Language and Mind
HONR 218L

Class #3
More: Language as an Instinct
Distinguishing different uses of ‘grammar’

Why call language an instinct?

- Independence from other mental abilities
- Uniformity throughout human species
- Species specificity
- Sensitive period for learning language
- Humans *spontaneously* create languages

Children spontaneously create language: Extreme cases

- Input is totally absent—home sign systems
- Input is inconsistent—Simon
- Input is not a full language—Pidgins and Creoles
Children spontaneously create language: Extreme cases

• Input is totally absent—home sign systems
• Input is inconsistent—Simon
• Input is not a full language—Pidgins and Creoles

Simon (Singleton & Newport)

• Input:
  – Parents were late learners of ASL
  – Parents used required ASL verb inflections only 60% of the time (either omitted obligatory inflections or produced the wrong inflection)
  – In school, only exposed to a Signed English system

• Output:
  – As good as “native of native” children on most aspects of ASL inflection
  – Simon’s own usage of ASL verbs of motion surpasses the performance of his parents
  – How different than parents? Simon does not acquire the “noise” in his parents use of inflections. He boosts the frequency of his parents’ most frequently used form. He regularizes the input.

Children spontaneously create language: Extreme cases

• Input is totally absent—home sign systems
• Input is inconsistent—Simon
• Input is not a full language—Pidgins and Creoles

A New Pidgin: Universal Gestural System
Pidgins and Creoles: The Case of Nicaraguan Sign Language

- 1977: Center for special education opened (100 children by 1979)
- 1980: Vocational school for adolescents opened (400 students in the 2 schools by 1983)
- 1986: Social club for deaf adolescents and adults formed (by 1990, this became the Nat'l Assoc. of Deaf Nicaraguans)
- “First Cohort” of children formed a pidgin based on their collective homesign systems: Lenguaje de Signos Nicaragüense (LSN)
- “Second Cohort” of children received pidgin LSN as input and ‘nativized this inconsistent and insufficient input’ to produce a creole: Idioma de Signos Nicaragüense (ISN)

Watching and signing back “Mr. Koumal Battles His Conscience”

- 25 children, aged 7 yrs to 31 yrs at time of testing
- Age of entry into the community:
  - Young (birth to 6;6), n=8
  - Medium (6;7 to 10;0), n=8
  - Old (10;1 to 27;5), n=9
- Year of entry into the community:
  - Before 1983
  - 1983 or later

Figure 2: The number of inflections per verb is greater overall for signers who entered the community in 1983 or later, and for signers who were exposed to the language at a young or medium age. The young and medium Age at Entry signers are particularly affected by a later Year of Entry.

Figure 8: The number of inflections showing agreement per verb is greater overall for signers who entered the community in 1983 or later, and for signers who were exposed to the language at a young or medium age. The young and medium Age at Entry signers are particularly affected by a later Year of Entry.
Signers who entered the community at a younger age…

- Express more events overall
- Express more events per unit of time
- Inflect more verbs (for locative, person, number agreement)
- Use more size-and-shape classifiers
- Use more object category classifiers (e.g. vehicle)
- Use fewer body-anchored signs (pantomimed actions)

Sum up: Language as an Instinct

- Language is specific to humans, and extremely uniform among humans
- Humans create language without instruction
- Language abilities are partly independent of other cognitive abilities
- Language learning requires a young brain
- Language has the properties of an ‘instinct’

But...

- Identifying a ‘language faculty’ as an instinct (a part of human biology) is just the first step
- What exactly is the ‘language instinct’?
- How does it interact with children’s input to yield very nearly the adult system?
- How is it encoded in the human genome?

Grammar!
Prescriptive Grammar

- Typically states what people should and should not do with a language
  - ... according to some ‘authority’
- It prescribes

Descriptive Grammar

- Describes what people actually do with language
- Explaining how the language system works
- It describes

Some Prescriptive Rules of English

- *Don’t* use *ain’t*
- *Don’t* split infinitives
- *Don’t* end a sentence with a preposition
- *Don’t* use *who* in place of *whom*

Some Descriptive Rules of English

- The subject precedes the verb, the object follows the verb
  - “The dog chewed the bone.”
  - *“Chewed the bone the dog”*
- Auxiliary verbs precede the subject in questions
  - “What has she done?”
  - “What has she done?”
- Form the plural of a noun by adding ‘-s’
  - dog --> dogs; circumstance --> circumstances
Mental Grammar

- The knowledge that is stored in a speaker’s head about his/her language
- Words and word order patterns (*syntax*)
- Sounds and sound patterns (*phonology*)
- Ways of constructing meanings (*semantics*)
- Ways of constructing words (*morphology*)
- Most of this ‘knowledge’ is *unconscious* (cf. vision, walking)

Mental Grammar (cont.)

- All speakers have a systematic mental grammar
- Low prestige speech is also systematic
  - “I ain’t done nothing”
  - “Done ain’t I nothing”
  - “Nothing I done ain’t.”

Promissory Note:
The Case of the Missing Copula (Labov)

Where do Prescriptive Rules come from?

- Rules adopted into English from Latin
- Rules adopted from mathematics
- Speech patterns imposed by speakers with high social prestige
Chaz was right!
Origin of ain’t

<table>
<thead>
<tr>
<th>1700s</th>
<th>Later (some dialects)</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>ain’t</td>
<td>—</td>
</tr>
<tr>
<td>2nd</td>
<td>aren’t</td>
<td>aren’t</td>
</tr>
<tr>
<td>3rd</td>
<td>isn’t</td>
<td>isn’t</td>
</tr>
</tbody>
</table>

Split Infinitives

6a. “To boldly go where no man has gone before.”
6b. “To go boldly where no man has gone before.”
7a. “I want to quickly read the newspaper.”
7b. “I want quickly to read the newspaper.”

English infinitive = 2 words, to + verb stem

Which sounds more natural?

I hope unexpectedly to win the prize.
I hope to unexpectedly win the prize.
I hope to win unexpectedly the prize.

(Bishop Robert Lowth, 1762, A Short Grammar of the English Language)
Prescriptive rules are effortful to follow

- “The English-speaking world may be divided into:
  (1) those who neither know nor care what a split infinitive is
  (2) those who do not know, but care very much
  (3) those who know and condemn
  (4) those who know and approve
  (5) those who know and distinguish

  Those who neither know nor care are the vast majority, and are a happy folk, to be envied.”
  – H. W. Fowler, Dictionary of Modern English Usage

Sentence-final Prepositions

3a. "What did the president talk about?"
3b. “About what did the president talk?”
3c. “Who did you sit with?”
3d. “With whom did you sit?”

Sentence-final Prepositions

Stranding of prepositions is descriptively impossible in Romance languages, e.g. Latin, Italian, French, Spanish
4. “Quien Juan ha hablato con?”

Sentence-final Prepositions

5. “This is a rule up with which we should not put.”
   (Winston Churchill)
A preposition is something you shouldn’t end a sentence with…

- the bed had not been slept in
- something to talk about
- what are you looking for?
- in the bed had not been slept
- something about which to talk
- for what are you looking?

Where do Prescriptive Rules come from?

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Norms of Socially Dominant Group

- US: white, northern, wealthy class
- UK: southern upper-class English

Dialects

- Every group of people speaks a dialect (we all speak some dialect of English)
  - British English vs. American English vs. Belfast English
  - African American English vs. Appalachian English vs. ‘Standard American English’
- From a scientific perspective, no dialect is any ‘better’ or ‘worse’ than another.
- However, humans, being who they are, look at different dialects and assign them social values
- The dominant or prestige dialect is often called the ‘standard dialect’.
Determining whether two language ‘varieties’ are dialects of the same language or whether they are different languages

- Some mutually intelligible languages with the same basic grammar are considered different LANGUAGES for social reasons (religion/nationalism). Sometimes writing systems play a role too.
  - e.g. HINDI and URDU are mutually intelligible, but HINDI is mostly spoken in India by Hindus, while URDU is mostly spoken in Pakistan by Muslims.

- Some mutually unintelligible languages are considered different DIALECTS, again for political reasons.
  - e.g. Mutually unintelligible languages spoken in China are thought of as DIALECTS due to a common writing system and culture and use within a single country.

Prescriptive or descriptive rule?

A tricky example

- Don’t use double negation
  - “I didn’t do nothing”

Double Negatives

9. English
   a. “I didn’t see nothing.”
   b. “He didn’t never say nothing like that.”

Double Negatives

9. English
   a. “I didn’t see nothing.”
   b. “He didn’t never say nothing like that.”

Mathematicians may object, but ...

10. Spanish
    “No vi nada.”
    I didn’t see nothing.

11. French
    “Il n’a jamais dit cela.”
    He hasn’t never said that.
It can be difficult to step out of our own social context and see the scientific equivalence of different dialects.

**British vs. American English**

Different: not better or worse

<table>
<thead>
<tr>
<th>American</th>
<th>British</th>
</tr>
</thead>
<tbody>
<tr>
<td>I might.</td>
<td>I might do.</td>
</tr>
<tr>
<td>The committee is meeting.</td>
<td>The committee are meeting.</td>
</tr>
<tr>
<td>Bill is in the hospital.</td>
<td>Bill is in hospital.</td>
</tr>
</tbody>
</table>

**Examples**

- The Americans are reducing their defense expenditure this year. I wonder if the Russians will do too.
- I didn't touch the television set, but Percy might have done.
- L. King: You're not going to write a book and put it away anymore?

**American vs. British English**

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<tr>
<td>I might.</td>
<td>I might do.</td>
</tr>
<tr>
<td>I might have.</td>
<td>I might have done.</td>
</tr>
<tr>
<td>I could.</td>
<td>I could do.</td>
</tr>
<tr>
<td>I may.</td>
<td>I may do.</td>
</tr>
<tr>
<td>Let's see if he does.</td>
<td>Let's see if he does do.</td>
</tr>
</tbody>
</table>
**British vs. American English**
Different: not better or worse

<table>
<thead>
<tr>
<th>AMERICAN ENGLISH</th>
<th>BRITISH ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill is <em>in jail</em></td>
<td>Bill is <em>in jail</em></td>
</tr>
<tr>
<td>Bill is <em>in school</em></td>
<td>Bill is <em>in school</em></td>
</tr>
<tr>
<td>Bill is <em>in the hospital</em></td>
<td>Bill is <em>in hospital</em></td>
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Is American English ‘wrong’, or somehow inferior to British English because it is less consistent?

No: it’s just different.

**AMERICAN ENGLISH**

- I like *myself*
- You like *yourself*
- He likes *himself*
- She likes *herself*
- We like *ourselves*
- You like *yourselves*
- They like *themselves*

**African American English**

- I like *myself*
- You like *yourself*
- He likes *himself*
- She likes *herself*
- We like *ourselves*
- You like *yourselves*
- They like *themselves*

**Where might Descriptive Rules come from?**

- Saying what ‘makes sense’?
- Saying what is easily understandable?

**SAE vs. AAVE**
Different: not better or worse

<table>
<thead>
<tr>
<th>‘Standard’ American English</th>
<th>African American English</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like <em>myself</em></td>
<td>I like <em>myself</em></td>
</tr>
<tr>
<td>You like <em>yourself</em></td>
<td>You like <em>yourself</em></td>
</tr>
<tr>
<td>He likes <em>himself</em></td>
<td>He likes <em>hisself</em></td>
</tr>
<tr>
<td>She likes <em>herself</em></td>
<td>She likes <em>herself</em></td>
</tr>
<tr>
<td>We like <em>ourselves</em></td>
<td>We like <em>ourselves</em></td>
</tr>
<tr>
<td>You like <em>yourselves</em></td>
<td>You like <em>yourselves</em></td>
</tr>
<tr>
<td>They like <em>themselves</em></td>
<td>They like <em>thirselves</em></td>
</tr>
</tbody>
</table>

**Some Constructions disallow certain verbs**

- gave
- donated
- bought
- offered
- sent
- obtained
- presented

The millionaire \{ the museum, a painting. \}
Jabberwocky

Colorless green ideas sleep furiously.

Descriptive rules of grammar tell you that even though this doesn't make any sense, it is grammatically well-formed.

Where might Descriptive Rules come from?

• Saying what ‘makes sense’?
• Saying what is easily understandable?

• …or it’s just the way that English (French, Swahili, Ojibwa…) works

Variation in Descriptive Rules Across Languages

• Some descriptive facts about individual languages are idiosyncratic

Every language has a unique vocabulary
Comparative ‘-er’

This one is...  This one is EVEN...
big ______
happy ______
enormous ______
sad ______
melancholy ______
red ______
crimson ______
delighted ______
fun ______

Variation in Descriptive Rules Across Languages

• Some descriptive facts about individual languages are idiosyncratic

• Other facts come up again and again from language to language

Languages are alike in basic ways

• All languages have a way of turning statements into questions, and they do so in 1 of just 2 ways

• Declarative: Zoe saw a helicopter last week.

• Option A: Zoe saw what last week?

• Option B: What did Zoe see last week?

• Unattested: Zoe saw last week what?

• No language uniformly moves the question word to the end of the sentence to form a question

Some or Any?

Yesterday Nicole didn’t eat _____ pizza.
Yesterday Nicole did eat _____ pizza.

I made margaritas after _____ guests had arrived.
I made margaritas before _____ guests had arrived.

One computer had _____ games on it.
Only one computer had _____ games on it.

Every tourist who ate _____ mussels got stomach cramps.
Every tourist who ate mussels got _____ stomach cramps.
Other Negative Polarity Items in English

Ever
Give a red cent
Lift a finger
Budge an inch
A damn thing

Variation in Descriptive Rules Across Languages

• Some descriptive facts about individual languages are idiosyncratic

• Other facts come up again and again from language to language

• These different types of variation point to the answer to a paradox…

Paradox

• We have seen evidence that language is a human instinct, and thus ‘innate’

• Yet children do have to learn at least some aspects of language

• How can both of these be true?

“…language acquisition in humans seems to involve a type of learning that is heavily constrained, or predisposed to follow certain limited courses, by our biology.” (Gleitman & Newport)

The paradox leads to a research program

• What parts of language are part of our biology?

• Those parts that we discover: We’ll call them UNIVERSAL GRAMMAR

• How to pursue the question:
  – Crosslinguistic analysis of the details of many languages
  – Study languages in their infancy (Nicaraguan Sign Language)
  – Study child language learning
Reading and Homework

Spelke (2003)
What Makes Us Smart

Jackendoff (1997)
How Language Helps Us Think

Written Assignment (homework 1) is due on Monday