Are there primitive languages?

Language Myths and Realities
July 11, 2007
Framing the question

• What factors determine whether one language is more primitive than another?
Framing the question

• What factors determine whether one language is more primitive than another?
  – Lexical distinctions?
Lexical relativity

- Color terms (Berlin and Kay 1969; Heider and Oliver 1972)
- All languages have some color terms
- Universal implicational scale:

<table>
<thead>
<tr>
<th>black(dark)</th>
<th>red</th>
<th>green</th>
<th>blue</th>
<th>brown</th>
<th>purple</th>
</tr>
</thead>
<tbody>
<tr>
<td>white(light)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pink</td>
</tr>
<tr>
<td>yellow</td>
<td></td>
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<td></td>
<td></td>
<td>orange</td>
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<tr>
<td>gray</td>
<td></td>
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<td></td>
<td></td>
<td>gray</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dani</th>
<th>Tvi</th>
<th>Ibo (G)</th>
<th>Tamil</th>
<th>Malayalam</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td>Nupe</td>
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<td>Nez Perce</td>
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<td>Tzeltzl (GY)</td>
</tr>
</tbody>
</table>

- No difference in short-term recall, recognition, similarity judgments (using color chips)
Caffé

- Espresso
- Americano
- Coretto
- Doppio
- Freddo
- Caffé Hag (decaffinato)
- Latte
- Macchiato
- Marocchino
- Stretto
- Cappucino (cappucio)
Framing the question

• What factors determine whether one language is more primitive than another?
  o Lexical distinctions
Framing the question

• What factors determine whether one language is more primitive than another?
  o Lexical distinctions
  – Grammatical categories?
Mohawk

- **ka-rák-Λ**
  NnS-white-STAT
  ‘It is white.’

- **ka-wis-ahútsi thíkΛ.**
  NnS-glass-black that
  ‘That glass is black.’

- **t-yo-ya’t-Λ’-Λ**
  CIS-NsO-body-fall-STAT
  ‘It has fallen.’

- **T-a’-ka-wís-Λ’-ne’ thíkΛ.**
  C-F-NsS-glass-fall-PNC that
  ‘That glass fell.’
Mohawk

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  NnS-white-STAT
  ‘It is white.’

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- ***ká-rak-s**
  NsS-white-HAB
  ‘It (habitually) whites.’

- **t-yo-ya’t-Λ’-Λ**
  CIS-NsO-body-fall-STAT
  ‘It has fallen.’

- **T-a’-ka-wís-Λ’-ne’ thíkΛ.**
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  ‘That glass fell.’

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  ‘It (habitually) falls.’
Framing the question

• What factors determine whether one language is more primitive than another?
  o Lexical distinctions
  o Grammatical categories
Framing the question

• What factors determine whether one language is more primitive than another?
  o Lexical distinctions
  o Grammatical categories
  – Systematicity?
English

• The man sees the turtle.
• The turtle sees the man.
Kayardild

- Bangaa dangkaya kurrija.  
  Bangaa kurrija dangkaya.  
  Dangkaya bangaa kurrija.  
  Dangkaya kurrija bangaa.  
  Kurrija bangaa dangkaya.  
  Kurrija dangkaya bangaa.

‘The man sees the turtle.’

‘The turtle sees the man.’
Kayardild


‘The man-**SUBJ** sees the turtle-**OBJ**.’
Hawai’ian Pidgin English

• Inside dirt and cover and blanket, finish
  ‘They put the body in the ground and covered it with a blanket and that's all.’

• Me cape buy, me check make.
  ‘He bought my coffee; he made me out a check.’
  ‘I bought coffee, I made him out a check.’
Hawai’ian Creole English

• ‘Permanent/essential’ properties: $\emptyset$.
  – Da baby cute.
    ‘The baby is cute.’

• ‘Temporary/accidental’ properties: stay.
  – Da water stay cold.
    ‘The water is cold.’

• Compare Spanish ser vs. estar.
Framing the question

• What factors determine whether one language is more primitive than another?
  o Lexical distinctions
  o Grammatical categories
  ✓ Systematicity
Some characteristics of human language

• 5 characteristics of language use and meaning
  – semanticity (words can be about external things in the world)
  – arbitrariness (word meaning is symbolic, not iconic)
  – prevarication (language can be used to lie)
  – displacement (we can refer to objects and events distant in place and time from the speech event; “black scorpions”)
  – reflexiveness (language can refer to itself and its properties)

• 3 characteristics of language structure
  – discreteness (the pieces are discrete, not continuous)
  – duality of patterning (small number of sounds combine to make words, finite number of words make sentences)
  – productivity (number of possible utterance types is infinite)
Some characteristics of human language

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## Semantic Primes

Table 1.2: *Proposed semantic primes*

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
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</thead>
<tbody>
<tr>
<td>Substantives</td>
<td>I, YOU, SOMEONE, PEOPLE, SOMETHING/THING, BODY</td>
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<tr>
<td>Determiners</td>
<td>THIS, THE SAME, OTHER</td>
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<tr>
<td>Quantifiers</td>
<td>ONE, TWO, SOME, ALL, MUCH/MANY</td>
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<td>Evaluators</td>
<td>GOOD, BAD</td>
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<tr>
<td>Descriptors</td>
<td>BIG, SMALL</td>
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<tr>
<td>Mental predicates</td>
<td>THINK, KNOW, WANT, FEEL, SEE, HEAR</td>
</tr>
<tr>
<td>Speech</td>
<td>SAY, WORDS, TRUE</td>
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<tr>
<td>Actions, events and movement</td>
<td>DO, HAPPEN, MOVE</td>
</tr>
<tr>
<td>Existence and possession</td>
<td>THERE IS, HAVE</td>
</tr>
<tr>
<td>Life and death</td>
<td>LIVE, DIE</td>
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<tr>
<td>Time</td>
<td>WHEN/TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME</td>
</tr>
<tr>
<td>Space</td>
<td>WHERE/PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE</td>
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<tr>
<td>Logical concepts</td>
<td>NOT, MAYBE, CAN, BECAUSE, IF</td>
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<tr>
<td>Intensifier, augmentor</td>
<td>VERY, MORE</td>
</tr>
<tr>
<td>Taxonomy, partonomy</td>
<td>KIND OF, PART OF</td>
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<tr>
<td>Similarity</td>
<td>LIKE</td>
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</table>

List based on study of roughly 30 languages from many areas/families.
Recursion

1) Mr. Burns bribed Mayor Quimby.
2) Bart \textit{claims that} Mr. Burns bribed Mayor Quimby.
3) Lisa \textit{insists that} Bart claims that Mr. Burns bribed Mayor Quimby.
4) Marge’s \textit{been saying that} Lisa insists that Bart claims that Mr. Burns bribed Mayor Quimby.
5) Homer \textit{thinks that} Marge’s been saying that Lisa insists that Bart claims that Mr. Burns bribed Mayor Quimby.
Recursion

Lisa insists that Bart claims that Mr. Burns bribed Quimby.

- $S = NP \ VP$
- $VP = V \ C(omplementizer)P$
- $CP = C \ S$

Diagram:

- S
  - NP
    - Lisa
  - VP
    - V
      - CP
        - C
          - S
            - NP
              - Bart
            - VP
              - V
                - CP
                  - C
                    - S
                      - NP
                        - Mr. Burns
                      - VP
                        - V
                          - NP
                            - bribed
                            - Quimby
Recursion

Fig. 2. A schematic representation of organism-external and -internal factors related to the faculty of language. FLB includes sensory-motor, conceptual-intentional, and other possible systems (which we leave open); FLN includes the core grammatical computations that we suggest are limited to recursion. See text for more complete discussion.

From: Hauser, Chomsky and Fitch, 2002, ‘The Faculty of Language: What is it, who has it, and how did it evolve?’ Science 298.
Framing the question

• What factors determine whether one language is more primitive than another?
  ✓ Systematicity
  ✓ Semantics/Displacement
    – Semantic primes
  ✓ Productivity
    – Recursion
Framing the question

• What factors determine whether one language is more primitive than another?
  ✓ Systematicity
  ✓ Semantics/Displacement
    – Semantic primes
  ✓ Productivity
    – Recursion
• Discreteness?
Pirahã
Pirahã

• An indigenous language spoken in several villages along the Maici River, in the Lowland Amazonia region of Brazil.
The Pirahã people maintain a hunter-gatherer existence and reject assimilation into mainstream Brazilian culture.

Little contact with the outside world, evidently as a matter of choice.
Pirahã

• Approximately 150-200 speakers.
Pirahã

- Approximately 150-200 speakers.
- Most of the men and all of the women are **entirely monolingual**.
Pirahã

• Documented most extensively by linguists Dan and Keren Everett (originally for SIL) over the past thirty years.
Pirahã Exceptionality

• According to Dan Everett, Pirahã contains several unexpected ‘gaps’:
  – No numbers or quantifiers
  – No color terms
  – An unusually small set of pronouns
  – No embedding (and maybe no recursion at all)
  – An unusually small set of kinship terms
Numbers and Counting

• No grammatical number marking:

1. hiaitīhi  hi  kaoāibogi  bai  -aagā
   Pirahā people he evil spirit fear -be
   “The Pirahā are afraid of evil spirits," “A Pirahā is afraid of an evil spirit," “The Pirahā are afraid of an evil spirit," or “A Pirahā is afraid of evil spirits.”

2. kó’oí,  kóhoibiíhai,  hi  píai,  ‘aáibigai,  
   name  name  he  also,  name
   hi  píai,  hi  koabáipí
   he  also,  he  die
   “Kó’oí, Kóhoibiíhai, and ‘aáibigai died.”

3. kó’oí  hi  koabáipí
   name  he  die
   “Kó’oí died.”

4. báigipóhoaá  ’i  ’óooí  kobai  -baaí
   name: feminine she tarantula watch -intently
   “Báigipóhoaá watched the tarantula[s] closely.” [This can refer to one woman named “Báigipóhoaá” or several.]
Numbers and Counting

• And no numbers, either:
  – hói ‘small amt’
  – hoí ‘larger amt’
  – báagiso ‘many/group’
  – ‘ogií ‘big’

5. a. tí ’itíí’isi hói hii ’aba’aígio ’oogabagaí
   I fish small predicate only want
   “I only want [one/a couple/a small] fish.” (This
could not be used to express a desire for one
fish that was very large except as a joke.)
   b. tiobáhai hói hii
   child small predicate
   ”small child/child is small/one child”

6. a. tí ’itíí’isi hoí hii ’oogabagaí
   I fish larger predicate want
   “I want [a few/larger/several] fish.”
   b. tí ’itíí’isi báagiso ’oogabagaí
   I fish many/group want
   “I want [a group of/many] fish.”
   c. tí ’itíí’isi ’ogií ’oogabagaí
   I fish big want
   “I want [a big/big pile of/many] fish.”
Table 1. Use of fingers and number words by Pirahã participant. The arrow (→) indicates a shift from one quantity to the next.

<table>
<thead>
<tr>
<th>No. of objects</th>
<th>Number word used</th>
<th>No. of fingers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>hói (= 1)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>hói (= 2)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>aibaagi (= many)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>hói (= 2)</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>hói (= 2)</td>
<td>5 → 3</td>
</tr>
<tr>
<td></td>
<td>aibaagi (= many)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>aibaagi (= many)</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>aibaagi (= many)</td>
<td>6 → 7</td>
</tr>
<tr>
<td>7</td>
<td>hói (= 1)*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>aibaagi (= many)</td>
<td>5 → 8</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>5 → 8 → 10</td>
</tr>
<tr>
<td>9</td>
<td>aibaagi (= many)</td>
<td>5 → 10</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>
Quantification

• All children like fish.
  Children like fish.
  Most children like fish.
  Some children like fish.
  No children like fish.

• The child ate all the fish.
  The child ate most of the fish.
  The child ate some of the fish.
  The child ate none of the fish.
Quantification

- Pirahã appears to use the same scalar terms for lots of quantities:
  - ‘ogi ‘big’
  - hói ‘small amount’

“We ate most of the fish.” [lit. “My bigness ate [at] a bigness of fish, nevertheless there was a smallness we did not eat.”]
Quantification

• Pirahã appears to use the same scalar terms for lots of quantities:
  – ‘ogi ‘big’
  – hói ‘small amount’

12. 'igihí  hi  'ogiáagaó  'oga
    man  he  bigness  field
hápii:  'aikáibaísi,  'ahoáápati  pío,
    went  name,  name  also,
tíígi  hi  pío,  'ogiáagaó
    name  he  also  bigness

“The men all went to the field, ‘aikáibaísi, ‘ahoáápati, tíígi all went.”

13. gáta  -hai  hói  hi  -i
    can  -foreign object  small  intensive  -be
'aba  -'á  -igi  -o
    remain  -temporary  -associative  -location
'ao  -aagá  'agaoa ko  -ó
    possession  -be [temporary]  canoe gut  -direction

“There were [a] few cans in the foreigner’s canoe.”
Quantification

- This looks like quantification:
  - báaiso ‘whole’
  - gíái ‘piece/part’

15. a. tiobáhai hi poogaíhiaí báaiso
    child he banana whole
    kohoi -sóog -ab -agaí
    eat -desiderative -stay -thus
    “The child wanted/s to eat the whole banana.”
    [lit. “Child banana muchness/fullness eat is desiring.”]

b. tiobáhai hi poogaíhiaí gíái
    child he banana piece
    kohoi -sóog -ab -agaí
    eat -desiderative -stay -thus
    ”The child wanted/s to eat part of the banana.”
    [lit. “Child banana piece eat is desiring.”]
Quantification

- **But Everett says no:**

In the following examples someone has just killed an anaconda and upon seeing it, utters 16a. Someone takes a piece of it, and after the purchase of the remainder the content of 16a is reaffirmed as 16b. In the English equivalent, where the same context is assumed, when the statement “He will likely buy the whole anaconda skin” is followed by the removal of a piece in full view of interlocutors, it would simply be dishonest and a violation of the meaning of ‘whole’ to say, “He bought the whole anaconda skin,” but this is not the case in Pirahã.

16. a. ʰáoi hi paóhoa’ai ʰisoí
foreigner he anaconda skin
báaiso ’oaboí -hai
“whole” buy -relative certainty
“The foreigner will likely buy the entire anaconda skin.”

b. ʰaió hi báaiso ’oaoób
affirmative he “whole” buy
-áhá hi ’ogió
-complete certainty he bigness
’oaoób -áhá
buy -complete certainty
“Yes, he bought the whole thing.”
Color Terms

**Table I**

*World Color Survey Chart of Pirahã Color Terms*

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Term</th>
<th>Gloss</th>
<th>Users</th>
<th>Basic Color Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>bio’pa'i ai³</td>
<td>black {extended}</td>
<td>25</td>
<td>+</td>
</tr>
<tr>
<td>–</td>
<td>ko’bi’ai³</td>
<td>white {extended}</td>
<td>25</td>
<td>+</td>
</tr>
<tr>
<td>+</td>
<td>bi’i’sai³</td>
<td>red/yellow</td>
<td>25</td>
<td>+</td>
</tr>
<tr>
<td>o</td>
<td>a’ho’a’saa’ga³</td>
<td>green/blue {green-focused}</td>
<td>25</td>
<td>+</td>
</tr>
</tbody>
</table>

- “All four terms for black, white, red/yellow, and green/blue are used by all speakers with clearly defined ranges and very high consensus (100% maximum in all cases) in the term maps. There is also considerable uniformity in the individual naming arrays. No other terms were recorded in the naming task.” – Steve Sheldon, in Kay et al. *World Color Survey* (U of C Press), reporting on field experiments.
Color Terms

• But Everett says that none of these are basic lexical items.
• He further questions the validity of Sheldon’s results, suggesting that the observed agreement may be spurious.

20. bii
   blood
   “Blood is dirty.”

21. k
   object
   “It sees.”

22. bi³i³
   blood
   “bloodlike”

23. a³hoa³s
   immature
   “temporarily being immature”
Pronouns

• **No number distinctions:**
  – ti **‘first person’**
  – gi/gia **‘second person’**
  – hi **‘third person’**
  – ‘i **‘third person feminine’**
  – ‘is **‘third person nonhuman’**
Recursion

• “One more unusual feature of Pirahã, perhaps the strangest of all, is the absence of clear evidence for embedding. Indeed, the evidence suggests that Pirahã lacks embedding altogether.” – Dan Everett (2005, p. 628)
Recursion

• What looks like sentence embedding is really just ‘paratactic conjunction’ of a noun (‘arrow making’) and a sentence (‘he knows’, lit. ‘he sees well’).

25. a. hi ob -áa’ái kahai kai -sai
   he see -attractive arrow make -nominative
b. kahai kai -sai hi
   arrow make -nominative he
ob -áa’ái
see -attractive
c. hi kahai kai -sai
   he arrow make -nominative
ob -áa’ái
see attractive

“He knows how to make arrows well.” (lit. “He sees attractively arrow-making.”)
Recursion

• Similarly for temporal clauses, conditionals, etc.

31. kohoai -kabáob -áo ti
    eat -finish -temporal I

32. pii -boi -sai ti
    water vertically move -nominalizer I

   -abagái
   -frustrated initiation
   “When [I] finish eating, I want to speak to you.”
   (lit. “When eating finishes, I speak-almost want.”)

   There is almost always a detectable pause between the temporal clause and the “main clause.” Such clauses may look embedded from the English translation, but I see no evidence for such an analysis. Perhaps a better translation would be “I finish eating, I speak to you.” The similar conditional that follows uses nominalization:

   “If it rains, I will not go.” (lit. “Raining I go not.”)
What do we make of all of this? Before we assess the data, let’s consider Everett’s explanation.

According to Everett, the Pirahã people do not create fiction, nor do they have creation stories or myths, unlike speakers of closely related languages in the area.

This leads to an interesting hypothesis about the relation between culture and grammar.
Immediacy of Experience Principle

• “Declarative Pirahã utterances contain only assertions related directly to the moment of speech, either experienced (i.e. seen, overheard, deduced, etc. – as per the range of Pirahã evidentials) by the speaker or as witnessed by someone alive during the lifetime of the speaker.” (Everett 2007, p.4)
Immediacy of Experience Principle

- **No recursion**
  Embedded sentences are not assertions

- **No numbers, quantifiers or color terms**
  Involve generalizations beyond immediate experience; numbers may require recursion

- **Kinship terms**
  No relations beyond life expectancy (40yrs)

- **Pronouns**
  No need for variables
What’s at stake

• “With respect to Chomsky’s proposal [of Universal Grammar], the conclusion is severe – some of the components of so-called core grammar are subject to cultural constraints, something that is predicted not to occur by the universal grammar model.” (Everett 2005, p. 622)
The nail in the coffin

• “Everett also argues that the Pirahã language is the final nail in the coffin for Noam Chomsky’s hugely influential theory of universal grammar.” – The New Scientist

• “At [UG’s] core is the concept of ‘recursion’, defined as the ability to build complex ideas by using some thoughts as subparts of others, resulting in subordinate clauses. The Pirahã language has none of these features; every sentence stands alone and refers to a single event…. Professor Everett insists the example of the Pirahã, because of the impact their peculiar culture has had upon their language and way of thinking, strikes a devastating blow to Chomskian theory.” – The Independent
How exceptional is Pirahã?

- Before proponents of UG abandon it and start looking for another problem to solve, it makes sense to take a closer look at the Pirahã ‘gaps’.
Numbers

• Languages vary in their number systems, with base 5 or 10 systems most common, but ‘1, 2, many’ systems also well-attested.

• To determine whether hói and hoí do or do not mean 1 and 2 – and whether it matters from the point of view of semantic universals – we need to assess the role of imprecision:
  – I bought \{3, 5, 10, 11, 15, 17, 20, 23\} bagels.
Quantification

The same goes for quantification: this example is not necessarily evidence that báaiso does not mean ‘all’, since this could be a case of imprecision. Just because (16b) would be dishonest in a Western context, doesn’t mean it would be in a Pirahã context.

16. a. 'áoóí hi paóhoai 'isoí
foreigner he anaconda skin
báaiso 'oaboi -hai
"whole" buy -relative certainty
"The foreigner will likely buy the entire anaconda skin."

b. 'aió hi báaiso 'oaob
affirmative he "whole" buy
-áhá hi 'ogió
-complete certainty he bigness
'oaob -áhá
buy -complete certainty
“Yes, he bought the whole thing.”
Imprecision

- Sometimes we use sentences that are literally false in informative ways: this is ‘loose talk’:
  - I arrived at 3pm.
  - The quarter is all done.
  - No one wants to take ten courses at once.
  - The container is full.

- The conditions under which this is licensed are variable and conditioned by all sorts of extralinguistic factors.
Imprecision

• Adults and children show different tolerances for imprecision in an experimental task involving the interpretation of gradable adjectives in definite NPs (Syrett, Kennedy and Lidz 2006, 2007).
  – the big $N$
  – the long $N$
  – the spotted $N$
  – the full $N$
“Please give me the __ one.”

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- √: Green cube
- √: Blue cube
- √: Green rectangle
- √: Blue rectangle
- √: Green circle
- √: Blue circle
- √: Red cylinder
- √: Red cylinder
- √: Red cylinder
- √: Red cylinder

* 2!
* 0!
Imprecision

spotted/less spotted
“They’re both spotted!”
(adults and children)

non-full/less full
“There’s no full one!”
(adults only)
Children took significantly longer to respond to the non-full/less full item than any other item, which suggests that they are performing a calculation to determine whether the request was ‘close enough to true’ to allow them to behave in a way that would satisfy the experimenter’s request.

Could something similar be going on in the Pirahã case?
Even though there is a certain “quantificational smell” here, the truth conditions are not the same for generics as for quantificational readings. In fact, I and others who have visited the Pirahã have misunderstood statements like these and/or their literal translations because we do translate them into Western languages as generic, universal quantification. These never mean that all beings with blood, for example, fail to inspire fear. That there are always exceptions is understood by the utterer and the hearer. It seems, though, that such sets conform to the postulate of cultural constraint on grammar and living because they are bounded by immediate experience (e.g., “evil spirits I know about”) and thus are not fully intensional. Rather, each member of the set has to be inspected to see whether it is an evil spirit or being with blood and, if so, whether it is like other such beings.

18. tí ’übisí hi baiai -hiaba
    I blood-one he fear -negative
    “I am not afraid of beings with blood.”

19. kaoáíbogi hi sabí ’áagahá
    evil spirit he mean is {permanent}
    “Evil spirits are mean.”
Color terms

• “Experience of color is about as direct as experience gets. [...] Linguistically, color terms exemplify a rare, arguably unique lexical field in that its distinctions are directly traceable to complex peripheral neural structures—in the retina.” (Kay 2005, reply to Everett)

• The crucial questions:
  – Are the meanings consensual and applicable to unfamiliar objects?
  – Are the color meanings non-compositional?
Pronouns

- **Pirahã**
  - SING
  - ti
  - gí
  - hi
  - PLURAL
  - tiaítiso
  - giaítso
  - hixaítso

- **Chinese**
  - SING
  - wo
  - ni
  - ta
  - PLURAL
  - women
  - nimen
  - tamen

The morpheme aítiso is glossed as ‘also’ in one of the early analyses of the language (by Sheldon), and could be a systematic pluralizer of pronouns. Everett (2007) discounts this analysis. Regardless, it is unclear how (lack of) marking of grammatical number on pronouns has anything to do with the Immediacy of Experience Principle, or whether it is a real ‘gap’.
Recursion

- Many languages turn complement clauses into (special types of) noun phrases (e.g., Quechua, Turkish, Inuktitut…).
- In contrast, nominal marking is generally not observed in cases of parataxis; instead, the connected units are on ‘equal footing’.
- But even if Everett is right, can we be sure there’s no recursion?
• What're you having, conch? You ever see it they take it out of the shell? You wouldn't eat it.
  
  – Maurice Zola: “five-five, weighed about one-fifteen and spoke with a soft urban-south accent that had wise-guy overtones, decades of street-corner styles blended and delivered, right or wrong, with casual authority” (from Elmore Leonard’s *LaBrava*):
Recursion

• This?

\[ S_1 \text{ if } [S_2 \text{ when } S_4] \text{ then } S_5 \]

• Or this?

\[ S_1 \text{ ? } S_2 \text{ ? } S_3 \]
Recursion

- Moreover, the data presented show a kind of ‘semantic recursion’ already:
  - Evidential morphology $EVID(p)$
  - Desiderative morphology $DESID(p)$
  - Negation $NOT(p)$

- Do combinations like these obviate the need for complex clausal structures of the sort we see so frequently in English?
Conclusions

• It’s clear that there is a lot more to learn about this language and its speakers.
• It likewise appears to be too early to draw any strong conclusions about whether this language is lacking ‘core design features’ relating to semanticity/displacement or productivity.
Framing the question

• What factors determine whether one language is more primitive than another?
  ✓ Systematicity
  ✓ Semanticity/Displacement  
    – Semantic primes
  ✓ Productivity
    – Recursion
• Discreteness?
Discreteness

• “The Pirahã people communicate almost as much by singing, whistling and humming as they do using consonants and vowels.”
  – Whistle speech: men only, used in hunting. 
    Káï’ihí ‘ao ‘aa-gá gáihí pacá possible exist-be there
    ‘There is a pacá.’
  – Normal: 
  – Whistle: 
Summary

• The range of linguistic diversity is huge; this makes it all the more astounding that languages have the same core properties, the same expressive power, and are acquired in the same way.

• That said, it is important to take potential counterexamples seriously, and beware the attraction of the ‘universal cookie cutter’.
The Universal Grammar Hypothesis, in particular the idea that the uniquely – and universally – human, innate feature of language is recursion (a mechanism that combines elements from a finite set of discrete units to create an infinite set of outputs), is both compelling and frustrating in its simplicity. Your job this week is to assess the status this hypothesis as a foundation for the scientific study of language, connecting your comments to this week’s readings and lecture as well as to topics from earlier weeks. Issues you could discuss include (but are not limited to):

- Is the UG Hypothesis falsifiable? What kinds of data would clearly show it to be incorrect? Are Everett’s claims that Pirahã is such a counterexample compelling?
- Does the UG Hypothesis determine a clear research program that has the potential to explain the kinds of issues we have been discussing this quarter (linguistic diversity, language acquisition, bilingualism, etc.)?
- Is it the ‘best game in town’, or are there alternative approaches to the kinds of questions and problems that it is supposed to account for that should be considered?