THE LANGUAGE INSTINCT: INTRODUCTION

"The most complex ability and set of facts that any human being ever acquires is the (implicit) knowledge of a native language.”

• Linguistics
  The science of Language

• Linguist
  (1) Someone who speaks several languages (a “polyglot” or “multilingual”)
  *(2) A specialist in the field of Linguistics

BUT…EVERYBODY IS A LINGUIST!

Here are a couple of examples:

(1) Why do we understand these sentences as jokes?

  John bought 50 female pigs and 50 male deer so that he would have 100 sows and bucks.

  We automatically know that “sows and bucks” sounds like “thousand bucks”. We (a) hear the similarity between “s” and “th”, (b) we hear that “and” sounds like the second syllable of “thousand”, and (c) we know that “buck” means either a male deer or is a slang term for a dollar.

  Have you ever seen a horsefly?

  We automatically know that “horse fly” could either be a combination of two nouns meaning a type of insect or a phrase composed of a noun “horse” and a verb “fly”.

  The fearsome ogre raised goats and [et] children.

  This is an “oral” joke since the word [et] can be heard as “8” or “ate”. Our mental analysis goes beyond this, however. Depending on how we interpret [et], we then hear the sentence as the conjunction of two objects—“goats and 8 children”—or the conjunction of two actions—“raising goats and eating children”.

  In all these cases (and every joke that is based on manipulating language!), we mentally pick apart the sounds and grammar, though it is unlikely we could “explain” the jokes or even need to!
(2) In the following phrases, native speakers of the respective languages know that only that particular word order works for that language.

**English:** two big white cows

**Spanish:** dos grandes vacas blancas

**Rumanian:** două vaci mari și albe

**Chinese:** liǎng tǐ tài pài njú
two “classifier” big white cow

**Korean:** khun hin so tu mali
big white cow two “classifier”

**Hausa:** manyan shanu farare biyu
big cows white two

How are we able to make linguistic judgments such as those above?

- Our parents didn’t teach us when we were children
- We didn’t learn these things in high school English classes
- There is nothing that we can point to in the form of the sentences, like word ordering

We might ask

- How does a spider know the good places to put a web.
- How do ducks know to fly south in the winter? How do they know where south is?

*For these questions, we would say that it is an “instinct”. The same is true for acquisition of intuitions about language.*

**What a human language is and what it is not**

- How language is distinct from other communication systems (to be explored in later lectures)
- Properties shared by all human languages

Two related claims:

1. *All languages have equal expressive power as communication systems (there are no “primitive” languages)* (Pinker, pp. 12-16)

- What would it mean for a language to be “primitive”?
  - Small vocabulary?
  - No written form?
Could you imagine a language without …

- A distinction between objects and actions?
- Ways to distinguish speaker (‘me’) from hearer (‘you’) from one spoken about (‘him/her/Them’)?
- Ways to ask questions?
- Ways to differentiate negative from affirmative?
- Ways to “quantify” (numbers, ‘all’, ‘few’, ‘many’, etc.)?
- A way to express conditions (‘if’)?
- Ways to distinguish completed events from events not yet begun?

We expect these and many other features to exist in any language we encounter, and it turns out that they do.

(2) **All languages follow rules of grammar (a native speaker of a language cannot speak “ungrammatically”)** (Pinker 16-19)

What would it mean to speak “ungrammatically”?

Is the sentence below ungrammatical?

“I can’t get no satisfaction.”

The answer depends on what we mean by “grammar”.

<table>
<thead>
<tr>
<th>Two uses of the word “grammar”:</th>
</tr>
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<tbody>
<tr>
<td>(a) <strong>Prescriptive grammar</strong>: Rules imposed as a socially determined “standard” for determining how speakers should construct utterances.</td>
</tr>
<tr>
<td>(b) <strong>Descriptive grammar</strong>: Rules that native speakers of a language instinctively follow in constructing utterances in their language.</td>
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</table>

An example: Rules of Negative Agreement

**Affirmative:** I can get some satisfaction.

**Negative, Dialect 1:** I can’t get any satisfaction.

**Negative, Dialect 2:** I can’t get no satisfaction.

Compare French …

\[ \text{Je vois quelque chose.} \quad \text{‘I see something.’} \]

\[ \begin{array}{ll}
\text{I see some thing} \\
\text{Dialect 1: Je ne vois rien.} \\
\text{I not see nothing} \\
\text{Dialect 2: Je vois rien.} \\
\text{I see nothing} \\
\end{array} \quad \text{‘I don’t see anything.’} \]

In French, it is actually Dialect 2 which is “sub-standard”, even though that is the dialect which more closely resembles the standard English expression.
• Does the universality of Language prove that it is biologically innate?
  (Pinker 19 ff.)

One might claim that …

“People are universally smart and have universal needs. Maybe people invented language independently several times.”

**Three arguments against the claim that language was INVENTED as a product of general intelligence**

(1) **Absence of a relationship between general intelligence and language ability**

| Example—Specific Language Impairment (SLI) vs. Williams Syndrome (Pinker 37-43): People with SLI make errors that no unimpaired native speaker of a language would make, e.g. I was make 140 box, yet on all measures of general intelligence, they score in the normal range or better. People with Williams Syndrome (also called “chatterbox” syndrome) speak fluently—even over-fluently—and grammatically, yet on measures of general intelligence they score well below normal. |

(2) **Acquisition of language by children**

Children, who lack the general cognitive abilities and experiences of adults, “invent” language simply by exposure (Pinker 28-31)

**Pidgins → Creoles** (Pinker 20-23): In social situations where the adults communicated using a *pidgin*—a type of “makeshift” language used by adults who have been thrown together and do not share a language—children who had only the pidgin as input have transformed this into a *creole*—a “full” language with all the properties of languages which have developed through normal language evolution.

<table>
<thead>
<tr>
<th><strong>Pidgins</strong></th>
<th><strong>Creoles</strong></th>
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</thead>
<tbody>
<tr>
<td>• No one’s native language</td>
<td>• The native language of its speakers</td>
</tr>
<tr>
<td>• Used in restricted situations (work, trading)</td>
<td>• Used in all social contexts needing language</td>
</tr>
<tr>
<td>• Variation in use, influenced by speaker’s native languages</td>
<td>• Individual variation no greater than that in any language community</td>
</tr>
</tbody>
</table>

(3) **Physical organs specialized for language**

• **Organs for speech production:** No other mammals have evolved organs that can produce sounds of the variety and with the accuracy needed for speech.

• **Areas of the brain specialized for language:** Many types of evidence show that human brains have evolved areas specifically related to language processing.

Both these points will be discussed in detail later in the course.
• The autonomy of language: the separation of Language and thought

• The Whorf Hypothesis ("Linguistic Determinism"): The structure of our language determines how we see the world, i.e. a language CAUSES its speakers to see the world in a way that speakers of other languages do not see it. … But does it??? (Pinker 48-57)

• Some defects in Whorfian claims:
  1. EQUATING THOUGHT WITH THE LANGUAGE USED TO EXPRESS THE THOUGHT: Saying, “The barrel is empty,” even though it is full of gasoline vapor is not what makes one think that the barrel is empty. In fact, it is just the opposite—the invisibility of gasoline vapor to human vision is the cause of the thought and its linguistic expression. See Pinker, pages 49-50.
  2. CIRCULAR REASONING: Apache speech ↔ Apache thought—The way Apache speakers express themselves linguistically shows that their world view differs from that of English speakers. **But Whorf’s reasoning is CIRCULAR!** How do we know the world views differ? Their modes of linguistic expression differ. Why do their modes of linguistic expression differ? They have different world views. See Pinker, page 50.
  3. MYTHS AND MISINTERPRETATIONS: Many of Whorf’s examples are myths—urban legends! Examples mentioned in Pinker are Eskimo words for snow (Pinker 54); Hopi (non-)expression of time (Pinker 53).
  4. FAILURE TO STAND UP TO SCIENTIFIC SCRUTINY: Controlled experimental studies provide no support for the hypothesis that language shapes thought—color perception (Pinker 56); Chinese understanding of counterfactuals (Pinker 56-57).

Bill Jones and Ahmed Ali visit the animal market in Cairo.

CONCLUSION … Language reflects distinctions people make about the world, it does not cause them to make those distinctions.
In VOCABULARY, human physiology and psychology (e.g. color terminology—Pinker 52) or things that have special importance to a culture (e.g. Eskimos and snow, desert nomads and camels—Pinker 54-55) determine what distinctions languages will make in the words they use.

GRAMMATICAL STRUCTURE has no relation to thought structure: People speaking languages with very different grammatical structures may have similar cultures and vice versa. For example, most languages of East Asia require the use of elaborate systems of honorifics relating to social status, yet the languages are vastly different in structure—see the next lecture!

Is language necessary for thought and can there be language without thought?

Can we think without language? (Pinker 57-63)

Using nothing but language, could you explain precisely to someone the difference between the way two people look? An example: We can recognize faces—a type of thought—but we cannot put such a thought into words in a way that parallels our face-recognition ability.

Does linguistic structure mirror thought? Examples like the following show that it does not…. (Pinker 69-73 gives other types of examples as well)

Grammatical form ≠ thought structure

English: The dog chased the cat.

Korean: Keka koyangilul cochakasst.  
dog cat chased

Tagalog: Hinabol ng aso ang pusa.  
chase the dog the cat

Malagasy: Nanaraha ny saka ny alika.  
followed the cat the dog

Linguistic sense often ≠ intended sense

They are living on a shoestring.
I’ve got you under my skin.
You’re out to lunch.

Here is a YouTube video of Pinker on using words in ways that differ from the intended content:

http://www.youtube.com/watch?v=3-son3EJT5U&feature=player_embedded

Utterances that follow the grammatical patterns of the language but express no thought

Colorless green ideas sleep furiously.
This is Stanley Unwin signy hoffer with wubbleyou all joyphoned.
(from Stanley Unwin, a British radio personality)
Discussion Questions on Language as an “Instinct”

1. Things we know by “instinct”

   a. Put the phrase two big white cows into a language you know other than English. What is the word order? Are other orders possible? Are there things other than word order that the language requires, such as agreement between adjective and noun?

   b. Answer the same question about the following (or other phrases you make up):

      I gave money to the church. or I gave the church money. but not *I gave to the church money. or *I gave money the church.

   c. Who is doing the learning in each of the following sentences?

      My chimpanzee is easy to teach.
      My chimpanzee is eager to teach.

   d. How many students “understand” in each of the following sentences?

      You are the one student who understands.
      You are the only student who understands.
      You are not the one student who understands.
      You are not the only student who understands.

   e. Did John’s team lose?

      John regrets that his team lost the game.
      John assumes that his team lost the game.

2. In each pair of sentences below, one would be called “ungrammatical” in sense (a) on page 11 of the APS book (it does not conform to a norm of “standard” English) whereas the other would be called “ungrammatical” in sense (b), the linguist’s sense (it does not follow the system of “rules” of native speakers of English). For each pair,

   • state which is ungrammatical in sense (a) and which in sense (b).
   • state what the “standard” native English version would be.
   • try to decide WHAT makes the sentence ungrammatical in sense (a) or (b).

   a. Me and my friend talked for three hours.
      Me talked for three hours.

   b. We no need no stinking badges!
      We don’t need no stinking badges!

   c. Tell me why are you ignoring me.
      Tell me why you ignoring me.

   d. Finish quickly your carrots.
      Finish your carrots quick.

   a. What you said you like to make?
   b. What did you learn doing?
   c. What you call?
   d. Where your house?
   e. Where she is from?
   f. Why this “Khalwa” funny name?

   √ How is this “interlanguage” like a pidgin?
   √ How does this differ from a child acquiring a first language?
   √ Why does an example like this call into question the notion that humans might have “invented” language?

4. Hausa, spoken in Nigeria and other parts of West Africa, has the following simple color words: *fari* ‘white’, *ba i* ‘black’, *ja* ‘red’, *kore* ‘green’, *shu i* ‘blue’. Other color terms are derived in various ways, e.g. *ja-ja-ja-ja* “red-red-red-red, reddish” (= ‘pink’), *asa-asa* “earth-earth” (= ‘brown’), or *ruwan goro* “tint of kola” (= ‘orange’, since chewing kola nuts turns one’s saliva orange). The Whorf Hypothesis claims that our linguistic categories shape our perceptions. This incorrectly predicts that we might just as well find people whose primary color terms are ‘pink’, ‘brown’, and ‘orange’ and who see the world in variants of those colors. Why is this prediction false?

5. Here is a table of verb tenses in Chibemba, a Bantu language of Zambia. *Ba* is a plural person subject prefix; *-bomb* is the verb root; grave accent = low tone, acute accent = high tone. (Data from T. Givón, *Studies in Chibemba and Bantu Grammar, Studies in African Linguistics*, Supplement 3, 1969, pp. 174-176.)

<table>
<thead>
<tr>
<th>Verb Form</th>
<th>Translation</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>ba-àléé-bomba</td>
<td>‘They were working.’ (some time before yesterday)</td>
<td></td>
</tr>
<tr>
<td>ba-áléé-bomba</td>
<td>‘They were working.’ (yesterday)</td>
<td></td>
</tr>
<tr>
<td>ba-ácîláá-bomba</td>
<td>‘They were working.’ (earlier today)</td>
<td></td>
</tr>
<tr>
<td>ba-á-bomba</td>
<td>‘They have just worked.’ (within the past 3 hours)</td>
<td></td>
</tr>
<tr>
<td>ba-léé-bomba</td>
<td>‘They are working.’ (now)</td>
<td></td>
</tr>
<tr>
<td>ba-áláá-bomba</td>
<td>‘They will work.’ (within about the next 3 hours)</td>
<td></td>
</tr>
<tr>
<td>ba-lée-bomba</td>
<td>‘They will work.’ (later today)</td>
<td></td>
</tr>
<tr>
<td>ba-ká-bomba</td>
<td>‘They will work.’ (tomorrow)</td>
<td></td>
</tr>
<tr>
<td>ba-ká-bomba</td>
<td>‘They will work.’ (sometime after tomorrow)</td>
<td></td>
</tr>
</tbody>
</table>

“This demonstrates that Chibemba speakers do not think of time as an single “flow” up to the present and away from the present, but rather as a set of discrete periods or “slots” into which events fit.” ARGUE AGAINST THIS CLAIM ABOUT THE WAY CHIBEMBA SPEAKERS VIEW TIME.

6. In what ways do the following items show thought and language to be separate cognitive processes?

   a. Describe the difference between the smell of frying bacon and frying hamburgers.
   b. What I mean when I say, “Hold your horses!”
   c. The sentence, “I can do what I cannot do that I can do.”