Organisational

- You hopefully just submitted Assignment 2
- Thursday: Feedback on Assignment 2
- Today: Questions about Assignment 3?
- Today: Constituency Tests and Exercise 5.9.2
- Today: Clause types

Reading:
- For assignment 3: Make sure you have fully read Chapter 12 J&M (Constituency grammars)
- For assignment 4, you will need to read Chapter 15.1-15.3
- You read section 6 today
- Sometime before Mid-Nov: Read Chapter 16.1-16.4 (Semantics)
- **DO** Logic worksheet on paper (not just read through)
From J and M, chapter 12.3.3
Noun compounds; branching
Constituency Tests: Substitution

• use “proform” (eg “do so” stands in for a VP; eg. “that” stands in for an NP)

• If substitution is felicitious, then phrase is a constituent (of same category as the proform).
  • I don’t want a second-hand fedora that seven people have owned before me
  • I don’t want that
  • I don’t want to accused her of having indirectly tortured animals
  • I don’t want to do so
Constituency Tests: Movement

- Constituents can be moved around in the sentence.
  - The old man has come to dinner
  - Has the old man come to dinner?
  - *The has old man come to dinner
Constituency Tests: Insertion

- Appositions are parentheticals.
- They cannot be inserted into constituents, only at the end of constituents.
  - *The President of America, Ronald Reagan, is over 70.*
  - *The President, Ronald Reagan, of America is over 70.*
  - *The President of America is, Ronald Reagan, over 70.*
Constituency Tests: Omissibility

(only suitable for some constituent types)

- Some constituents can be omitted
- Non-constituents cannot be omitted
  - *Some friends of the old man came to dinner.
  - *Some friends came to dinner.
  - *Some friends man came to dinner.
Constituency Tests: Coordination

- Constituents of the same type can be coordinated
  - Kim and Sandy kissed each other
  - The old man and his young nephew came to dinner
  - The old men and women came to dinner
  - Kim and Sandy divorced and remarried each other
  - Kim kissed Sandy and remarried her
  - That rather old and very unreliable car belongs to Kim
  - Kim washed up and Sandy watched the TV

(Well-known exceptions!)
Problems for Coordination Test

- Kim is a conservative and proud of it
- Kim became a conservative and arrogant
- Kim enjoys chess and watching football
- Kim gave Sandy a pen and Fido a bone
- “To hell with them and be dammed”, he said
Exercise 5.9.2

- Why is it “S → NP VP”?
- Why not “S → (NP V) NP”?
- Why not “S → NP V NP”?

Build a distributional argument using these sentences:

- Passionately Kim kissed Sandy
- Kim passionately kissed Sandy
- Kim kissed Sandy passionately
- *Kim kissed passionately Sandy
- Kim kissed Sandy and Robin did so too
- Kiss Sandy!
Intransitive verb

a. Kim smiled

```
S[decl]
  /    |
NP    VP
  /    |
N[name] V[intrans]
  /    |
Kim smiled
```
Transitive verb

b. Kim kissed Sandy

S[decl]
  NP
    N[name] Kim
  VP
    V[trans] kissed
    NP
      N[name] Sandy
Ditransitive verb 1

c  Kim gave Sandy Fido

S[decl]
  NP
    N[name]  V[ditrans]  NP
      Kim       gave       NP
      N[name]  N[name]
        Sandy  Fido
Ditransitive verb 2

d  Kim gave Fido to Sandy

S[decl]

NP

<table>
<thead>
<tr>
<th>N[name]</th>
<th>V[ditrans]</th>
<th>NP</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kim</td>
<td>gave</td>
<td>Fido</td>
<td>to Sandy</td>
</tr>
</tbody>
</table>
Types of Clauses

- subordinate clauses [finite, -ing, infinitive]
  - *I can’t believe that he tweeted that*
  - *I don’t like fishing in polluted rivers*
  - *I made him do the dishes*

- WH-clauses
  - *I asked who was at the party*

- relative clauses [object/subject, reduced non-restrictive/restrictive]
  - *the man who filmed her was fellini*
  - *the man who she filmed was fellini*
  - *the paper presented here will address…*
  - *the director filming in studio 2 is tarantino*
  - *the Iranian runners who reached the goal within 2 hours were tired*
  - *the Iranian runners, who reached the goal within 2 hours, were tired*
From J and M, chapter 12.3.3
Subject Control verb

\[ e \text{ Kim wanted to smile} \]

\[
\begin{array}{c}
S[\text{decl}] \\
\downarrow \\
NP \\
\downarrow \\
N[\text{name}] \quad V[\text{infin}] \\
\quad \downarrow \\
\text{Kim} \quad \text{wanted} \\
\quad \downarrow \\
\end{array}
\]

\[
\begin{array}{c}
\downarrow \\
Aux \quad VP \\
\downarrow \\
\text{to} \quad V[\text{intrans}] \\
\downarrow \\
\text{smile}
\end{array}
\]
Control vs. Raising Verbs

- Control: Subject or object is semantically an argument of the verb
  - *Kim tried to enjoy the party* [subject control]
  - *Kim persuaded Lee to go to Paris* [object control]
- Raising: Subject or object is semantically not an argument of the verb
  - *Kim seemed to enjoy the party.* [subject raising]
  - *Kim expects Lee to have gone to Paris.* [object raising]
Context-free grammar from J&M, chapter 12

\[
\begin{align*}
S & \rightarrow NP \ VP \\
NP & \rightarrow \text{Pronoun} \mid \text{Proper-Noun} \mid \text{Det Nominal} \\
\text{Nominal} & \rightarrow \text{Nominal Noun} \mid \text{Noun} \\
\text{VP} & \rightarrow \text{Verb} \mid \text{Verb NP} \mid \text{Verb PP} \mid \text{Verb NP PP} \mid \text{Verb S} \\
\text{PP} & \rightarrow \text{Preposition NP} \\
\text{Det} & \rightarrow \text{NP 's} \\
\text{Nominal} & \rightarrow \text{Nominal PP} \\
\text{Nominal} & \rightarrow \text{Nominal GerundVP} \\
\text{Nominal} & \rightarrow \text{Nominal RelClause} \\
\text{RelClause} & \rightarrow (\text{who} \mid \text{that}) \ VP
\end{align*}
\]
Coordination

NP → NP and NP
Nominal → Nominal and Nominal
VP → VP and VP
S → S and S
X → X and X
Non-declarative sentences

\[ S \rightarrow VP \]
\[ S \rightarrow Aux \ NP \ VP \]
\[ S \rightarrow Wh-NP \ VP \]
\[ S \rightarrow Wh-NP \ Aux \ NP \ VP \]
The lexicon

Det → a | the | an | this | these | that
Verb → is | prefer | like | need | want | fly
Noun → flight | breeze | trip
Pronoun → me | I | you | it
Proper-Noun → Alaska | Baltimore | Los Angeles | Chicago | United
Preposition → from | to | on | near
Conjunction → and | or | but
A context-free grammar (L90)

Rules:

- $S \rightarrow NP \ VP$
- $VP \rightarrow VP \ PP$
- $VP \rightarrow V$
- $VP \rightarrow V \ NP$
- $VP \rightarrow V \ VP$
- $NP \rightarrow NP \ PP$
- $PP \rightarrow P \ NP$

Lexicon:

- $V \rightarrow can$
- $V \rightarrow fish$
- $NP \rightarrow fish$
- $NP \rightarrow they$
- $NP \rightarrow rivers$
- $NP \rightarrow pools$
- $NP \rightarrow December$
- $NP \rightarrow Scotland$
- $NP \rightarrow it$
- $P \rightarrow in$
Exercise

• Critique L90 grammar
• Which rules go against linguistic intuitions?