

INTD0111A/ARBC0111A

The Unity and Diversity of Human Language

Lecture #12
Oct 24th, 2006

LAP Announcements

- Use the discussion board to find a partner if you have not found one already.
- LAP pairs/groups: I might entertain groups of 3, but you'll have to turn in a more elaborate LAP report. Also, make sure to divide the work evenly among yourselves.
- A one-page LAP proposal is due Nov 7th. Mark your calendar for that.
- Guidelines for the LAP report.

Clarifications for Midterm questions

- Heads can only move to head positions, and phrases can only move to specifiers.
- **C-command:** A node c-commands its sister node and all the descendants of that sister.

Mid-course evaluation

- Suggestions? Criticisms? Hate mail? Send it my way. Anonymously if you want.

Parameterizing anaphors: Revisiting a question from Assignment #1

- Another instance of cross-linguistic variation that you should be familiar with from Assignment #1 has to do with the behavior of anaphors in human languages.
- Recall that anaphors are subject to Binding Condition A, which says: "An anaphor must be bound within the minimal clause it is in."
 - a. John_i likes himself_i.
("himself" has to refer to "John")
 - b. John_i says that [Barry_j likes himself_{*i/j}].
("himself" has to refer to "Barry", not to "John")

But Japanese is different

- But we have seen that the Japanese anaphor "zibun" behaves differently:

Satoo_i-ga Tanakaj-ga zibun_{i/j}-o nikunde-iru koto-o hanasita
Satoo-SU Tanaka-OB self-OB hates fact-OB said
"Satoo_i said that Tanaka_j hates him/himself_i."

And so is Chinese

- As it turns out, Chinese “*ziji*” behaves exactly like Japanese “*zibun*”:

Zhangsan_i renwei Lisi_j hai-le ziji_{i/j}

Zhangsan think Lisi hurt self

“Zhangsan_i thought that Lisi_j hurt him/himself_j.”

The anaphor domain parameter

- One way to capture this difference between English on the one hand, and Japanese and Chinese on the other is by means of a parameter, which we may call the “anaphor domain parameter” (ADP):
“An anaphor must be bound by an NP in the minimal clause it is in (English).

or,

An anaphor must be bound by an NP in the entire sentence it is in (Japanese/Chinese).”

The anaphor domain parameter

- Time to discuss the learnability question from Assignment #1: If you are a child learning English, Japanese, *or* Chinese, on the basis of “positive evidence” only, how would you go about setting the ADP?
- Well, there are two settings. So, let’s try to start with each and see what happens with the child.

The anaphor domain parameter

- If a child learning Japanese starts with setting the ADP to the more restrictive English option, will she be able, on the basis of positive evidence only, to re-set the parameter to the Japanese setting?
- Answer: Of course, yes! All the child needs to do is observe cases in the primary linguistic data where “*zibun*” refers to a NP outside the minimal clause in which “*zibun*” occurs.

The anaphor domain parameter

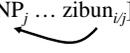
- Start with the English more restrictive setting:
[_{sentence} NP_i ... [_{minimal clause} NP_j ... zibun_{*i/j}]]
 - Upon further “positive evidence”, re-set to the less restrictive Japanese setting:
[_{sentence} NP_i ... [_{minimal clause} NP_j ... zibun_{i/j}]]
-

The anaphor domain parameter

- Now, if a child learning English starts with setting the ADP to the less restrictive Japanese option, will she be able, on the basis of positive evidence only, to re-set the parameter to the Japanese setting?
- Answer: No way! There is no positive evidence in the English primary linguistic data that would force the child to re-set the parameter, since every anaphor interpretation in English is compatible with the Japanese setting.

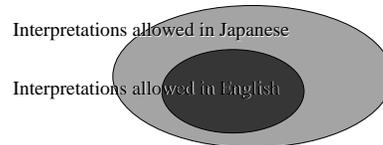
The anaphor domain parameter

- Start with the Japanese less restrictive setting:
 $[\text{sentence } NP_i \dots [\text{minimal clause } NP_j \dots \text{zibun}_{i/j}]]$

- No “positive evidence” forces re-setting the ADP to the more restrictive English setting:
 $[\text{sentence } NP_i \dots [\text{minimal clause } NP_j \dots \text{zibun}_{i/j}]]$

- The child will thus be “stuck in limbo,” FOREVER, learning English with Japanese intuitions, which simply does not happen.

The anaphor domain parameter

- The key here is to observe that the anaphor interpretations allowed in English are a *subset* of the anaphor interpretations allowed in Japanese:



The Subset Principle

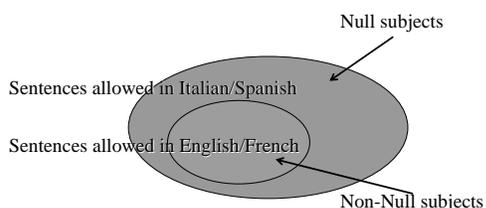
- This is the so-called *Subset Principle*, a general learnability condition, which states that children will always go with the more restrictive setting of a parameter as they’re acquiring their language.

Nick’s question from last time:

- “You said last time that children learning English and French produce null subject structures. Isn’t that a counterexample to the Subset Principle?”
- Yes, it is. Let’s see how.

The Subset Principle and the NS Parameter

- The range of sentences allowed in Italian/Spanish includes as subset the range of sentences allowed in English/French:



The Subset Principle and the NS Parameter

Two questions:

- First, how come that children start with the less restrictive setting for the null subject parameter?
- Second, how do they ever recover from that less restrictive setting to the more restrictive one?

The NS parameter is set “on” by *default*

- One possible answer to the first question is that some parameters have a *default* setting, which can then be re-set by the child on the basis of positive evidence.
- In the case at hand, the default for the NS parameter would be “on”. In other words, all children assume their language is “Italian” until they observe evidence to the contrary.

The NS parameter is set “on” by *default*

- But what would count as positive evidence for the “off” setting of the null subject parameter? In other words, how do children ever come to recover from the default setting?
- Well, any ideas?

“Dummy” subjects!

- Well, maybe observing subjects in contexts where you do *NOT* expect them:
It is raining.
There is a squirrel in my room.
- “Dummy” elements such as “it” and “there” are used only to fill in the subject position, so it must be that, the child thinks, “my language is not a null subject language.”

But, ...

- Children are also likely to hear:
Sounds good.
Go to your room now!
- So, maybe the subject is *optional* in English.

Looking for the “trigger”

- Perhaps what children are looking for, then, is a *trigger*, that is, positive evidence specific to the setting of the NS parameter:
*John knows that [— must go]
Juan sabe que [— debe ir]
“Juan knows that he must go.”
- The key here is whether null subjects may occur in tensed embedded clauses. Any problems here?

Looking for the “trigger”

- One problem is: The trigger might be too complex for children to process.
- It requires *degree-1 learnability*, being sensitive to the presence of an embedded clause.
- Perhaps, we should expect triggers to meet a *degree-0 learnability*, being confined only to main clauses.

So, are we turning this into an acquisition class or what?

Blame Nick. Don't blame me!

Any other alternative analysis?

- So, where do we go from here? Can we do better? Maybe. Or maybe not. Let's see.
- In the interest of time, I'll keep it brief. This is not an ACQUISITION class. I would love to offer one at one point, though.

Root infinitives

- As it turns out, children around the age of 2 use infinitives (INF) in root (=main) clauses where finite verbs should be used:

<i>French:</i> Pas manger la poupée not eat[INF] the doll Michel dormir Michel sleep[INF]	<i>German:</i> Zahne putzen teeth brush[INF] Thorsten das haben Thorsten that have[INF].
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Root infinitives

- And in Dutch, as well:
Ik ook lezen
I also read[INF]
- So, how about English?
It only write on the pad.
He bite me.
Horse go.

Root infinitives

- We used to think that children learning English are simply dropping the -s inflection for third person singular on the verb.
- But now, given what we have seen in French/German/Dutch, this might actually be a case of using infinitives in root clauses.

Root infinitives

- But we know that English does allow null subjects with infinitives:
Sarah wants to watch TV.
I want to buy a new car.
- So, do you see where this is heading?

Root infinitives and the NS parameter

- Right. Children are not actually using null subjects in main clauses because they mis-set the NS parameter. They are using null subjects in main clauses because they use infinitives there.
- But why do children use infinitives in main clauses, after all? Maybe because they have not acquired all phrase structure yet: AuxP is missing?

Conclusion

- There might be no subset problem with the NS parameter. Children learning English/French produce null subjects not because they have selected the less restrictive “on” setting of the parameter, but because at a certain stage of their acquisition of syntactic structure, AuxP is missing, hence, infinitives are used in main clauses. Since infinitives allow null subjects, that explains why children, unlike adults, drop subjects in these contexts.

Post-conclusion

- There is more to children’s acquisition of the null subject parameter and a lot of interesting research that was done on that. But we have to leave it at that. My goal was to get you to see how we go about proving or disproving certain hypotheses regarding UG, even if eventually we might be still far from firm conclusions.

Wrap-up: Why Parameters?

- This is what Baker discusses in most of Chapter 7 (pp. 199-216).
- Main Question: Why is language that way?
- Two common answers: Cultural and evolutionary.

Language diversity as an aspect of cultural diversity

- Pretty much the view outside of formal linguistics, mainly in the humanities and social sciences.
- “Differences” are more emphasized and highlighted. Sameness is unexpected and ignored. If cultures differ, and language is part of culture, then languages have to be different.

But, ...

- We have seen how totally unrelated languages are similar:
Japanese, Basque, Turkish, Navajo, Quechua, Malayalam, Greenlandic Eskimo, and New Guinean languages, are all head-final.
English, Edo, Arabic, French, Thai, Swahili, Zapotec, Russian, Indonesian, are all head-initial.
- Edo, Khmer, and Sranan all have serial verbs.
- etc.

Same culture, but different languages

- Also, culture may be the same, but the languages differ: Northern vs. southern tribes in Australia. Same culture, different polysynthesis properties.
- Some Mohawks speak their language, but others do not. Still, they all represent the same culture.

Linguistic variation is limited

- Edward Sapir: “Language is a human activity that varies without assignable limit.”
- But we know now this is false. The range of variation available to human language is actually very limited, and can be expressed in terms of a finite number of universal principles and binary options that we called parameters.

Linguistic variation is systematic

- Variation is also systematic, not random. Why would Mohawk go polysynthetic and exhibit the properties it does, even though the probably related Siouan languages would not do the same? Is this a cultural decision? How?

Language as a product of evolutionary biology

- Survival? Better life? Mastodon hunting?
But, ...
- How can a DNA sequence induce an abstract system like language?
- Why is it unique to our species?
- Is there a museum of fossilized verbs and complementizers that I can visit?

Language as a product of evolutionary biology

- Three kinds of humans:
Homo rigidus, with a completely fixed grammar in their genome.
Homo whateverus, whose genome did not specify any principles of grammar.
Homo parametrus, whose genome specified many fixed principles but also left some options open.
- Who would have the advantage? Think about that till Thursday!

Next class agenda

- Some aspects of linguistic diversity from Whaley’s book: Chapters 10-13. These will help you as you look at the languages of your project.