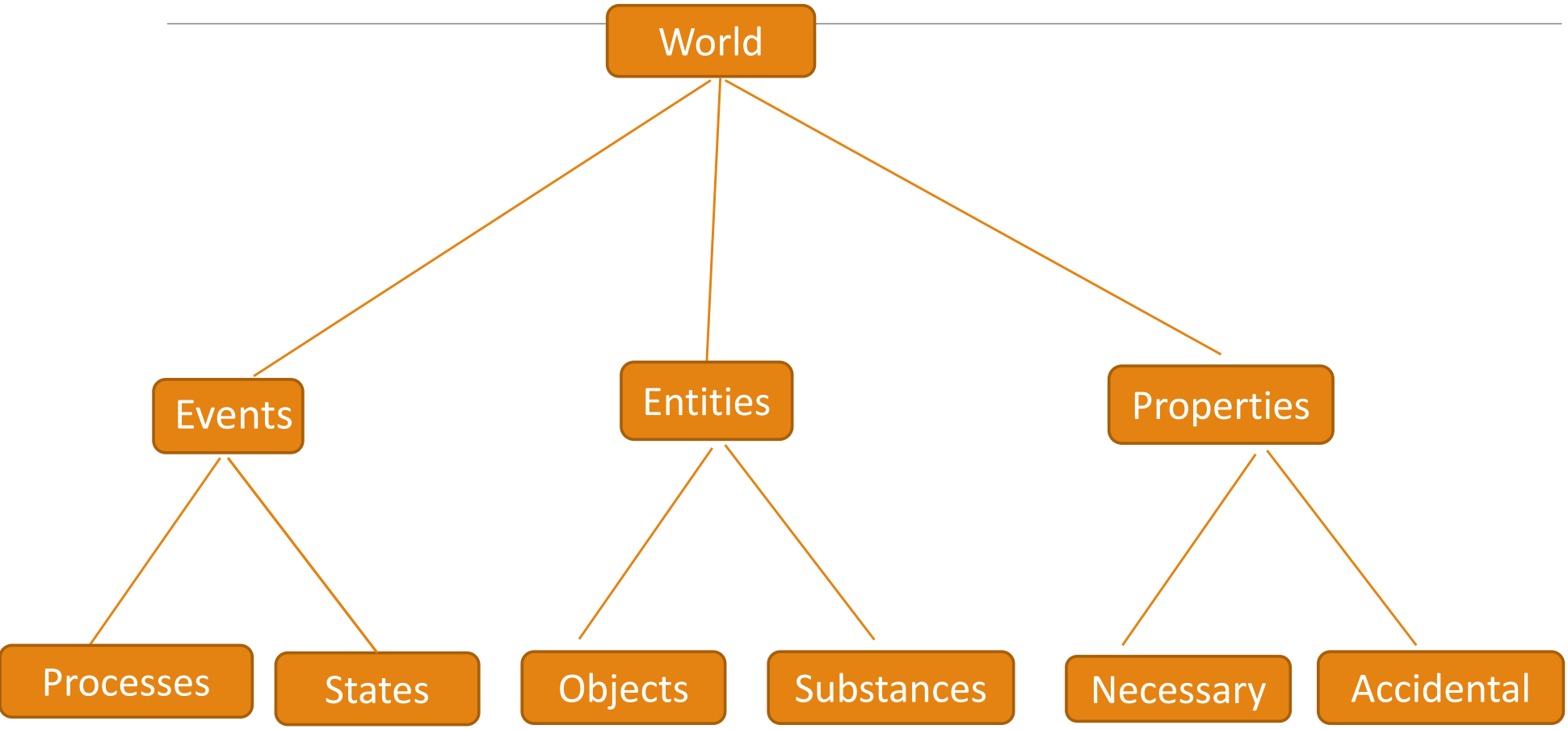
(The sign points to the school.)

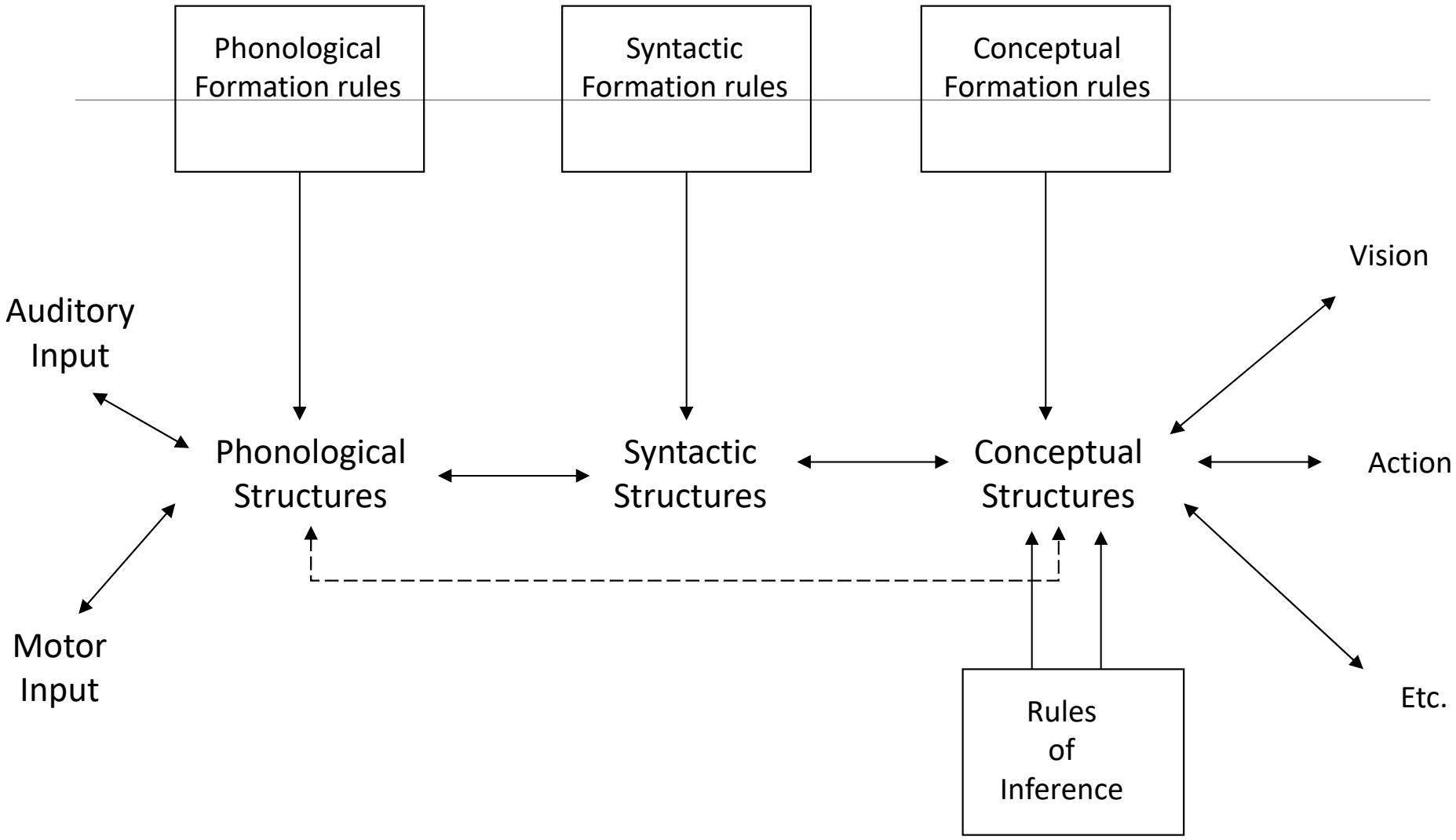
PATH-FUNCTIONS: TO, FROM, TOWARD etc.

EVENT-FUNCTIONS: GO, STAY, CAUSE etc.

STATE-FUNCTIONS: BE, ORIENT etc.

Ontology


World
Events
Entities
Properties
Processes
States
Objects
Substances
Necessary
Accidental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Conceptual Decomposition

Conceptual decomposition in terms of ontological primes and principles of combination

- Ontological primes: THING, EVENT, STATE, PLACE, PATH, PROPERTY etc.
- Predication: An ontology of events and states such as BE, ORIENT, GO, STAY,, CAUSE, TO, FROM, PATH etc.
- Conceptual compositionality

Lexical and sentential conceptual structure:

Regular correspondences with syntactic and phonological structures

Similarly syntactic compositionality parallels conceptual compositionality

Parallel architecture

Syntactic Structure:

$[_S[_{NP}$ Ram$]$ $[_{VP}$ ran $[_{PP}$ into $[_{NP}$ the room$]]]]$

Conceptual Structure:

$[_{Event}$ GO$([_{Thing}$ RAM, $[_{Path}$ TO $([_{Place}$ IN $([_{Thing}$ ROOM$])])])])]$

The verb *run* corresponds to the Event-function GO.

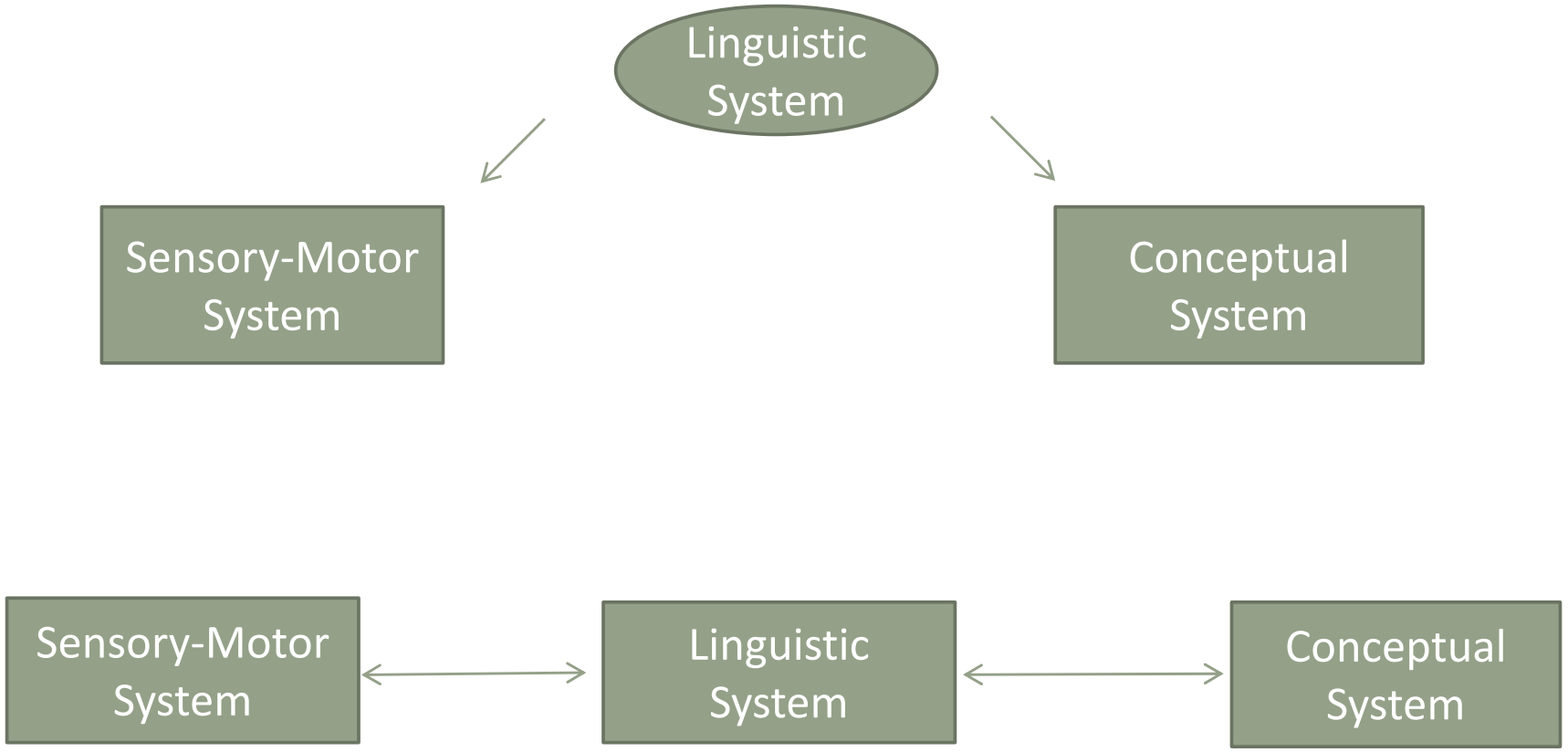
The subject NP is the THING argument of GO

The PP is the second argument of GO which is itself a composite of the Path-function TO and its argument PLACE.

The PLACE decomposes into the Place-function IN and a THING argument.

A parallel rather than derivational architecture and correspondences between the modules.

Three coarse-grained characterizations of language faculty



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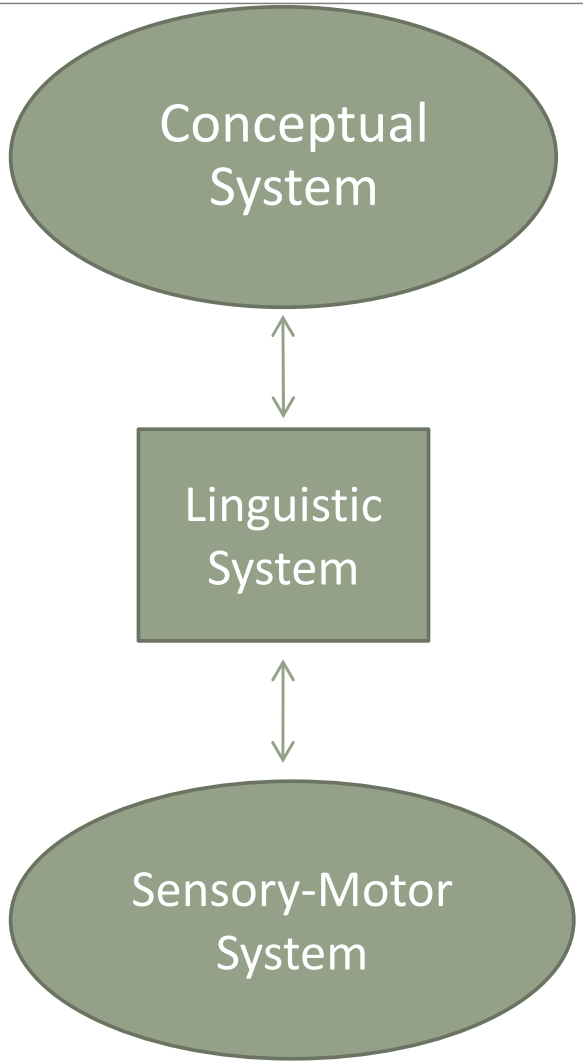

Cognitive Linguistics

In everything that the human mind does, it is in the process of making sense of the world around

The mind is making meanings.

Some of these meaning making processes are mediated by language.

Linguistic theory is a theory of meaning making mediated by language.

Cognitive Linguistics

Cognitive Linguistics is an attempt to explore the intersection between the linguistic and conceptual systems that subserve linguistically mediated meaning making processes.

According to Cognitive Linguists, Linguistic theory is the theory of linguistically mediated meaning making.

Cognitive Linguistics not a single theory of language but a cluster of broadly compatible approaches which see language as embedded in the human cognitive capacities.

Cognitive Linguistics

Linguistic theory as a theory of conceptual architecture underlying language

Representational and mapping issues

- Conceptual architecture
- Linguistic architecture
- Mappings across the two

Language production and understanding embedded in the context of use

A re-contextualisation of linguistic theory

Language: a window to the mind

Language reflects patterns of thought.

Therefore, to study language from this perspective is to study patterns of **conceptualization.**

Language offers a window into cognitive function, providing insights into the nature, structure and organization of thoughts.

An important way in which cognitive linguistics differs from other familiar approaches to the study of language:

Language is assumed to reflect certain fundamental properties and design features of the human mind.

What is *cognitive* about Cognitive Linguistics?

In what sense exactly is Cognitive Linguistics a *cognitive* approach to the study of language?

Terminologically, we need to make a distinction between **Cognitive Linguistics** and (uncapitalized) **cognitive linguistics** comprising all those approaches in which natural language is studied as a cognitive potential rather than a phenomenon out there.

Cognitive Linguistics is one form of cognitive linguistics, to be distinguished from others.

Generative Grammar and many forms of linguistic research in the field of Computational Linguistics and Artificial Intelligence [e.g, HPSG, LFG, TAG, Ontological Semantics], Conceptual Semantics and there are many.

An interesting question

How is it that Cognitive Linguistics and Generative Grammar both proclaim themselves to be cognitive enterprises?

Essentially, the two approaches differ with regard to the *epistemological role* of natural language.

Both approaches agree - and this is their shared cognitive parentage - that there can be no knowledge without the existence of mental representations mediating in the epistemological relationship between subject of knowing and its object.

An interesting question

The semiotic triad of **world-knowledge-mind** as against **world-word-mind**]

Reconceptualising the notion of *cognition* – Cognition in general as against linguistic cognition

Cognitive Linguistics is interested in our **knowledge of the world** and studies the question of how natural language contributes to it.

The generative linguist, conversely, is interested in our **knowledge of language** and asks the question how such knowledge can be acquired given a cognitive theory of knowledge acquisition.

Knowledge *of* and knowledge *through*

As cognitive enterprises, Cognitive Linguistics and Generative Grammar are both interested in mental structures that constitute knowledge.

For the Cognitive Linguistics approach, the relevant kind of knowledge is knowledge of the world, and language comprises the mental structures that constitute such knowledge.

For the generative grammarian, however, the knowledge under consideration is knowledge of language, and the relevant mental structures are constituted by the genetic endowment that enables human beings to learn language.

Generative Grammar is interested in knowledge ***of*** language.

Cognitive Linguistics is interested in knowledge ***through*** language.

CgL vs. GG

CgL has a specific working hypothesis about natural language - that much more in natural language can be explained on semantic and functional grounds than has been assumed.

CgL: an adequate description of the formal phenomena at the core of generative theory involve semantic factors that go beyond the limits of the generative framework.

For example: recursion in language is a reflex of recursion in the conceptual system.

CgL vs. GG

If it turns out that a particular phenomenon involves cognitive functioning rather than formal syntax, the motivation for positing genetically given linguistic constraints on possible grammars is weakened.

The constraints on possible grammars could be of a more general nature than dedicated to language (as Universal Grammar is).

Similarly, the notion of a possible grammar could be defined differently.

Language acquisition

Cognitive Linguistics would have to develop an amodular (as against modular) theory of language acquisition with the following assumptions:

1) language acquisition involves mechanisms and constraints that are not specific to natural language, and

2) If there do exist constraints on learning that are restricted to language acquisition, these will draw on general ‘‘cognitive processing mechanisms’’ in the cognitive systems other than the linguistic.

   Whether these predictions are borne out or not is a matter of empirical investigations.

What constitutes conceptual knowledge subserving language?

- Linguistic and conceptual representations and their mappings

How does conceptual knowledge arise in the mind?

- Perceptual grounding and abstraction leading to categorization, no steady states

How is conceptual knowledge put to use?

- Usage embedded conceptual and linguistic representations and the mappings between the two

What are the neurobiological correlates of this knowledge?

- Distributed cerebral anatomy rather than localization

How did it evolve in the species?

- An evolutionary adaptation

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CgL assumptions about language

1. Meaning is primary to syntax, and determines it: S*emanticised grammar*
2. Meaning is conceptualisation: *Cognitive semantics*
3. Semantic/cognitive structures are perceptually grounded: *Grounded semantics/cognition*
4. Semantics/cognition is embodied: *Experiential embodiment*
5. Meaning is image-schematic: *Modality-independent operations*
6. Meaning is perspectival: *construal effects and perspective*
7. Meaning shows prototype effects: *Dynamic semantics*

The assumptions

1)The primacy of semantics in linguistic analysis: if the primary function of language is categorization, of which linguistic categorization is only a subset, then meaning making must be the primary linguistic phenomenon.

2) If language is a system for the categorization of the world, there is no need to postulate a structural level of linguistic meaning that is different from the level where the mind interacts with linguistic forms.

3) Meaning is grounded in perceptual experience. Conceptualization is an abstraction based on perceptual experience and resulting in categorization.

Experientialism and embodiment

4) The experientialist position of Cognitive Linguistics vis-a-vis human knowledge emphasizes the view that the human cognitive potential is determined by our organic embodiment and by our individual and collective experiences.

Meaning is grounded in terms of choosing from a finite number of semantically autonomous source domains coming from our biological capacities – all meaning comes from things we do with our bodies. (spatial metaphor for love, fictive motion)

Universals of conceptual structure and conceptual content are to be defined in terms of experiential grounding and embodiment.

Image-schematic meanings

5) Meaning is image schematic rather than propositional.

Image-schemas are cross-modality patterns of meaning-making.

Both conceptual structure and conceptual content are abstracted in terms of pre-linguistic schemas which cut across cognitive domains.

Spatial cognition of *on*: book on the table, picture on the wall, water on the floor, fly on the roof, ring on the finger, movie on the TV etc – progressive schematisation of a spatial relation. Constructional schemas

Linguistic expressions are construction-schematic.

Construal and perspective

6) The perspectival nature of linguistic meaning implies that the world is not objectively reflected in language.

The categorization function of language imposes a structure on the world rather than just mirroring objective reality.

Relativism as against universalism

Prototypicality

7) Categorization is not by criterial features but by prototyping.

Concepts (or meanings) are regions rather than categories

- Women, fire and dangerous things

Family resemblances: Members bear similarities without having properties in common that define a category

Centrality: Some members as better exemplars than others

Membership gradience: At least some categories have degrees of membership and no clear boundaries.

Eleanor Rosch's work

A recontextualisation

Decontextualization appears to be a fundamental underlying characteristic of the development of grammatical theory in twentieth century.

Cognitive Linguistics stands for a *recontextualizing* tendency.

Context of utterance is of importance, and so are the cognitive processes at work in defining the epistemic landscape of a linguistic expression.

Why decontextualisation?

a. With the basic dichotomy of competence and performance, the study of language is focused on internalized knowledge of language divorced from the usage context (language *not designed for use*).

b. To examine the invariant core of language structure, linguistic analysis is delinked from the context which is likely to throw up individual variation.

c. With the focus on formal rule systems, linguistics turns away form the cognitive context at work in meaning making in language.

Cognitive Linguistics rejects all three.

a) Usage-embedded language design – re-establishes the link between competence and performance.

b) The invariant core is conceptual rather than linguistic – universals are stated in terms of conceptual operations.

c) Operations are schematic rather than linguistic rule-based – schematic operations which invoke construal and perspective.

What CgL studies

1. Structural characteristics of linguistic categorization: language imposes categorisation on experience.

a) Prototypicality

b) Logical Polysemy

c) Bifurcation of conceptual structure and conceptual content

d) Lexical and constructional schemas,

e) Embodiment and metaphorical transference

What CgL studies

2.Interface between syntax and semantics (as explored by Cognitive Grammar and Construction Grammar) – semantics is conceptualisation.

3. The experiential and pragmatic background of language-in-use – language is usage embedded.

4. Relationship between language and thought, including questions about linguistic relativism and conceptual universalism – universals are conceptual rather than linguistic (a question that could not be posed in GG).

Approaches in CgL

Two broad approaches

- Cognitive Semantics: Grammar of conceptualisation underlying meaning making through language
- Cognitive Grammar: Cognitive underpinnings of grammatical constructs
- The schism reflects the age long dissociation between grammar and meaning in linguistic theory.
- Integrating the two approaches is a goal worth pursuing.

From Evans and Green, 2006

Two key assumptions

1) **Generalisation across components**

2) **Generalisation across modalities**

These two assumptions underlie the approach adopted by cognitive linguists, and the methodologies employed.

1) Theoretical constructs generalise over linguistic components of phonology, morphology, syntax and so on.

2) Theoretical constructs posited for language generalise to cognitive modalities other than language.

   Both of the assumptions boil down to one – need for cross-component and cross-modality generalisations.

A third assumption

Embodied cognition

At the heart of much research within cognitive linguistics

The human mind and conceptual organisation is a function of the ways in which our species-specific bodies interact with the environment we inhabit.

The assumption gives CgL an **empiricist** philosophical orientation.