

INTD0111A/ARBC0111A

**The Unity and Diversity of
Human Language**

Lecture #10
Oct 12th, 2006

Announcements

- LAP: If you have already decided who you'll be working with and on what language, please send me a short note by e-mail with your names and the language. I will then post this online, so people know which languages have been already taken.
- Also, you can find a list of some descriptive grammars here:
<https://ssl.kundenserver.de/www.s83009615.einsundeinsshop.de/sess/utn;jsessionid=15452e7b540df1d/shopdata/index.shopsript>

Announcements

- Assignment #2: I'll take questions on this assignment in class today, and also after class in my office hours from 5-6:30pm.
- If you need an extension for the assignment, you have to tell me BEFORE the deadline, so I waive off the delay penalty.

So, how are English and Mohawk different?

- One word (though with multiple morphemes):
POLYSYNTHESIS

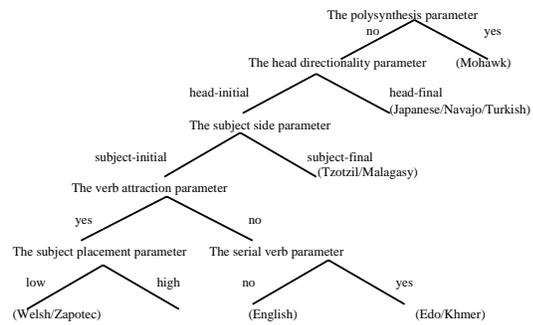
The polysynthesis parameter

- "Verbs must include some expression of each of the main participants in the event described by the verb (the subject, object, and indirect object)."

The polysynthesis parameter

- Adding this at the top of the parameter hierarchy, we get version 3 of the hierarchy:

Baker's parameter hierarchy (3rd version)



Polysynthetic languages of the world

(table from Baker 2001:115)

Language family	Sample languages	Where spoken
Caddoan languages	<i>Wichita</i>	American Great Plains
Tanoan languages	<i>Suothern Tiwa, Jemez</i>	New Mexico
Nahuatl languages	<i>Nahuatl (esp. Classical)</i>	Central Mexico
Gunwinyuan languages	<i>Mayali, Nunggubuyu, etc.</i>	North central Australia
Paleosiberian languages	<i>Chukchee, Koryak</i>	Northeastern Siberia
Mapuche	<i>Mapuche</i>	Central Chile
Ainu	<i>Ainu</i>	Northern Japan
Munda languages?	<i>So:ta?</i>	India

Polysynthesis and head directionality

- Question: Judging from version 3 of the parameter hierarchy, is the head directionality parameter relevant to polysynthetic languages?
- No. The way it looks now, the answer is negative.

BUT...

- It turns out that there are languages for which both polysynthesis and head directionality seem to be relevant.
- This seems to be the case in the Bantu language of Chichewa.

Chichewa

- Chichewa shows similar properties to those of Mohawk:
 - head-marking on verbs,
 - frequent subject and object drop, and
 - freedom of word order:
- Example:

zi-na-wa-lum-a
they-bit-them
“They bit them.”

Chichewa

- Njuchi zi-na-wa-lum-a alenje SVO
bees they-bit-them hunters
- Zi-na-wa-lum-a alenje njuchi VOS
they-bit-them hunters bees
- Zi-na-wa-lum-a njuchi alenje VSO
they-bit-them bees hunters

Chichewa

- d. Alenje njuchi zi-na-wa-lum-a OSV
hunters bees they-bit-them
- e. Alenje zi-na-wa-lum-a njuchi OVS
hunters they-bit-them bees
- f. Njuchi alenje zi-na-wa-lum-a SOV
bees hunters they-bit-them

Chichewa

- Unlike Mohawk, however, object agreement in Chichewa is optional rather than obligatory. Both of the following sentences are grammatical in the language:
 - a. Njuchi zi-na-lum-a alenje (without object agreement)
bees they-bit hunters
 - b. Njuchi zi-na-wa-lum-a alenje (with object agreement "wa")
bees they-bit-them hunters
"The bees bit the hunters."

Agreement in Chichewa

- Furthermore, while subject drop is always possible in Chichewa (since the verbs always shows agreement with subject), object drop is only possible in the presence of the object agreement marker on the verb; otherwise, the object has to appear following the verb:

Subject and object drop in Chichewa

- a. zi-na-(wa)-lum-a alenje (subject drop is always fine)
they-bit-them hunters
"They bit the hunters."
- b. Njuchi zi-na-*wa*-lum-a (object drop with "wa" is fine)
bees they-bit-them
"The bees bit them."
- c. *Njuchi zi-na-lum-a (object drop without "wa" is out)
bees they-bit

Freedom of word order in Chichewa

- Notice also that the freedom in the position of the object is contingent on the presence of object agreement.
- So, if object agreement does not appear on the verb, the object always has to follow the verb.
- Specifically, out of the six possible word orders we saw earlier, only two are allowed in absence of object agreement, i.e., SVO and VOS:

Freedom of word order in Chichewa

- a. Njuchi zi-na-lum-a alenje SVO
bees they-bit hunters
- b. Zi-na-lum-a alenje njuchi VOS
they-bit hunters bees
"The bees bit the hunters."

Chichewa-type languages

- Chichewa, then, seems to behave like Mohawk in polysynthesis when there is object agreement on the verb, but like English in head directionality when that agreement is lacking.
- Other languages that behave like Chichewa with regard to the optionality of object agreement on the verb are the Nilo-Saharan language *Lango*, the Indonesian language *Selayese*, and perhaps also the Chilean language *Mapuche*.

Slave: The Chichewa of head-final languages

- Slave, a language spoken in the Yukon territory, also seems to behave like Mohawk with regard to polysynthesis when there is object agreement on the verb, but like Japanese with regard to head directionality when that agreement is lacking:

Slave

- a. li 'ehkee kayihshu (OV order in absence of object agreement)
dog boy it-bit
- b. *'ehkee li kayihshu (OVS order not permitted without object agreement)
boy dog it-bit
- c. 'ehkee li kayeyihshu (OVS order permitted with object agreement)
boy dog it-bit-him
"The dog bit the boy."

Slave

- And, as you should expect, object drop in Slave is only possible when the object agreement marker "ye" is present:
 - li kayeyihshu
dog it-bit-him
"The dog bit him."
 - *li kayihshu
dog it-bit

Reverse Chichewa

- Reverse Chichewa would be a language in which the verb *always* agrees with the object, hence allowing objects to drop and dislocate freely, but *optionally* with the subject, hence restricting subject drop and dislocation to only those contexts in which subject agreement is manifest on the verb.
- Such a language would have the following range of sentences:

Reverse Chichewa

- Bees bit-him John (object agreement obligatory)
- Bees bit-him. (object drop)
- John bees bit-him. (object dislocation)
- *Bit-him John. (subject drop not possible)
- *Bit-him John bees./Bit-him bees John/etc. (subject dislocation not possible)

Reverse Chichewa

- As far as we know, no such languages exist. But if so, how do we account for their non-existence? Our parametric theory as it stands now does not predict their absence.
- So, we are faced with the following question:
“How do we modify our parametric theory so that we can account for the presence of languages such as Chichewa and Slave, and at the same time for the absence of languages such as Reverse Chichewa?”

Solution 1: Splitting the polysynthesis parameter

- One solution is to split the polysynthesis parameter into two sub-parameters, one for subject polysynthesis, and the other for object polysynthesis, as follows:

Solution 1: Splitting the polysynthesis parameter

- *The subject polysynthesis parameter*
“The subject of a verb must be expressed inside that verb (Mohawk, Chichewa, Slave).
or
The subject of a verb need not be expressed inside that verb (English, Japanese).”

Solution 1: Splitting the polysynthesis parameter

- *The object polysynthesis parameter*
“The object of a verb must be expressed inside that verb (Mohawk).
or
The object of a verb need not be expressed inside that verb (English, Japanese, Chichewa, Slave).”

Evaluating Solution 1

- To evaluate Solution 1, we need to consider the following three questions:
 - A. Does this parametric splitting approach account for the presence of languages such as Chichewa and Slave?
 - B. Is there anything inelegant about this solution?
 - C. More importantly, does it predict the non-existence of Reverse Chichewa?

Solution 2: Extending the polysynthesis parameter

- We can also solve the problem by allowing non-binary parameters in UG:
- *The extended polysynthesis parameter*
“All participants of an event must be expressed on the verb (Mohawk).
or
Any participant of an event may be expressed on the verb (Chichewa, Slave).
or
No participant of an event must be expressed on the verb (English, Japanese).”

Solution 2:

Extending the polysynthesis parameter

- To evaluate Solution 2, we need to consider the same three questions as before:
 - A. Does the introduction of a third value into the formulation of the polysynthesis parameter account for the presence of languages such as Chichewa and Slave?
 - B. Is there anything inelegant about this solution?
 - C. More importantly, does it predict the non-existence of Reverse Chichewa?

The Agreement Principle

- The key to solving the problem with Solution 2 is to find a way to ensure that subject agreement will always be required, whereas object agreement will be optional.
- For this, Baker introduces the *Agreement Principle* below:

“If agreement with an NP is not required, use the agreement to show that this NP is animate and/or definite in its reference.”

The Agreement Principle

- To see the relevance for notions such as “animacy” and “(in)-definiteness” for agreement, Baker provides the following data from Swahili:
 - a. Juma a-na-**wa**-penda watoto (agreement “wa” with animate object)
Juma he-likes-them children
“Juma likes children./Juma likes the children.”

The Agreement Principle

- b. Juma a-li-**li**-kamata gitara (agreement “li” with definite object)
Juma he-grabbed-it guitar
“Juma grabbed the guitar.”
- c. Juma a-li-kamata gitara (no agreement with indefinite, inanimate object)
Juma he-grabbed guitar
“Juma grabbed a guitar.”

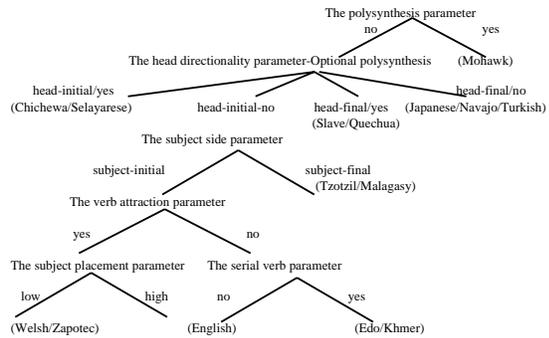
The Agreement Principle

- But how does the agreement principle help us predict that Chichewa and Slave will obligatorily have subject agreement and optionally object agreement?
- Baker’s answer: Since “subjects are usually or always definite or animate, then the agreement principle will always tell speakers who have a choice to use agreement with the subject, even though agreement is optional in theory” (p.154).

The Agreement Principle

- The properties of Chichewa and Slave thus follow from the interaction of the optional setting of the polysynthesis parameter, the agreement principle, as well as the head directionality parameter.
- To see this, let’s look at the revised parameter hierarchy:

Baker's parameter hierarchy (4th version)



Agenda for next class

- More parameters: Baker (Chapter 6).
- Enjoy the Fall break, everyone!