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.
Greenberg’s Word Order Generalizations

<table>
<thead>
<tr>
<th>Navajo</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic word order: Subject-Object-Verb</td>
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</tr>
<tr>
<td>Ashkii at’eéd yiyiltsá</td>
<td>Jareth-ga Hoggle-o butta</td>
</tr>
<tr>
<td>Boy saw the girl</td>
<td>Jareth hit Hoggle</td>
</tr>
</tbody>
</table>

The boy saw the girl
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)
---|---
Basic word order: Subject Verb Object | Basic word order: Subject Verb Object
Sarah found Toby. | Òzó mién Adésuwá
Ozo found Adesuwa.

Prepositions:
Preposition Noun Phrase
Jareth gave the crystal to Sarah.

Prepositions:
Preposition Noun Phrase
Ozo gave the book to Adesowa.
Greenberg’s Word Order Generalizations

<table>
<thead>
<tr>
<th>English</th>
<th>Edo (Nigeria)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possessed before Possessor</td>
<td>Possessed before Possessor</td>
</tr>
<tr>
<td>Possession Possessor</td>
<td>Possession Possessor</td>
</tr>
<tr>
<td>quest of Sarah</td>
<td>Omo Ozó child Ozo</td>
</tr>
<tr>
<td>(alternative: Sarah’s quest)</td>
<td>Ozo’s child</td>
</tr>
</tbody>
</table>

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

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<td>Possession Possessor</td>
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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

<table>
<thead>
<tr>
<th></th>
<th>French</th>
<th>Italian</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject</strong></td>
<td><strong>Verb</strong></td>
<td><strong>Subject</strong></td>
</tr>
<tr>
<td>Jareth</td>
<td>will-come.</td>
<td>Jareth</td>
</tr>
</tbody>
</table>

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### More Language Comparisons

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<tr>
<td><strong>Verb</strong></td>
<td><strong>Subject</strong></td>
<td><strong>Verb</strong></td>
</tr>
<tr>
<td><strong>He-will-come</strong></td>
<td>Verrà Jareth.</td>
<td>Will-arrive Jareth.</td>
</tr>
</tbody>
</table>

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More Language Comparisons

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<td>Subject Verb</td>
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</tr>
<tr>
<td>*Verb Subject</td>
<td>Verb Subject</td>
</tr>
<tr>
<td>*Verb</td>
<td>Verb</td>
</tr>
</tbody>
</table>

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

<table>
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<tr>
<th>French</th>
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<tbody>
<tr>
<td>Embedded Subject-question formation (easy to miss)</td>
<td></td>
</tr>
<tr>
<td>Tu veux que Marie épouse J. You want that Marie marries J. “You want Marie to marry J.”</td>
<td></td>
</tr>
<tr>
<td>“Qui veux-tu que ___ épouse J?” Who want-you that ___ marries J? “Who do you want to marry J?”</td>
<td></td>
</tr>
<tr>
<td>Requires a special “that” form: qui.</td>
<td></td>
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<tr>
<td>Credi che Jareth verrá. You think that Jareth will-come. “You think that Jareth will come.”</td>
<td></td>
</tr>
<tr>
<td>Che credi che ___ verrá? Who think-you ___ will-come? “Who do you think will come?”</td>
<td></td>
</tr>
<tr>
<td>Does not require a special “that” form.</td>
<td></td>
</tr>
</tbody>
</table>
More Language Comparisons

French | Italian
---|---
Expletive subjects: words without content

*Pleut
It-rains.
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 Subject Verb
*Verb Subject

*Verb
Requires special action for embedded subject questions.

Not okay to leave out expletive subject "it".

Italian Subject Verb
Verb Subject

Verb
Does not require special action for embedded subject questions.

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

Embedded Subject-question formation (easy to miss)

*Qui veux-tu que qui épouse Jean?
Who want-you that marries Jean?
Que veux-tu qui épouse Jean?
Who want-you that marries Jean?
Expletives

Pleut
It-rains.
Il pleut.

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

Qui veux-tu que qui épouse Jean?
Who want-you that marries Jean?
Che credi che verrà?
Who think-you that will-come?
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 (NP) + Postposition (PP)
  - Possessor before Possessed (NP) + Possession (P)
  - Possessor (NP) + Possession (P) + postposition

- Structure:
  - NP: Subject, NP: Verb
  - PP: Postposition
  - NP + P: 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

Japanese/Navajo

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.