

Psych156A/Ling150: Psychology of Language Learning

Lecture 18 Language Structure II

Announcements

HW6 due today

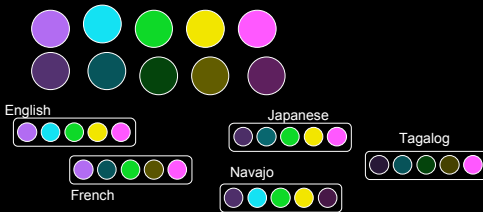
Quiz 6 results: Average 17.5 out of 21 (yay!)

Reminder: Email me (lpearl@uci.edu) by the end of today if you will be writing a paper for your final assignment.

Note: No late papers will be accepted - so make sure you get it in on time.

Similarities & Differences: Parameters

Big Idea: A relatively small number of syntax parameters yields a large number of different languages' syntactic systems.



Generalizations About Language Structure

Greenberg's Word Order Generalizations

Navajo

Japanese

Greenberg's Word Order Generalizations

Navajo

Japanese

Basic word order:
Subject Object Verb

Basic word order:
Subject Object Verb

Ashkii at'ééd yiyiiltsá
Boy girl saw

Jareth-ga Hoggle-o butta
Jareth Hoggle hit

The boy saw the girl

Jareth hit Hoggle

Greenberg's Word Order Generalizations

Navajo	Japanese
Postpositions: Noun Phrase Postposition	Postpositions: Noun Phrase Postposition
'ée' biih náásdzá clothing into I-got-back I got back into (my) clothes.	Jareth-ga Sarah to kuruma Jareth Sarah with car da London ni itta by London to went Jareth went to London with Sarah by car.

Greenberg's Word Order Generalizations

Navajo	Japanese
Possessor before Possessed	Possessor before Possessed
Possessor Possession	Possessor Possession
Chidí bi-jáád Car its-leg the wheel of a car	Toby-no imooto-ga Toby's sister Toby's sister

Greenberg's Word Order Generalizations

Navajo	Japanese
Basic word order: Subject Object Verb	Basic word order: Subject Object Verb
Postpositions: Noun Phrase Postposition	Postpositions: Noun Phrase Postposition
Possessor before Possessed Possessor Possession	Possessor before Possessed Possessor Possession
Despite the differences in the languages, both Japanese and Navajo are very similar when viewed through these three structural descriptions.	

Greenberg's Word Order Generalizations

English

Edo (Nigeria)

Greenberg's Word Order Generalizations

English

Edo (Nigeria)

Basic word order:
Subject Verb Object

Basic word order:
Subject Verb Object

Sarah found Toby.

Òzó mién Adésuwá
Ozo found Adesuwa.

Greenberg's Word Order Generalizations

English

Edo (Nigeria)

Prepositions:
Preposition Noun Phrase

Prepositions:
Preposition Noun Phrase

Jareth gave the crystal to Sarah.

Òzó rhié néné ebé né Adésuwá
Ozo gave the book to Adesuwa.

Greenberg's Word Order Generalizations

English	Edo (Nigeria)
Possessed before Possessor	Possessed before Possessor
Possession Possessor	Possession Possessor
quest of Sarah (alternative: Sarah's quest)	Omo Ozó child Ozo Ozo's child

Greenberg's Word Order Generalizations

English	Edo (Nigeria)
Basic word order: Subject Verb Object	Basic word order: Subject Verb Object
Prepositions: Preposition Noun Phrase	Prepositions: Preposition Noun Phrase
Possessed before Possessor Possession Possessor	Possessed before Possessor Possession Possessor

Again, despite the differences in the languages, both English and Edo are very similar when viewed through these three structural descriptions.

Greenberg's Word Order Generalizations

Greenberg found forty-five "universals" of languages - patterns overwhelmingly followed by languages with unshared history (Navajo & Japanese, English & Edo)

Not all combinations are possible - some patterns rarely appear
Ex: Subject Verb Object language (English/Edo-like) + postpositions (Navajo/Japanese-like)

Moral: Languages may be more similar than they first appear "on the surface", especially if we consider their structural properties.

More Language Comparisons

French

Subject Verb
Jareth arrivera.
Jareth will-come.

Italian

Subject Verb
Jareth verrá.
Jareth will-come.

More Language Comparisons

French

*Verb Subject
*Arrivera Jareth.
*Will-arrive Jareth.

Italian

Verb Subject
Verrá Jareth.
Will-arrive Jareth.

More Language Comparisons

French

*Verb
*Arrivera
He-will-come

Italian

Verb
Verrá
He-will-come

More Language Comparisons

French	Italian
Subject Verb	Subject Verb
*Verb Subject	Verb Subject
*Verb	Verb

These word order patterns might be fairly easy to notice. They involve which combinations of Subject and Verb are allowed to exist in the language. A child might be able to notice the prevalence of some patterns and the absence of others.

More Language Comparisons

French	Italian
Embedded Subject-question formation (easy to miss)	

Tu veux **que Marie** épouse J.
You want **that Marie** marries J.
"You want Marie to marry J."

*Qui veux-tu **que** ___ épouse J?
Que veux-tu **qui** ___ épouse J?
Who want-you **that** marries J?
"Who do you want to marry J?"

Requires a special "that" form: **qui**.

More Language Comparisons

French	Italian
Embedded Subject-question formation (easy to miss)	

Credi **che Jareth** verrà.
You think **that Jareth** will-come.
"You think that Jareth will come."

Che credi **che** ___ verrà?
Who think-you **that** will-come?
"Who do you think will come?"

Does not require a special "that" form.

More Language Comparisons

French

Italian

Expletive subjects: words without content

*Pleut
It-rains.

Piove.
It-rains.
"It's raining."

Il pleut.
It rains.
"It's raining."

Not okay to leave out
expletive subject "it".

Okay to leave out
expletive subject "it".

More Language Comparisons

French

Italian

Subject Verb

Subject Verb

*Verb Subject

Verb Subject

*Verb

Verb

Requires special action for
embedded subject
questions.

Does not require special
action for embedded subject
questions.

Not okay to leave out
expletive subject "it".

Okay to leave out
expletive subject "it".

All these involve the subject in some way - coincidence?
Idea: No! There's a language parameter involving the subject.

The Value of Parameters: Learning the Hard Stuff by Noticing the Easy Patterns

French vs. Italian: Subject Parameter

French

Italian

Subject Verb

Subject Verb

*Verb Subject

Verb Subject

-Verb

Verb

Easy to
notice

Hard to
notice

Embedded Subject-question formation (easy to miss)

*Qui veux-tu	que	épouse Jean?	Che credi	/che	verrà?
Who want-you	that	marries Jean?	Who think-you	that	will-come?
Que veux-tu	qui	épouse Jean?			

*Pleut	Expletives	Piove.
Il rains.		It-rains.
Il pleut.		

The Value of Parameters: Learning the Hard Stuff by Noticing the Easy Patterns

French vs. Italian: Subject Parameter

Big idea: If all these structural patterns are generated from the same linguistic parameter (e.g. a "subject" parameter), then children can learn the hard-to-notice patterns (like the patterns of embedded subject questions) by being exposed to the easy-to-notice patterns (like the optional use of subjects with verbs). The hard-to-notice patterns are generated by one setting of the parameter, which children can learn from the easy-to-notice patterns.

Universal Grammar: Principles & Parameters

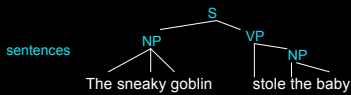
Principles: Apply to all human languages.
 Ex: Language has hierarchical structure.
 Smaller units are chunked into larger units.

sounds g a b l i n

syllables g a b l i n

words goblin

phrases Noun Phrase (NP) The sneaky goblin
 Verb Phrase (VP) stole the baby



sentences

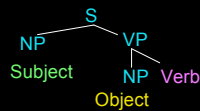
The sneaky goblin stole the baby

Universal Grammar: Principles & Parameters

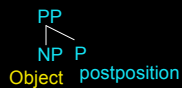
Parameters: Constrained variation across languages. Child must learn which option native language uses.

Japanese/Navajo

Basic word order:
 Subject Object Verb



Postpositions:
 Noun Phrase Postposition



Possessor before Possessed
 Possessor Possession

Universal Grammar: Principles & Parameters

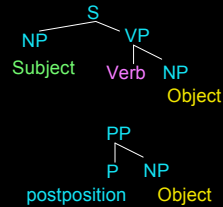
Parameters: Constrained variation across languages. Child must learn which option native language uses.

Edo/English

Basic word order:
Subject Verb Object

Prepositions:
Preposition Noun Phrase

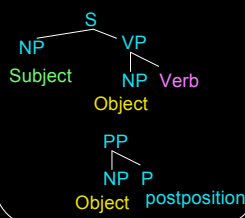
Possessed before Possessor
Possession Possessor



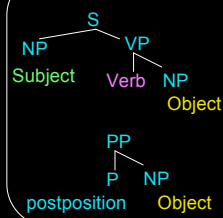
Universal Grammar: Principles & Parameters

Parameters: Constrained variation across languages. Child must learn which option native language uses.

Japanese/Navajo



Edo/English



Language Variation: Summary

While languages may differ on many levels, they have many similarities at the level of language structure (syntax). Even languages with no shared history seem to share similar structural patterns.

One way for children to learn the complex structures of their language is to have them already be aware of the ways in which human languages can vary. Then, they listen to their native language data to decide which patterns their native language follows.

Languages can be thought to vary structurally on a number of linguistic parameters. One purpose of parameters is to explain how children learn some hard-to-notice structural properties.

Questions?
