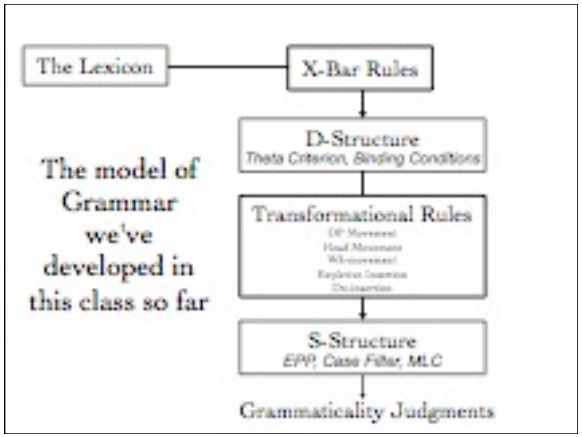
A Unified Theory of Movement



The model of Grammar we've developed in this class so far

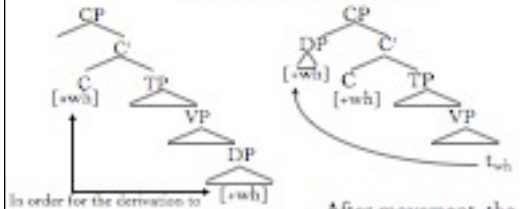
Evaluating the grammar

- Observational?
  - Partly, it certainly accounts for much of the data you might run across in a corpus (although not all).
- Descriptive?
  - Partly, it does account for many grammaticality judgments (although not all)
- Explanatory?
  - Since much of the grammar is innate, and the rest is parameterized, yes.

But could it be simpler?

Unifying the three types of movement

Wh-features



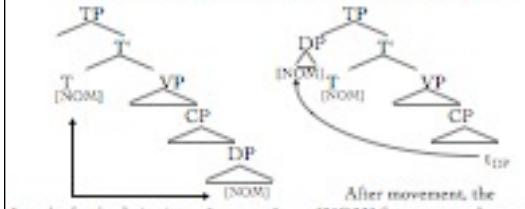
In order for the derivation to "converge", the two [+wh] features must 'check' against each other. But in order to do so they must be local. Here there are too far apart.

Before movement

After movement, the [wh] features are close to one another, so can they can check

After movement

[NOM] Case-features



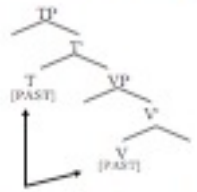
In order for the derivation to "converge", the two [NOM] features must 'check' against each other. But in order to do so they must be local. Here there are too far apart.

Before movement

After movement, the [NOM] features are close to one another, so can they can check

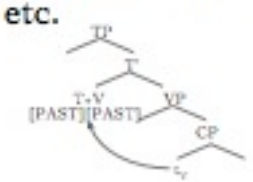
After movement

Tense-features, [Q] features etc.



In order for the derivation to "converge", the two [Past] features must "check" against each other. But in order to do so they must be local. Here there are too far apart.

Before movement



After movement, the [PAST] features are close to one another, so can they can check

After movement

Local Configuration

- *Principle of Full Interpretation*: Features must be checked in a local configuration
- Local Configuration
  - [ACC] features: Head/Complement configuration
  - [PAST], etc., [Q] features: Head-head configuration
  - [WH]: Specifier/Head configuration.

Move

- With this in place we can simplify our movement rules down to one rule:
- Move: Move stuff around.
- This is filtered by FI: movement happens only to get features close to one another.

Merge

- There is an equivalent single rule that replaces the three X-bar rules. This is MERGE. We're not going to spend any time on this rule. But roughly it's "stick stuff together" and then it is filtered by FI. The X-bar rules can be viewed as constraints that hold over the output.

Explaining Cross Linguistic Variation

Giving a more uniform explanation to cross-linguistic variation

- How do we account for the fact that English lowers its T and French raises its V etc.?
- To answer this question we need to take a little detour into semantics:

Two kinds of Quantifiers

- Universal Quantifier (∀): Every, All,
- Existential Quantifier (∃): Some, A, One
- Notice that the following sentence is ambiguous
  - Everyone ate an apple.
    - Meaning 1: Each person ate their own apple
    - Meaning 2: There was a single apple that everyone had a piece of.

Two kinds of Quantifiers

- Everyone ate an apple.
  - Meaning 1: Each person ate their own apple
    - For every person x, there is some apple y, such that x ate y:
      - ∀x(∃y[x ate y]) (Universal quantifier has "wide scope")
  - Meaning 2: There was a single apple that everyone had a piece of.
    - For some apple y, and every person x ate y.
      - ∃x(∀y[x ate y]) (Universal quantifier has "narrow scope")

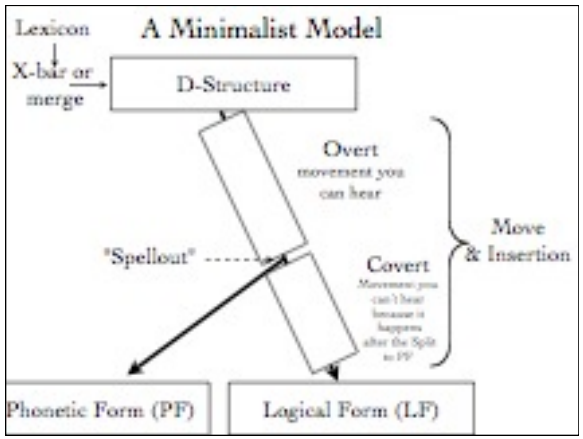
Let's translate into syntax: With wide scope the universal quantifier c-commands the existential quantifier, with narrow scope the c-command relationships are reversed.

Ambiguity

- Remember: Ambiguity is supposed to be structural -- appear in the tree.
- How do we get the narrow scope reading, where *some* c-commands *every*?
- Movement:
  - An apple$_i$ everyone ate t_i
- But hold on a minute! This is the wrong order for the sentence.
- Uhm, maybe there is a kind of movement you can't hear? This is called COVERT movement.

Saussurian Signs

- Every Linguistic expression consists of two linked parts: a signifier (sound) and a signified (meaning). Let's built on that concept and assume that there are really two parts to every sentence:
  - A Phonetic Form (PF) (signifier)
  - A Logical Form (LF) (signified)
- We call these "interface levels" because they are the interface between the syntax and the phonology/semantics.



Covert Quantifier Movement

$[_{CP}$ $[_{TP}$ Everyone ate an apple]] "Spellout" (and PF)

Covert Movement

$[_{CP}$ an apple$_i$ $[_{TP}$ Everyone ate t_i]] LF

The cross-linguistic claim

- All languages have exactly the **same** movements. (i.e. English has verb raising).
- BUT languages vary in whether the movement is overt or covert. This is encoded in parameters.

Head Movement

FRENCH Head Movement Overt	ENGLISH Head Movement Covert (main verbs)	
Je $T_{[pres]}$ souvent mange$_{[pres]}$ des pommes	I $T_{[pres]}$ often eat$_{[pres]}$ apples	
Overt Move		
Je $T_{[pres]}$-mange$_{[pres]}$ souvent t_i des pommes	I $T_{[pres]}$ often eat$_{[pres]}$ apples	SC
	Covert Move	
Je $T_{[pres]}$-mange$_{[pres]}$ souvent t_i des pommes	I $T_{[pres]}$-eat$_{[pres]}$ often t_i apples	LF

Wh-movement in Chinese

a) Ni kanjian-le shei?
You saw who
"Who did you see?"

b) *Shei ni kanjian-le *t*?
Who you saw
"Who did you see?"

Wh-movement

ENGLISH — Overt Wh-movement

$[_{CP}\ C_{[...wh]}\ [_{TP}$ You did see what$_{[...wh]}]]$

Overt Move

$[_{CP}$ what$_i$ did+$C_{[...wh]}\ [_{TP}$ You t_v see $t_i]]$

$[_{CP}$ what$_i$ did+$C_{[...wh]}\ [_{TP}$ You t_v see $t_i]]$

CHINESE — Covert Wh-movement

$[_{CP}\ C_{[...wh]}\ [_{TP}$ Ni kanjian-le shei$_{[...wh]}]]$

S
O

$[_{CP}\ C_{[...wh]}\ [_{TP}$ Ni kanjian-le shei$_{[...wh]}]]$

Covert Move

L
F

$[_{CP}$ Shei $C_{[...wh]}\ [_{TP}$ Ni kanjian-le $t_i]]$

DP-movement

Assumption VP-internal Subjects

FRENCH — Overt DP movement

$[_{TP}\ T_{[pres]}\ [_{VP}$ il mange$_{[pres]}$ des pommes$]]$

Overt Move

il $T_{[pres]}$+mange$_{[pres]}\ [_{VP}\ t_{VP}\ t_v$ des pommes$]$

il $T_{[pres]}$+mange$_{[pres]}\ [_{VP}\ t_{VP}\ t_v$ des pommes$]$

IRISH — Covert DP movement

$[_{TP}\ T_{[pres]}\ [_{VP}$ sé itheann$_{[pres]}$ úll$]]$

$T_{[pres]}$+Itheann $[_{VP}$ sé t_v úll $]$

SC

Covert Move

Sé $T_{[pres]}$+Itheann $[_{VP}\ t_{VP}\ t_v$ úll $]$

LF

Is there any further evidence for covert movement?

- Note there are two kinds of wh-in-situ
  - English Echo Questions
  - Japanese/Chinese Wh-questions
- The latter kind involve movement, the first kind do not.
- Movement should trigger MLC effects -- you shouldn't be able to escape out of a wh-island.

MLC violations in Japanese

*Nani-o doko-de katta ka obeete-iru no?

What-acc where-at bought Q remember Q

"What do you remember where we bought?"

Summary

- Simplified Theory of movement:
  - 1 rule (move)
  - 1 principle (FI)
  - Move to get local
- Cross-linguistic variation is accounted for using timing. All movement types are universal, but whether that movement is overt or covert (silent) is parameterized