

INTD0111A

The Unity and Diversity of Human Language

Lecture #7
March 2nd, 2009

Announcements

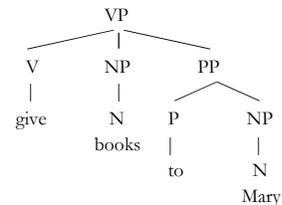
- Homework is due this Wed, March 4th, in class or by e-mail at 5pm at the very latest.
- Any problems watching the language movie, Part I?
- The documentary, *The Linguists*, premiered last Thursday on PBS, but will be shown again at these times, in case you stay up that late:
 - Thursday, March 5, at 1:00AM.
 - Sunday, March 8, 11:30PM.
- More information about the film can be found here: <http://www.pbs.org/thelinguists>

Three comments for Q3 on the homework

- So far, we have looked at four rules for the structure of VPs (remember that bracketing indicates optionality):
 - VP → V (e.g., *slept*)
 - VP → V NP (e.g., *bought books*)
 - VP → V PP (e.g., *went to school*)
 - VP → V CP (e.g., *said that Mary left*)
- But how about VP strings like “give books to Mary” or “put the car in the garage”?
- Any ideas?

Verbs with 2 complements

- These would be cases where VP has three constituents: a head and two complements:
VP → V NP PP
- The tree structure will look like that:



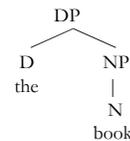
Now, a question for you:

- Given a string like “read the book on the table,” what do you think the structure of that VP is?

Second comment: What’s a DP?

- So far, we have ignored determiners (words such as *the, this, that, his, some, most*, etc.), and we will continue ignoring them for the most part. But for Q3, here’s what you need to know.
- In principle, determiners should also be words heading their own phrases:
DP → D NP

- Tree:



- Question: If this is the case, then what do we expect in languages with a different head directionality than English?

Third comment: *má* in Edo

- In the Edo example, treat *má* simply as a negative auxiliary.

Transition from last class

Main question from last time:
Why are English and Japanese different in their word order?

English vs. Japanese

- Japanese and English look very different on the surface, but the parametric approach attributes that to a single difference in head directionality: initial in English, final in Japanese.
- To see how, let's review the data one more time.

English vs. Japanese

- English:
The child might think that she will show Mary's picture of John to Chris.
- Japanese:
Taroo-ga Hiro-ga Hanako-ni zibun-no
Taroo-SU Hiro-SU Hanako-to self-POSS
syasin-o miseta to omette iru
picture-OB showed that thinking be
"Taro thinks (literally, is thinking) that Hiro showed a picture of himself to Hanako."

English vs. Japanese

Element A	Element B	English	Japanese
V	NP	A precedes B	A follows B
V	PP	A precedes B	A follows B
V	embedded CP	A precedes B	A follows B
P	NP	A precedes B	A follows B
N	PP	A precedes B	A follows B
C	embedded IP	A precedes B	A follows B
Aux	VP	A precedes B	A follows B

The head directionality parameter

- Now, let's remind ourselves of the *head directionality parameter* from last time:
Heads occur initially (i.e., before their complements) or finally (i.e., after their complements) within phrase structure.
- Since Japanese is a head-final language, the mini-grammar for Japanese phrase structure will have the same rules as in English, except for the position of the head:

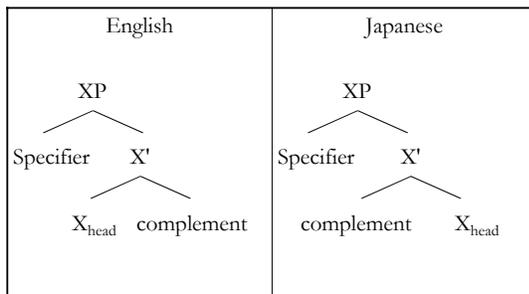
English vs. Japanese

English	Japanese
CP → C AuxP	CP → AuxP C
AuxP → NP Aux'	AuxP → NP Aux'
Aux' → Aux VP	Aux' → VP Aux
VP → V (NP)	VP → (NP) V
VP → V (PP)	VP → (PP) V
VP → V (CP)	VP → (CP) V
PP → P NP	PP → NP P
NP → N (PP)	NP → PP N

English vs. Japanese

- How do we express the difference between English and Japanese in terms of the X'-schema for phrase structure then?
- Obviously, in English, heads precede their complements; in Japanese heads follow their complements.

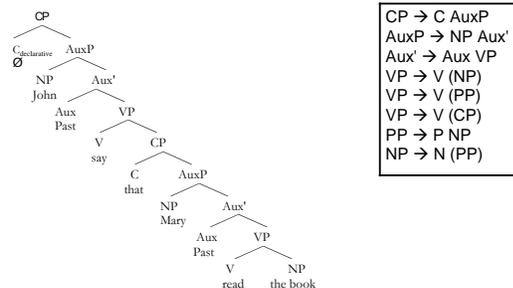
The X'-schema: English vs. Japanese



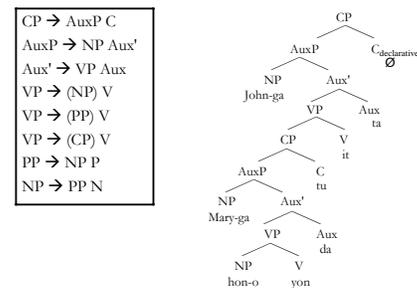
English vs. Japanese

- Compare English and Japanese again:
John said that Mary read the book.
- John-ga Mary-ga hon-o yon-da-tu it-ta
John-SU Mary-OB book-OB read-past-comp say-past
- Now, given the head-directionality for both English and Japanese, the structural trees for each sentence will look like this:

First: English



Second: Japanese



So, ...

- The principles and parameters approach accounts for word order correlates in SVO and SOV languages in a straightforward manner.
- Notice also how a simple difference in head directionality leads to a dramatic variation on the surface, due to its cumulative effect on all heads and complements in a language.

And ...

- In addition, since the HD parameter does not apply to specifiers, it follows that both English and Japanese will behave the same with regard to the position of subjects in sentences.
- Also, since the HD parameter has two settings only, it predicts two types of languages, SOV and SVO, which is exactly what we find in language samples: these two orders represent about 90% of human languages.

Japanenglish!

- But equally important, the HD parameter also predicts the non-existence or at least the rarity of Japanenglish-type languages, i.e., languages in which the verb precedes the object but that are also postpositional, or languages in which the verb follows the object but that are also prepositional, (in contradiction with Greenberg's *Universals 3* and *4* that we discussed in the first week).

Japanenglish!

- As Baker notes, in such languages we expect to find structures like this:
Chris put the book the table on.
Chris the book on the table put.
- But Japanenglish-type languages are rare, if existent. This is good news for the parametric approach since Japanenglish is predicted to be an unattested human language under this approach.
- But is it actually unattested? That's a question for another time (or for another homework ☺).

But, ...

- We still want to explain why other language types do exist: VSO, VOS, OVS, and OSV.
- And this is exactly what we do today.

How about VSO languages?

- Remember that 9% of the languages in Tomlin's sample are VSO. Why do these languages exist? Do they follow from the head directionality parameter?
- Well, the first thing to notice is that in these languages the verb comes before the object. So, they must be ...
- Right, *head-initial*.

Deriving VSO basic word order

- But then the main difference in their word order as opposed to SVO and SOV languages is that the subject follows, rather than precedes, the verb.
- So, how can our phrase structure grammar “derive” VSO orders then?
- Head directionality can’t do it. So, there must be another parameter involved. What could that be?

The subject placement parameter

- This is what Baker calls the *Subject Placement parameter* (p. 130):
 “The subject of a clause is in the specifier of VP (as in Welsh), or in the specifier of AuxP (as in English).”

The subject placement parameter

- The subject placement parameter then has to do with the phrase structure rule that introduces subjects :

English:

AuxP → NP Aux'

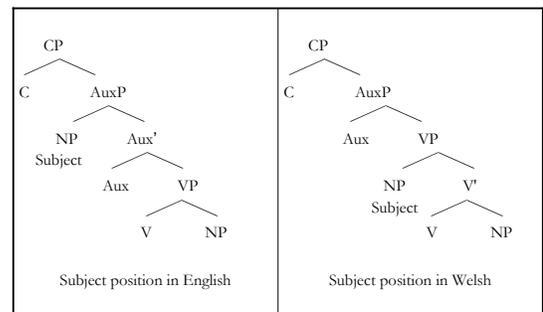
Aux' → Aux VP

Welsh:

AuxP → Aux VP

VP → NP V'

The English-Welsh contrast

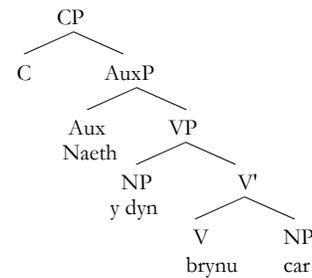


Welsh

- Given the subject placement parameter, the structure of Welsh sentences with auxiliaries becomes straightforward. Here’s an example, followed by a tree:

(1) Naeth y dyn brynu car
 did the man buy car
 “The man did buy a car.”

Welsh



Welsh

- Ok, but how about this other Welsh example, then?
 - (2) bryn-odd y dyn gar
 - buy-Past the man car
 - “The man bought a car.”
- There’s no auxiliary here, so how come the verb precedes the subject?
- Maybe time for another parameter?

The verb attraction parameter

- “Aux attracts V to its position (Welsh), or V attracts Aux to its position (English).”

The verb attraction parameter

- So, the reason why Welsh is always verb-initial is because the Aux head has to host a verb (either an auxiliary verb, or a main verb, if an auxiliary is not present).
- *Notice that this means if Aux is already filled, then the verb cannot be there, as we saw in the first Welsh example.*

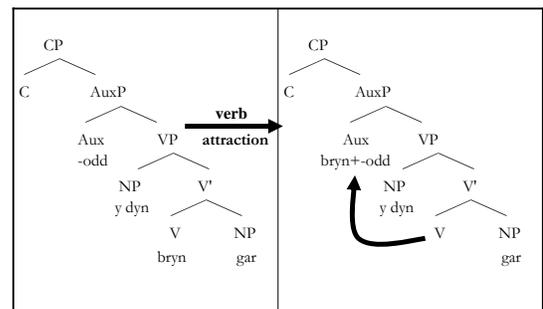
Quick note on “movement”

- Importantly here, we need a second type of rule: A rule that can derive one tree structure from another tree structure.
- Formalists typically talk about that in terms of “movement”.
- So, in Welsh, V “moves” up to Aux, but in English Aux “moves” down to V (more on English in a minute).

Welsh

- The tree structures for the Welsh example in (2) before and after movement takes place would be as follows:

Welsh



Welsh

- In sum, VSO languages like Welsh and Irish are possible because of the interaction between two parameters: the **subject placement** parameter and the **verb attraction** parameter.
- But if Mr or Mrs. Advocate were here (rather than in Hawaii), they would have asked if there is any evidence for the existence of these parameters in languages other than in Welsh and Irish.
- Luckily, there is. And in familiar languages.

Parlez vous français?

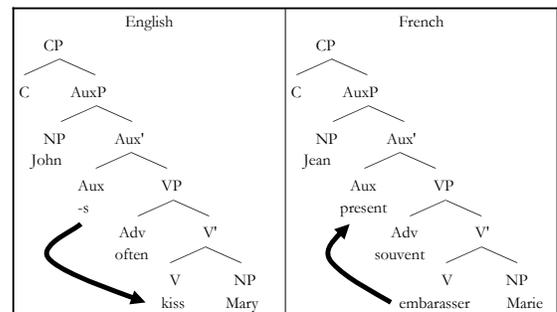
- Compare the position of adverbs in English and French:
 John often kisses Mary.
 *John kisses often Mary.

 *Jean souvent embarrasse Marie.
 Jean often kisses Marie.
 Jean embarrasse souvent Marie.
 Jean kisses often Marie.

Verb position in English vs. French

- We mentioned before that adverbs are sometimes in the specifier of VP. So, given the contrast between English and French in adverb position with regard to the main verb, it must be that V is outside VP in French, but inside VP in English.
- Since verbs all start in the same position, the only explanation has to be that in French verbs move “up” to Aux, but in English Aux moves “down” to V.

Verb position in English vs. French



Interim summary

- So, here's the story:
- English, French, and Welsh, all share the same head-initial setting for the HD parameter, as opposed to Japanese, which is head-final.
- But:

Interim summary

- Welsh differs from both English and French in having the subject placed inside the VP. English and French subjects are in the specifier of AuxP.
- English differs from both French and Welsh in having Aux move down to V. In French and Welsh V moves up to Aux.
- The interaction of parameters give us English, Japanese, Welsh, and French. Any more parameters today?
- Well, why don't we look at German?

Sprechen Sie Deutsch?

- Ich **las** letztes Jahr diesen Roman
I read last year this book
- Diesen Roman **las** ich letztes Jahr
this book read I last year
- Letztes Jahr **las** ich diesen Roman
last year read I this book

- So, what do you notice here about the position of the verb?

German: The V2 effect

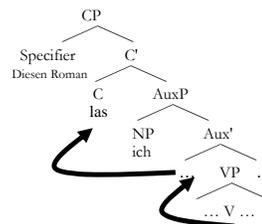
- The verb is always the second constituent in German sentences, following the subject, or a fronted object, or an adverbial.
- If that is the case, then it must be that German, like French, has V move up to Aux.
- Unlike French, though, German can even have the verb before the subject.
- Hmmm ... what's going on here?

German: The V2 effect

- If V can move up to Aux in declarative clauses (as in French and Welsh), one can imagine a language where V can keep moving all the way up to C, right? At least, the system of sentence structure we're using here does not prevent that from happening.
- And that seems to be what is happening in German main clauses. Let's call this the **V2 parameter** (not discussed in Baker). The parameter also holds in Scandinavian languages.

German: The V2 effect

German (sketchy since it's a potential question on assignment 2)



Parameters and languages so far

Parameter	English	Japanese	French	German	Welsh
HD parameter	Head-initial	Head-final	Head-initial	?	Head-initial
Subject placement parameter	Specifier of AuxP	Specifier of AuxP	Specifier of AuxP	?	Specifier of VP
Verb attraction parameter	Aux down to V	?	V up to Aux	V up to Aux	V up to Aux
V2 parameter	No	?	No	Yes	?

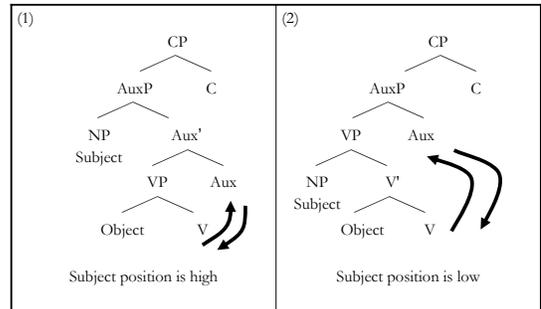
Verb attraction and subject placement in head-final languages

- We have seen how the interaction of different parameters in head-initial languages can give rise to different languages, e.g., English, Welsh, French, and German.
- Now, one should wonder if we see this same parametric interaction in head-final languages.
- It turns out that, at least as far as we know, such interaction does not exist. Any ideas why?

Verb attraction and subject placement in head-final languages

- Let's consider the interaction of subject placement and verb attraction with head-finality in tree-geometric terms.
- Here's how the two trees would look like for two head-final languages, one of which places the subject in specifier of AuxP, and the other places it in specifier of VP, with verb attraction going either up or down:

Verb attraction and subject placement in head-final languages



Verb attraction and subject placement in head-final languages

- As you can see, no matter where the subject is, it will precede the verb, and whether V moves up or Aux moves down, there is no effect on word order.
- The parametric approach thus predicts that no comparable word order variation in head-final languages can result from the subject placement and verb attraction parameters.
- To use Baker's chemical motif, while Welsh is an "alloy" of English, there are no comparable alloys of Japanese.

Parameters and languages so far (updated)

Parameter	English	Japanese	French	German	Welsh
HD parameter	Head-initial	Head-final	Head-initial	?	Head-initial
Subject placement parameter	Specifier of AuxP	Irrelevant	Specifier of AuxP	?	Specifier of VP
Verb attraction parameter	Aux down to V	Irrelevant	V up to Aux	V up to Aux	V up to Aux
V2 parameter	No	Irrelevant	No	Yes	?

Agenda for next class

- VOS, OSV, and OVS word order languages. (Baker Chapter 5 cont.)
- Verb serialization. (Baker Chapter 5 as well).
- A quick introduction to morphology: Synthesis and fusion continua (Payne chapters 1, pp. 16-20; Chapter 7, pp. 190-191 on Morphological typology)
- Introducing languages with freedom of word order (aka nonconfigurational languages): polysynthetic languages (Mohawk) (start reading Baker chapter 4).