

# INTD0112

## Introduction to Linguistics

Lecture #16  
Nov 2<sup>nd</sup>, 2009

### Announcements

- Homework #4 is now posted. Due date is Monday Nov 9<sup>th</sup>. Make sure you read Chapter 9 of the textbook and watch Part Two of the Human Language movie to be able to answer the questions.
- LAP proposal is due today. If two or more students choose the same language, I'll contact you so one or more of you may have to change your selection.

### Bilingualism (in response to Martina's question)

- Two theories: the *unitary system hypothesis* (USH), and the *separate systems hypothesis* (SSH).
- Evidence for USH: Bilingual children do produce "mixed utterances."  
His nose is perdu./A house pink
- It seems, however, that this could reflect an "any port in a storm" strategy, or even a normal instance of code-switching rather than an indicator of one system.

### Bilingualism (in response to Martina's question)

- There is also good evidence that bilingual children acquire different rules for each language.
- German-learning monolingual children typically use the infinitive as in  
Thorstu das haben. (= Thorstu that to have.)
- Italian-learning monolinguals typically use inflected verbs, and never use infinitives in such sentences.
- It turns out that German-Italian bilinguals use infinitives when they are speaking German, and inflected verbs when they're speaking Italian.

### Ana Martinez-Laga's talk on Dec 2<sup>nd</sup>

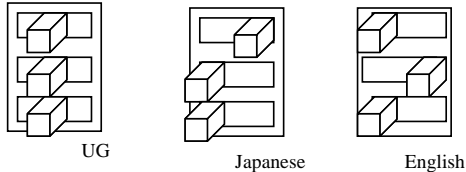
- If interested to learn more about this, you should go to Prof. Martinez-Laga's talk on Dec 2<sup>nd</sup>. It should be very informative and insightful.

### Transition from last class

- The model of the biological language faculty is what we called UG.
- UG has two components: **principles** and **parameters**.
- Principles (such as *structure-dependency*) are universal to all languages; they capture the similarities among human languages.
- Parameters (such as *head-directionality*) are binary options that languages choose from; they explain the variation among human languages.

### Transition from last class

- Under this approach, acquiring a human language is nothing but a process of parameter fixation.



### Transition from last class

- 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).  
 $S_0 + \text{PLD} \rightarrow S_F$
- $S_F$  is what we refer to as English, Finnish, Tiwa, Khmer, etc.
- The children's task in acquiring their language is simply to "set" the parameter value on the basis of the PLD in their linguistic environment.

### The null subject parameter

- Consider these data from English, French, and Italian, all of which allow SV (=Subject-Verb) orders:
- |                      |         |
|----------------------|---------|
| (1) John will leave. |         |
| (2) Jean arrivera.   | French  |
| Jean will-arrive     |         |
| (3) Gianni verrà.    | Italian |
| Gianni will-come.    |         |

### The null subject parameter

- Italian, however, allows the subject of a tensed sentence to be omitted, an option that is not available in English or French:
- |                  |         |
|------------------|---------|
| (5) *Will leave. |         |
| (6) *Arrivera.   | French  |
| will-arrive      |         |
| (7) Verrà.       | Italian |
| will-come.       |         |

### The null subject parameter

- This case of cross-linguistic variation is typically referred to as the ***null subject parameter***.  
 "In some languages (e.g., French, English, Edo) every tensed clause must have an overt subject. In other languages (e.g., Italian, Spanish, Romanian, Navajo, Arabic) tensed clauses need not have an overt subject."

### Head directionality

- Last time we also looked at another instance of parameterization, that of variation in basic word order.
- We saw that the difference between English and Japanese, despite being massive on the surface, is actually very simple at a deeper level of analysis: English is head-initial, while Japanese is head-final.
- The HD parameter accounts for word order in the majority of human languages, but there's still some work to do.

## 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 theory of 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

- Let's follow Mark Baker, the author of *The Atoms of Language*, and call it the *Subject Placement parameter* :  
 "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:

$AuxP \rightarrow NP\ Aux'$

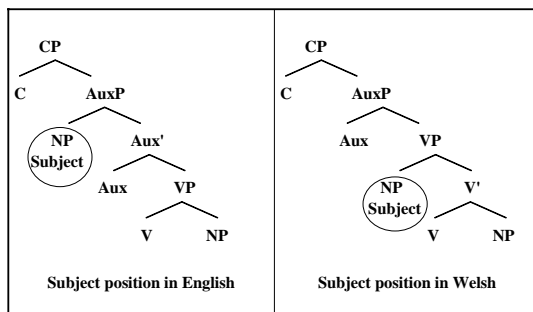
$Aux' \rightarrow Aux\ VP$

Welsh:

$AuxP \rightarrow Aux\ VP$

$VP \rightarrow NP\ V'$

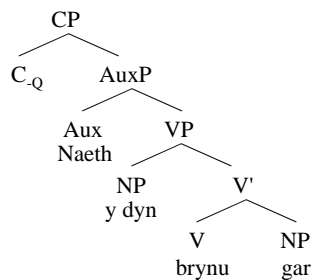
## The English-Welsh contrast



## 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 gar  
 did the man buy car  
 "The man did buy a car."

## Welsh



## Welsh

- Ok, but how about this other Welsh example, then?  
(2) brynodd y dyn gar  
buy-Past the man car  
“The man bought a car.”
- There’s no overt auxiliary here, so how does the verb come to precede the subject?
- I guess it’s time for me to come clean on how Aux and V eventually get together. It turns out there are two options, thereby formulating another parameter.

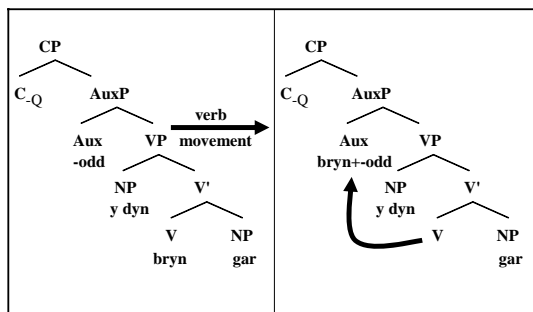
## The verb movement parameter

- “V moves up to Aux (Welsh), or Aux moves down to V (English).”

## The verb movement 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 word is absent).
- The tree structures for the Welsh example in (2) before and after movement takes place would be as follows:

## Welsh



## Welsh

- VSO languages like Welsh and Irish are thus possible because of the interaction between two parameters: the **subject placement** parameter and the **verb movement** parameter.
- But if Mr D. Advocate were here (rather than in Hawaii), he would have asked if there was any evidence for our assumption that in English the Aux moves down to V.
- Luckily, there is. Let’s contrast English and French.

## Parlez vous français?

- Compare the position of adverbs in English and French:

John often kisses Mary.

\*John kisses often Mary.

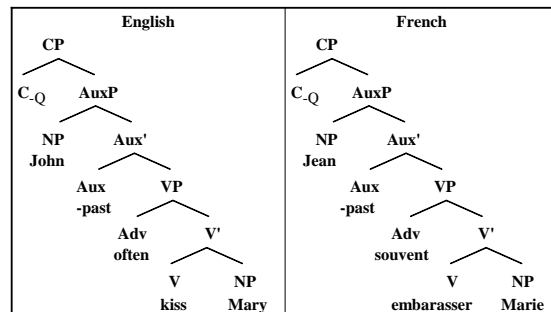
\*Jean souvent embarrasse Marie.

Jean often kisses Marie.

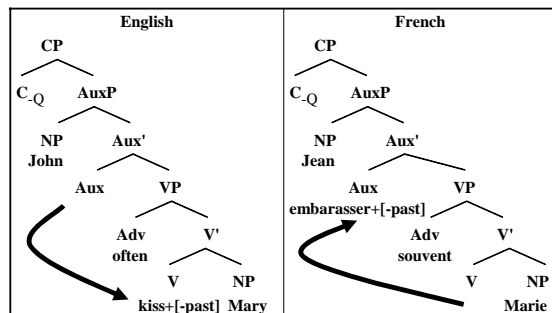
Jean embarrasse souvent Marie.

Jean kisses often Marie.

## Verb position in English vs. French



## 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/Turkish/Navajo, which are head-final.
- But:

## Interim summary

- Welsh differs from both English and French in having the subject placed in the specifier of 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 these parameters gives us English, Japanese, Welsh, and French.
- If I haven't confused you by now, then why not look at German/Scandinavian?

## Sprechen Zie 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

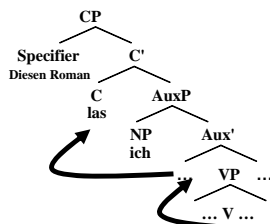
- The verb is always the second constituent in German sentences, following the subject, or a fronted object, or an adverbial.
- If that is the case, then it must be that German, like French, has V move up to Aux.
- Unlike French, though, German can even have the verb before the subject.
- Hmm ... what's 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**. The parameter also holds in Scandinavian languages.

## German: The V2 effect

German (sketchy since German is Japanenglish)



## 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 movement parameter	Aux down to V	?	V up to Aux	V up to Aux	V up to Aux
V2 parameter	No	?	No	Yes	?

“?” indicates issues that we simply did not address in this class; it does not mean that linguists don't know the settings of these parameters in such languages.

## VOS/OVS/OSV languages

- VOS is on HW4. You should be able to figure this language type on your own.
- OVS/OSV languages are not that well understood, but there are definitely ways to derive their word order. In the interest of time, we won't be discussing them here (but they may show up on your final. Maybe!).

## How about UG principles?

- We have already talked about structure-dependency two weeks ago.
- Today I would like to talk about some universal constraints on wh-movement in human languages, which will take us back to some puzzles from the first week of the semester.

## Constraints on Wh-movement

- We have already seen examples of wh-movement in English (remember “*t*” is the trace of the moved wh-phrase):  
Who did John meet *t* ?
- Notice that the distance between the wh-phrase and its original position in the D-structure could be, in principle, unbounded:  
Who did you say that John met *t* ?  
Who does Mary believe that you said that John met *t* ?  
etc.

## Constraints on Wh-movement

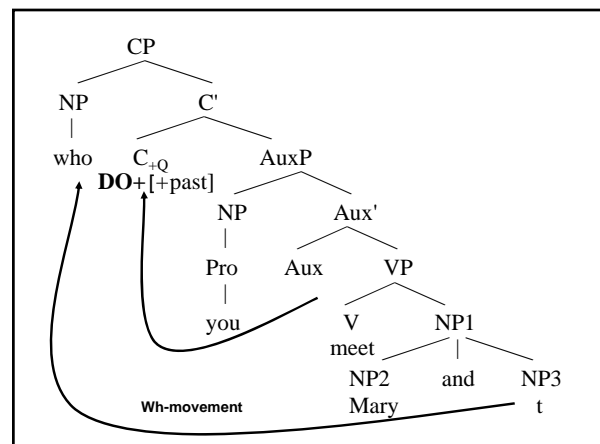
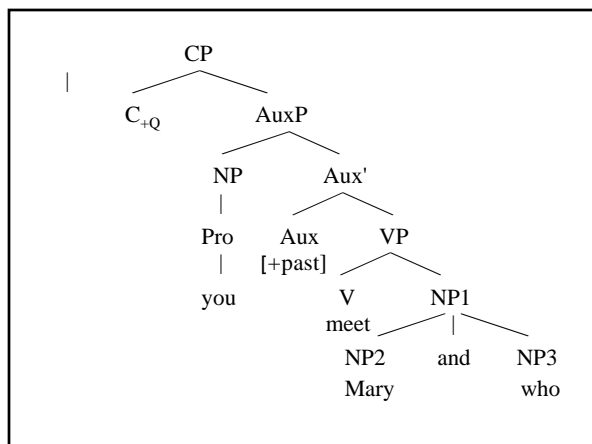
- But now consider these cases of wh-movement:  
\*Who did you meet Mary and *t* ?  
\*Who do you believe the claim that Mary met *t* ?  
\*Which book did Mary talk to the author who wrote *t* ?  
\*Who do you wonder whether Mary met *t* ?  
\*Who did Mary talk to John without meeting *t* ?
- Obviously, wh-movement is not unconstrained. There are cases where the movement is, for some reason, *blocked*.

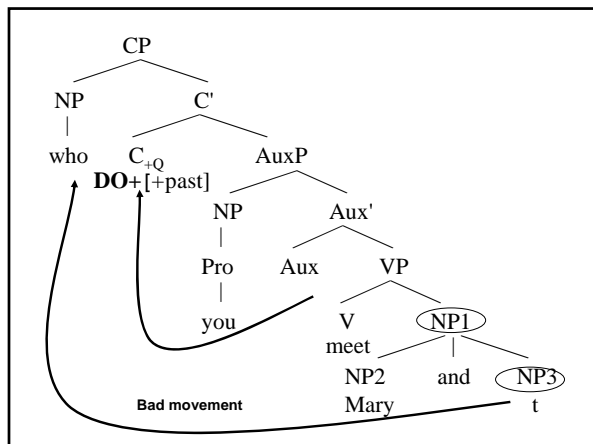
## Islands

- The substructures out of which wh-movement is blocked are technically called *islands*.
- Complex NPs are islands:  
\*Who do you believe [<sub>NP</sub> **the claim that Mary met *t*** ]?
- Relative clauses (RC for short) are also islands:  
\*Which book did Mary talk to [<sub>RC</sub> **the author who wrote *t*** ]?

## Islands

- Also, embedded CPs introduced by a wh-word act as islands for wh-movement:  
\*Who do you wonder [<sub>CP</sub> **whether Mary met *t*** ]?
- Adverbial clauses are islands:  
\*Who did Mary talk to John [<sub>PP</sub> **without meeting *t*** ]?
- Coordinate NPs are also islands:  
\*Who did you meet [<sub>NP</sub> **Mary and *t*** ]?
- Let's draw a tree for this last island and see if we can make sense of what's going on.





## Islands

- Island constraints cannot possibly be learned on the basis of the PLD that the child hears around her. If so, then the inevitable conclusion is that they must be *built-in*.

## Revisiting a puzzle from last week

*Anne hit the man with an umbrella.*

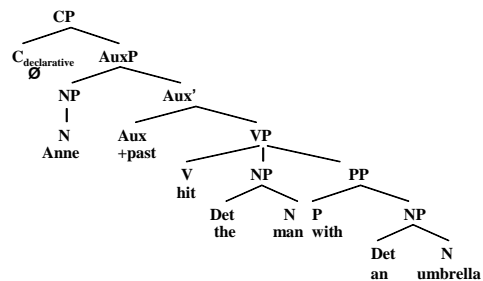
Two meanings

*What did Anne hit the man with?*

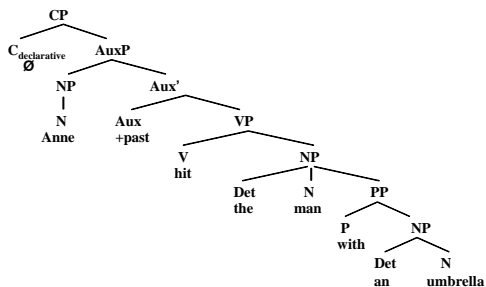
One meaning

- That's again where trees help.

Anne hit the man with an umbrella.  
 “Meaning: Anne held an umbrella and hit the man with it.”

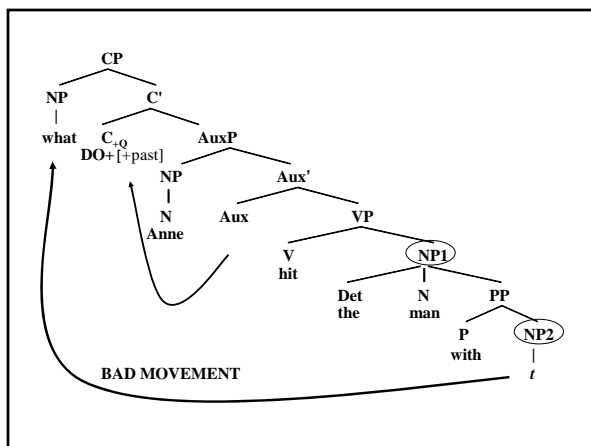
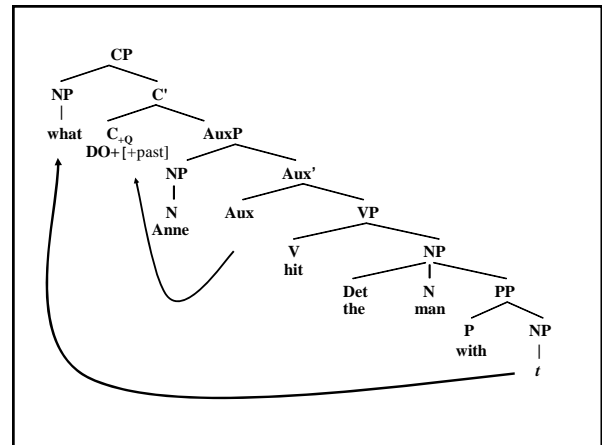
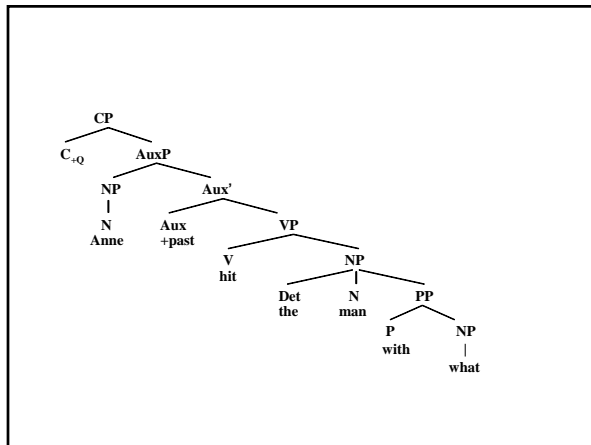
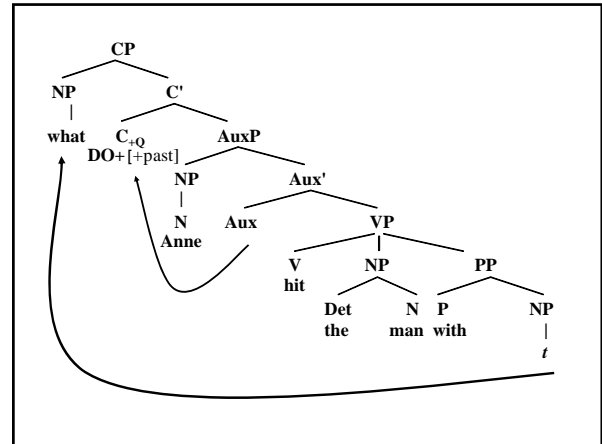
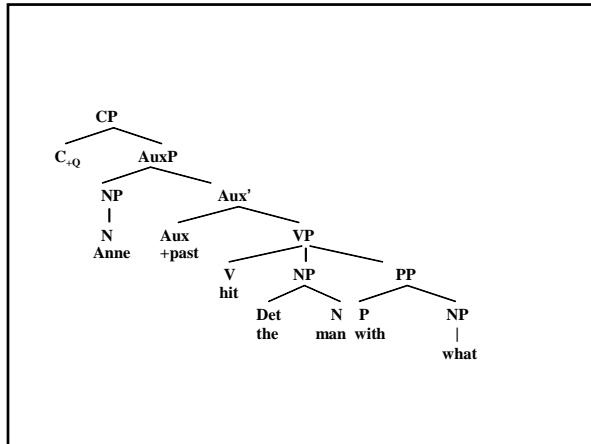


Anne hit the man with an umbrella.  
 “Meaning: Anne hit the man who was holding an umbrella.”



- Now, let's draw trees for a wh-question out of each structure.





## UG as a falsifiable hypothesis

- A scientific theory has to make predictions, and the predictions have to be falsifiable.
- So, what are some falsifiable predictions that a theory of UG makes? How can we test them?

## Prediction #1

- A theory of UG makes an interesting prediction about language acquisition by children:  
“Child language can differ from adult language only in the same ways adult languages differ from each other.”
- This is known as the *Continuity Hypothesis* (Pinker 1984, Crain 1991, among others).
- In other words, whatever utterances children produce have to fall within the realm of what is allowed by UG.

## Parameters of question-formation

- Human languages differ in the way they form so-called wh-questions.
- Some languages like English form a question by fronting the wh-word:  
What did you see \_?
- Let’s call this type of languages **wh-fronting** languages.

## Parameters of question-formation

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

### Japanese

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

### Egyptian Arabic

?inta fuft miin?  
you saw who?  
“Who did you see?”

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

## Parameters of question-formation

- Within the wh-fronting-type, languages can differ further as to whether they 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?”

## Parameters of question-formation

- 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. Let’s call this *wh-doubling*.

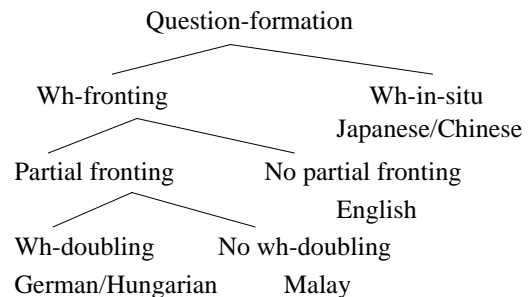
### Hungarian (Horvath, 1997)

Mit gondolt hogy kivel beszelt Mari?  
who think that who-with talk Mari  
“With whom do you think that Mari talked?”

### 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?”

## Parameters of question-formation



## So, what do children do?

- 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?
- How do English-learning children know that this is a possibility in human language, even though they never hear such questions in the PLD?

## But it gets interesting. Observe:

- **First**, compound wh-phrases such as "which + noun" cannot be repeated in that wh-doubling German dialect:  
-\*Wessen Buch glaubst du wessen Buch Hans liest?  
which book believe you which book Hans reads
- Interestingly, English-learning children do not repeat lexical wh-phrases in medial position, either. Instead, children shorten the wh-phrase or omit it altogether:  
-Which Smurf do you think (who) is wearing roller skates?  
-\*Which Smurf do you think which Smurf is wearing roller skates?

## And again observe:

- **Second**, 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 again, 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.
- **WATCH!**

## Moral of the wh-story

- Well, if children learn on the basis of input only, then we have no explanation for why medial wh-questions appear in their language, let alone the fact that their appearance is restricted in certain contexts (never with "which + noun," or with infinitivals).
- If, by contrast, children have access to what is "a possible human language," their non-adult productions are not as mysterious any more.

## The Bennish optative (Sadock 1982)

- Ben's speech is SVO normally, but in optative (wish) constructions, he uses a weird word order.
- Intransitives (subject follows verb)
  - Fall down Daddy. 'Daddy should fall down'
  - Eat Benny now. 'Let Benny eat now.'
  - Sit down Maggie, Mommy. 'Maggie should sit down, Mommy.'
- Transitives (subject marked with *for*)
  - Pick up Benny for Daddy. 'Daddy should pick Ben up.'
  - Read a story for Mommy. 'Mommy should read a story.'
- He's marking transitive subjects with *for*, but leaving intransitive subjects and objects unmarked.

## So, what's Ben doing exactly?

- It seems that in optative constructions, Ben treats English as if it were an ergative-absolutive language. In all other constructions, he treats English as nominative-accusative.
- Ben's language is thus a split system, with ergative-absolutive used only in the optative.

### So, what's Ben doing exactly?

- Also, it turns out that the ergative case marker is often homophonous with the marker for possessive in some of these ergative languages (e.g., Inuktitut *-up* is used for both), and Ben uses *for* (his ergative marker) in possessive constructions as well:

*That's a nose for Maggie* 'That's Maggie's nose.'

- Ben basically converged on a possible human language; it just happens not to be English.

### Story #3: Negation

- It was late last night, and I got tired of typing, so how about watch another short movie?

### Looks like Prediction #1 is borne out

- Child language, while it might differ from the target adult language, seems to fall within the realm of "possible human languages."
- If children learn on the basis of the input around them only, this is a mystery.
- If children come to the task of language acquisition already knowing what to look for, then we have an explanation.

### Prediction #2

- "Whenever a universal principle is at work, children will *not* produce non-adult forms."
- We talk about this on Wednesday.

### Next class agenda

- More about child language.
- Also we start talking about language change. Read Chapter 12.

### Acknowledgements

- The slide with Ben's talk is taken from Paul Hagstrom's slides on his website, based on data from Sadock's 1982.
- The two movies shown were created by Stephen Crain, Rosalind Thornton, and Graciela Tesan, at the Language Acquisition Laboratory at the University of Maryland, College Park.

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