Announcements

• **Assignment #6** is posted and is due Fri April 24 at 2pm.

• Next week’s presentations order: 3 on Monday, 4 on Wed.

Summary

• X'-Theory generates phrase structures in human language.

• The theory faces two challenges, however: It overgenerates and it undergenerates.

• To prevent overgeneration, we needed to constrain the theory with filters on its output (e.g., Theta Theory and Binding Theory).

• To prevent undergeneration, we needed to enrich the theory with a new kind of rule: **transformations** (mainly movement rules such as V to T and T to C).

Summary

• Cross-linguistic variation is the result of parameters that distinguish between different types of languages:
  - Head-initial languages (English, Edo) vs. head-final languages (Japanese/Turkish).
  - High-subject languages (English/French) vs. low-subject languages (Welsh/Irish).
  - Verb-raising languages (French/German) vs. T-lowering languages (English).
  - V2 languages (German/Dutch/Scandinavian) vs. non-V2 languages (English/French).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>English</th>
<th>Japanese</th>
<th>French</th>
<th>German</th>
<th>Welsh</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD parameter</td>
<td>Head-initial</td>
<td>Head-final</td>
<td>Head-initial</td>
<td>?</td>
<td>Head-initial</td>
</tr>
<tr>
<td>Subject placement parameter</td>
<td>Specifier of TP</td>
<td>Specifier of TP</td>
<td>Specifier of TP</td>
<td>Specifier of TP</td>
<td>Specifier of VP</td>
</tr>
<tr>
<td>Verb movement parameter</td>
<td>T down to V</td>
<td>?</td>
<td>V up to T</td>
<td>V up to T</td>
<td>V up to T</td>
</tr>
<tr>
<td>V2 parameter</td>
<td>No</td>
<td>?</td>
<td>No</td>
<td>Yes</td>
<td>?</td>
</tr>
</tbody>
</table>
Let’s do VOS!

- English:
  The woman washed the clothes.

- Malagasy (Austronesian)
  manasa ni lamba ny vihavvy
  wash the clothes the woman
  “The woman is washing the clothes.”

- Suggest a parameter to get this difference in word order accounted for.
- Draw a tree for the Malagasy sentence in light of your parameter.

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OVS(OSV) languages

- OVS(OSV) languages are not that well understood, but there are definitely ways to derive their word order. I’ll leave it to you as an exercise to think of ways for how these word orders can be derived. Or maybe they’ll show up on some homework.

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The syntax of questions

- Questions are of two types:
  - Yes-no questions
  - Wh-questions (i.e., questions starting with words such as who, what, which, etc., in English).

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English yes-no questions

- Sentences with modal verbs simply undergo T to C[+Q] movement to form a yes-no question:
  Will you join us for dinner?
  Can you move this table please?

- Sentences with auxiliary have and be undergo both V to T and T to C movements:
  Is she studying in the library still?
  Has he visited his parents recently?
English yes-no questions

- In sentences with multiple verbal elements, the closest one to C is the one that gets fronted (a locality condition):
  - Will he have graduated in May?
  - *Have he will graduated in May?

  Has he been investigated by the CIA?
  - *Been he have investigated by the CIA?

Questions in Irish

- Irish:
  - An bhfaca tú an madra?
  - Q see.past you the dog
  - ‘Did you see the dog?’

Yes-no questions in French

- Parlez vous français?
  - Speak.2pl you.pl French
  - ‘Do you speak French?’

  Avez vous mange des pommes?
  - Have you.2pl eaten the apples
  - ‘Have you eaten the apples.’

  *Mangé vous avez des pommes? ①

The syntax of wh-questions

- Languages differ in the way they form wh-questions.

  - English-type languages always front wh-words to the beginning of the sentence:
    - a. Who did you see?
    - b. *Did you see who? (bad on a non-echo reading)

Variation in wh-questions

- Japanese, however, does not front its wh-words. Rather, these words stay in their position in the sentence. They stay “in situ”:
  - John-ga dare-o butta ka?
  - John-su who-08 hit Q-marker
  - “Who did John hit?”

- **Egyptian Arabic**
  - ?inta juft miin?
  - you see who
  - “Who did you see?”

The wh-parameter

- This is another instance of parameterization: “In some languages wh-words move to the front of the sentence (English); in others wh-words stay “in situ” (Japanese).”

- Let’s call this the **wh-parameter**.
Derivation of wh-questions

What have you seen ti? (where ti stands for trace)

subject aux inversion:
means Aux is in C

Wh-word precedes C – hence it is in specifier of CP

Why do we think traces exist?

• There is evidence that even though they are phonologically null, traces are syntactically present.

• A famous example is that of wanna contraction in English.

Wanna contraction in wh-questions

• I want to kiss the kitten.
  I wanna kiss the kitten. [want + to] \(\rightarrow\) wanna

• Who do you want to kiss?
  Who do you wanna kiss? 😊

• Who do you want to kiss the kitten?
  *Who do you wanna kiss the kitten? 😊

Partial wh-fronting

• Some languages allow partial wh-fronting. In English, partial wh-fronting is prohibited:
  Who do you think that Mary saw _?
  *Do you think who that Mary saw _?

• In Malay, however, partial wh-fronting is perfectly acceptable, leading to a medial wh-phrase in the structure (Cole and Hermon 2000):
  Kamu fikir ke mana Mary pergi _?
  you think to where Mary go
  ‘Where do you think that Mary went?’

Wanna contraction in wh-questions

Who do you want to kiss ti?

*Who do you wanna to kiss the kitten?

Wh-doubling

• Similar partial wh-fronting effects have been observed in both Hungarian and a dialect of German, except that in these languages two wh-words appear, one medially and one in front. This is sometimes called wh-doubling.

• Hungarian (Horvath, 1997)
  Mit gondolz hogy kivel beszelt Mari?
  who think that who-with talk Mari
  ‘With whom do you think that Mari talked?’
Wh-doubling

- **German** (McDaniels, 1989)
  
  Was glaubst du mit wem Maria jetzt spricht?
  
  What believe you with whom Maria now talks
  
  ‘With whom do you think Maria is now talking?’

Typology of question-formation (rather simplified)

- **Question-formation**
  
  Wh-fronting × Wh-in-situ
  
  Partial fronting ok No partial fronting
  
  Wh-doubling ok No wh-doubling
  
  German/Hungarian Malay*

English-learning children produce wh-doubling questions

- Interestingly, children learning English have been observed to produce doubling wh-questions of the German and Hungarian type:
  
  What do you think what’s in the box?
  
  What do you think where the marble is?
  
  What do you think what Cookie Monster eats?

But it gets interesting

- Medial wh-words are not permitted if the embedded clause is an infinitival:
  
  a. *Was versucht wen Hans anzurufen?*
     
     *Who try who Hans call*
  
  b. Wen versucht Hans anzurufen?
     
     *Who try Hans call*
     
     “Whom is Hans trying to call?”

- Interestingly, English-learning children do not repeat wh-phrases in medial position if the complement is an infinitival. “Who do you want who to win?” is unattested in their speech, even upon elicitation.

Next class agenda

- More on wh-movement: Islands.