

*Lecture notes by Edward Loper*

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## 0.1 projection

lexical items How big is a lexical item?

## 0.2 representation / generation

Syntax generates the argument structure. Argument structure of what? A clause or phrase.. How big are these units?

## 0.3 Issues

- locality
- listedness

Where do external/internal arguments come from?

# 1 Argument Structure

The structural or syntactic realization of certain semantic relations. Why do we care about agent/patient/etc instead of topic/focus/etc?

1. In the domain of nonfunctional heads.
2. Ideosyncrasy of interpretation.

Locality and domain give distinction between these categorizations..

There are signs: arbitrary relations between sound & meaning.. some element of the meaning of the sign is associated with the semantic argument structure..

## 1.1 Subcategorization

### Aspects

Start with structures generated by rules like:  $VP \rightarrow V (NP) (NP) PP^* (S)$  and then filter it with "subcategories" like: Smash:  $V [ NP]$  (not really filter? I'm confused.. begin sick sucks.. :)

Note that the expansion rule tells you the possible argument structures..

### GB

Now subcat features filter via projection principle and theta criterion. Moves the argument structure to the lexicon..

### Moving back towards Aspects

Hale & Keyser

Possible argument structures are given by the syntax.

do you memorize trees? Ug.. I feel awful.

## 1.2 etc.

What has argument structures? Verbs or verb phrases? Chomsky suggests in "Derivation by phase" (00) that v defines a phase. Phase is the minimal unit sent out for phonological or semantic interpretation. So.. words are phases.

## 2 Theories of Argument Structure

### 2.1 Pure Classificatory Theory

Almost a pure allosyntactic theory of argument structure. Each alternation is a distinct feature. We could classify all verbs by their alternations.

Problem: the ability of a verb to undergo an alternation is somehow related to the meaning of the verb. Also, no theory of possible argument structures.

### 2.2 Theta Grid Theory

Parsons, Larson..

Meaning of verb = list of thematic roles? A thematic role = a relation between an event and an individual.

Theta hierarchy: makes some claim about the relation between the ordering of roles and the structural hierarchy of those roles..

UTAH: uniform thematic assignment hypothesis – the same thematic roles will be realized in the same ways in the same language..

Agent could either be a relation btwn an event & individual: agent(run, John) or a position in a relation: CAUSE(agent, ...)

### 2.3 Decompositional Mapping

Jackendoff.. There are mapping generalizations about the relation between syntax & decompositions...

### 3 Overview

Evidence for theories of argument structure:

- Alternations
- Constraints on possible argument structures
- Interface (interpretation)

Approaches:

- Pure Classification
- Thematic Grids
- Decompositional
- Pure Syntactic (seems promising)

### 4 Thema Grid Theory

Argument structure is a list of thematic roles, like agent, theme, goal. These roles are unique: can't have two agents. Why are they unique? Also, there are no distinctions made between the theta roles (except perhaps a hierarchy). All theta roles have the same status..

#### 4.1 Larson

Verb has a theta grid. As it goes up the tree, it assigns roles in the order of some theta hierarchy. Out of the lexicon we get things with theta roles, and we have to decide how to put them.. Use some sort of noun passivisation when things are in the other order..

### 5 Decomposition

Jackendoff. Decompose a verb to primitive predicates. Thematic roles are positions in the decomposed predicates. Link via some sort of argument frame. We can supposedly derive many properties of the syntax of a word by looking at its decomposition into predicates.. But doesn't predict everything..

### 6 Pure Syntactic Theory

#### 6.1 Aspect

- Aspectual categories: state, activity, achievement, accomplishment, etc.
- Perfectivity, imperfectivity, etc..

#### 6.2 Primitive Predicates

Outer aspect, involved with notions like source Inner aspect, involved with notions like goal, completedness These aspect heads are responsible for subj, obj??

## 7 External Arguments

The term is Williams'(?): The external argument of a category X is the argument of X that stands outside the maximal projection of X.

- In LFG, it's theta-hat.
- Relational Grammar: initial 1.

Burzio: If you have an external object, you can assign accusative; if not, you can't. Accusative → license an object..

If you can get a direct object, then you have an external object(?).

Derived arguments vs. nonderived.

Resultatives go with objects.. I broke the glass *apart* . The glass broke <t> apart.

c.f. \*John laughed silly, John laughed himself silly. The glass broke apart, \*the glass broke itself apart.

Try this: As far as verbs are concerned, the subject is optional.. Hard to see in clauses, because of the EPP. But in nominalizations, "the destruction of the city" or "John's destruction of the city.." But in "John's destruction took 3 hours," John must be object, not subject..

The verb can't put any restrictions on the case or the prep or anything else of the subject, but it can put restrictions on its arguments.

Asymmetry between internal and external arguments..

- Compositionality
- Idioms