Announcements

- HW3 is now posted. It is due on Wednesday Oct 28 by 8pm via e-mail or in class if you’re submitting a hard copy.

Can you pronounce this word?
- Llanfairpwllgwyngyllgogerychwyrndrobwllllantysiliogogogoch

Presentation for Monday

- How many languages are there?
  - [http://www.linguisticsociety.org/content/how-many-languages-are-there-world](http://www.linguisticsociety.org/content/how-many-languages-are-there-world)

Italian dialects map

- [https://upload.wikimedia.org/wikipedia/commons/1/16/Languages_spoken_in_Italy.svg](https://upload.wikimedia.org/wikipedia/commons/1/16/Languages_spoken_in_Italy.svg)

Episode 2 of Language Matters: ‘Web Language’


- [http://www.nytimes.com/2012/05/06/technology/creating-a-language-for-the-web.html?_r=3&ref=todayspaper&](http://www.nytimes.com/2012/05/06/technology/creating-a-language-for-the-web.html?_r=3&ref=todayspaper&)

LNGT0101
Introduction to Linguistics

Lecture #11
Oct 21st, 2015
Summary of syntax so far

- Sentences have ‘structure’.
- The main unit of structure is the constituent.
- Constituents are phrases.
- Phrases follow the X’-schema.
- Phrase structure rules tell us the internal structure of constituents.

Phrase structure rules can also account for recursiveness and ambiguity of sentence structure.
- They can also explain to us regular variation in word order.
- Languages choose from two options of a parameter: head-initial vs. head-final.
- The result is massive diversity on the surface, even though the difference is very simple at the core.

John said that Mary read the book.

How do we explain other word orders in human languages?

- VSO
- VOS
- OVS
- OSV

- All curiosities lead to here → LNGT 0250
Today’s agenda

• Accounting for sentence relatedness in human language syntax: Introducing transformations.

• How does UG work exactly? Introducing principles and parameters.

Sentence relatedness

• As we said before, some sentences are intuitively “felt” to be related, e.g.,
  a. Your friend can play the piano.
  b. Can your friend play the piano?

• To capture the relatedness between the two sentences, we rely on a new kind of rule: a transformation.

Transformational rules

• A transformational rule is a syntactic operation that takes one structure (called D-structure) as input and operates on it producing a modified syntactic structure (called S-structure) as output.

• D-structures are derived by phrase structure rules, whereas S-structures are derived through the application of transformational rules.

So, the tree for the question ‘Can your friend play the piano?’ starts as this D-structure: Your friend can play the piano

(Note: [Q] indicates this sentence is interrogative. After all, we do not want to say that both sentences are identical. They obviously are not.)

Evidence for Aux-to-C movement

• But why do we actually think that there is Aux-to-C movement in English yes-no questions?

• Well, consider:
  He asked if your friend could play the piano.
  *He asked if could your friend play the piano.
Deriving wh-questions

- Ok, let’s try another kind of question, the so-called **wh-questions**, e.g.,
  
  *What will your friend play?*

- Since “what” is interpreted as the object of “play,” we assume that this is where it starts at D-structure:
  
  *your friend will play what*

We apply PSRs to derive this D-structure:

```
 CP
  C0    AuxP
       NP    Aux'
           Det    N    Aux    VP
                  V    NP
                         |    N
                              what
```

Where do wh-phrases end up?

- To get the desired surface structure, we need to move the wh-phrase “what” to the front of the sentence.
- The question now is: Where does the wh-phrase move to?
- There is a restriction, however. It’s called **structure perseveration**: Phrases can move only to specifier positions, and heads can only move to head positions.

Syntax: The grammar model

Phrase structure grammar (X’-theory)

\[ \downarrow \]

D-structure

\[ \downarrow \]

Transformations (primarily Movement)

\[ \downarrow \]

S-structure
How do languages differ in the syntax of wh-questions?

- Some front their wh-words; and some don’t.
- That’s another parameter. Let’s call it the **wh-parameter**.

A parameter for question-formation

- Some languages like English form a question by fronting the wh-word:
  
  What did you see _?

- These are typically referred to as **wh-fronting** languages.

A parameter for question-formation

- In other languages like Japanese, Chinese, and Egyptian Arabic, the wh-word appears where other nouns normally appear:

  **Japanese**
  
  John-ga dare-o butta ka?
  
  John-Subj who-Obj hit Q-particle
  
  “Who did John hit?”

  **Egyptian Arabic**
  
  Ḫinta juft miin?
  
  you saw who
  
  “Who did you see?”

- This type is called **wh-in-situ** languages.

Universal Grammar: Principles and Parameters

- **Universal Grammar** (UG) includes two components: **principles** and **parameters**.

- The principles are invariant; they hold in all languages.

- Parameters, by contrast, come in the form of (usually) **binary** options, and this is where the locus of cross-linguistic variation exists.

UG: principles and parameters

- So, the **head directionality parameter** is why languages differ in their basic word order: Heads are initial vs. heads are final.

- Another example is the **wh-parameter**: Wh-phrases appear fronted in some languages, and appear in-situ in others.

- A third parameter is the so-called **null subject parameter**: Subjects are obligatorily realized in some languages but optionally realized in others.

The null subject parameter

(1) John will leave.

(2) Jean arrivera. French
  
  Jean will-arrive

(3) Gianni verrá. Italian
  
  Gianni will-come.
The null subject parameter

(5) *Will leave.

(6) *Arrivera. French will-arrive

(7) Verrá. Italian will-come.

UG: principles and parameters

• We can think of UG as an initial state $S_0$ that gets mapped onto a final state $S_F$ through exposure to primary linguistic data (PLD).
  $$S_0 + \text{PLD} \rightarrow S_F$$

• $S_0$ is the general system that we are born with, and $S_F$ is what we end up referring to as English, Finnish, Tiwa, Khmer, etc.

UG: principles and parameters

• Under this approach, language acquisition is the result of interaction between nature (principles and parameters) and nurture (PLD).

Chomsky on language acquisition

https://www.youtube.com/watch?v=7Cgpfw4z8cw

How can we falsify UG?

• Find a language!

• Find a child!
Exercises

- Yiddish.
- Turkish.

Yiddish

1. jehs roth jehs fahnt m a sax linder. 'Jews speak Yiddish today in many countries.'
2. haant roth jehs jehs fahnt m a sax linder.
3. 'm a sax linder haant roth jehs jehs fahnt.
4. jehs roth jehs fahnt m a sax linder.
5. 'm a sax linder haant jehs roth jehs fahnt.
6. jehs roth jehs fahnt m a sax linder.
7. jehs roth jehs fahnt m a sax linder.
8. jehs roth jehs fahnt m a sax linder.
9. jehs roth jehs fahnt m a sax linder.
10. jehs roth jehs fahnt m a sax linder.
11. jehs roth jehs fahnt m a sax linder.
12. jehs roth jehs fahnt m a sax linder.
13. 'Do Jews speak Yiddish in many countries today?'
14. 'Do Jews speak Yiddish in many countries today?'
15. 'Do Jews speak Yiddish in many countries today?'
16. 'What do Jews speak today in many countries?'

Turkish

1. Et oldum. 'I bought meat.'
2. Et old. 'I bought meat.'
3. Mektub yazdim. 'I wrote a letter.'
4. Mektup yazd. 'I wrote a letter.'
5. Mektubu yazdim. 'I wrote the letter.'
6. Eti oldum. 'He bought the meat.'
7. Eti old. 'He bought the meat.'
8. Eti pahsh. 'The meat is expensive.'
9. 'Eti pahsh. 'The meat is expensive.'
10. Mektup väzdel. 'The letter is beautiful.'
11. Kasaptan et oldum. 'I bought meat from the butcher.'
12. 'Eti kasaptan aldum. 'I bought meat from the butcher.'
13. Kaza mektub yazdum. 'I wrote a letter to the girl.'
14. 'Mektupu kaz yazdum. 'I wrote a letter to the girl.'
15. Kasaptan eti oldum. 'I bought meat from the butcher.'
16. Eti kasaptan aldum. 'I bought meat from the butcher.'
17. Kaza mektubu yazdum. 'I wrote the letter to the girl.'
18. Mektubu kaz yazdum. 'I wrote the letter to the girl.'

Next class agenda

- Phonetics: Chapter 5, pp. 189-208.