LNGT 0250
Morphology and Syntax

Announcements
• Proposals received and returned.

• Midterm scores:
  - Average: 55.5/60.
  - Median: 57/60.

• Any quick questions on Assignment #5.

Transition from last class
• We made progress. Our theory of phrase structure is now simpler and more symmetrical across different categories (both lexical and functional).

Grammatical diversity in English
• Aspects of English syntactic variation with data from the Yale Grammatical Diversity Project.

• A news report about the project

Things a syntax student should not do

Phrase structure under X'-Theory
**X'-Theory**

- No phrases with optional heads. Heads are obligatory.
- All branching is binary. Why is this good?
- The ‘flatness’ of the earlier rules is gone, which allows us to capture constituency relations better (*one*-replacement and *do-so*-substitution).

**Complements vs. Adjuncts**

- As it turns out, X'-Theory also accounts for another intriguing empirical fact about sentence structure: the difference in behavior between complements and adjuncts.
- We discuss this with regard to NPs and VPs.

**Not all PPs are created equal**

- Let’s ignore the DP-hypothesis for the moment. It doesn’t really matter here.
  \[
  [\text{NP} [\text{D the}] [\text{N student} [\text{AdjP of linguistics}] [\text{PP of linguistics}] ]
  \]
- The two NPs above, at least on the surface, seem to have identical structure: [D N PP]. However, as we consider further data, we notice differences in syntactic behavior between the PP ‘of linguistics’ and the PP ‘from Phoenix.’

**Formal Definitions**

- **Specifier:** Daughter of XP, sister to X'
- **Adjunct:** Daughter of X’, sister to X’
- **Complement:** Daughter of X’, sister to X

**The student of linguistics**

**The student from Phoenix**
Complements always closest to head

The student [of linguistics] [from Phoenix]

head complement adjunct

*The student [from Phoenix] [of linguistics]

head adjunct complement

since complements are sisters to the head

Only one complement, multiple adjuncts

X' \rightarrow (ZP) X' or X' \rightarrow X' (ZP) \text{ Iterative}

X' \rightarrow X (WP) \text{ Not iterative}

the student of linguistics with the red hair from Phoenix in the bath

*the student of linguistics of chemistry from Phoenix

Adjuncts can be reordered

The student of linguistics from Phoenix with red hair in the library
The student with red hair of linguistics in the library

The student from Phoenix with red hair of linguistics

The student from Phoenix with red hair in the library with red hair

*The student from Phoenix of linguistics with red hair in the library

*The student from Phoenix with red hair of linguistics in the library

*The student from Phoenix with red hair in the library of linguistics

(etc.)

Conjunction

The conjunction rule: X'' \rightarrow X'' \text{ Conj} X''

The red and blue house \text{ *The red and cat}

Complements can be conjoined with complements:

The student of linguistics and of philosophy

Adjuncts can be conjoined with adjuncts

The student with red hair and with a tattoo

Complements cannot be conjoined with adjuncts

*The student of linguistics and with red hair

One-replacement

One Replacement: replace N' with one.

The student from Phoenix not the one from Tucson

*The student of linguistics not the one of chemistry

For those of you who find the last sentence grammatical, your rule targets both N and N' and this test won't work for you to distinguish adjuncts from complements.
### Telling complements from adjuncts

<table>
<thead>
<tr>
<th>Complements</th>
<th>Adjuncts</th>
</tr>
</thead>
<tbody>
<tr>
<td>only 1</td>
<td>multiple allowed</td>
</tr>
<tr>
<td>closest to head</td>
<td>may be separated from head</td>
</tr>
<tr>
<td>cannot be reordered</td>
<td>can be reordered</td>
</tr>
<tr>
<td>conjoin with complements</td>
<td>conjoin with adjuncts</td>
</tr>
</tbody>
</table>

*one*+complement | [one]+adjunct

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### The complement/adjunct distinction in VPs

- John \([_{VP\, often\, eats\, apples\, with\, a\, fork}]\)
  - adjunct head complement adjunct

- In VPs, the direct object is always the complement. (Almost) everything else is an adjunct. (Exception to that rule: the verbs give and put take two complements an NP and a PP.)
  - I gave the apple to John.
  - I put the book on the table.

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### I loved the policeman intensely with all my heart

$V' \rightarrow (W) X'$

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### Summary of X'-Theory

- Every phrase must have a head (X).
- A head may have a specifier, a complement, and any number of adjuncts.
- **Specifier:** sister to $X'$, daughter of XP
  - Specifier Rule: $XP \rightarrow (YP) X'$
- **Adjunct:** sister to $X'$, daughter of $X'$
  - Adjunct Rule: $X' \rightarrow (ZP) X'$ or $X' \rightarrow X' (ZP)$
- **Complement:** sister to X, daughter of X'
  - Complement Rule: $X' \rightarrow X (WP)$
Next class agenda
• Cross-linguistic variation in word order. Finish reading Chapters 9 and 10.

Acknowledgement
• Several of the slides for this lecture are borrowed from Andrew Carnie’s slides.