

### The language instinct

IIE 269: Cognitive Psychology

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Lecture 25

*Why we do not have to worry about teaching language in school.*

### Linguistics

- Study of language (Noam Chomsky)
  - sentences
  - words
  - sounds
  - structure
  - interpretation
- *The language instinct*
  - Pinker (1994)

### Preconceptions

- We tend to think of language as
  - a great invention of *human* cognition
  - taught to children
  - taught in schools
  - a cultural invention
- This is *wrong!*
  - instead, language is an **instinct**

### Cultural influences

- Culture does influence language
  - Consider words in English
    - » Some derived from the invading Normans (1066) (considered sophisticated and polite)
    - » Some derived from the Anglo-Saxon language of the British Isles (considered crude by the invaders)
  - Norman: perspiration, dine, deceased, desire, urine, excrement
  - Anglo-Saxon: sweat, eat, dead, want, piss, shit
- But this is not what determines our capability to *have* language!

### Biology

- Language is a specialized skill of human animals
  - Darwin (1871)
- Humans instinctively learn language
  - effortless
  - unconscious
  - procedural knowledge

### Learning

- Like all skills, language needs the proper environment to be developed
  - blinded birds cannot navigate by the stars
  - Atlantic Ocean turtles that navigate by magnetic fields need to be in the correct ocean
- Language development needs exposure to other people for communication
  - but it needs surprisingly less exposure than you might suspect

### Child learning

- Children do *not* learn language by simply imitating others
  - ♦ otherwise they would never come up with statements like



Don't giggle me!

We holded the baby rabbits.

I'm felling!

### Learning

- Instead, each child *reinvents* language
  - ♦ difficult to test because we rarely get to see a language created from a non-language
  - ♦ however, there are cases!
- Slave plantations in the South Pacific mixed together people of many different languages
  - ♦ create a jargon called a *pidgin*

### Pidgin

- For example, in New Guinea
  - ♦ pidgin is similar to English (rulers of the plantation)

woman: 'meri' (Mary, generic word for woman)

another man's wife: 'meri bilong enaderfelo man'

hair: 'grass bilong hed'

helicopter: 'mixmasta bilong Jesus Christ'

coffin: 'die bokus'

piano: 'bokus bilong teeth yu hitim teeth bokus is cry'

### Pidgin

- The Ten commandments in pidgin
  - ♦ as translated by the Alexishafen Catholic Mission in 1937
  - ♦ 1. Mi Master, God bilong yu, yu no ken mekim masalai end ol tambaran.
  - ♦ 2. Yu no ken kolim nating nem bilong God.
  - ♦ 3. Yu must santium sande.
  - ♦ 4. Yu mast mekin gud long papamama bilong yu.
  - ♦ 5. Yu no ken kilim man.
  - ♦ 6. Yu no ken brukim fashin bilong marit.
  - ♦ 7. Yu no ken stilim samting.
  - ♦ 8. Yu no ken lai.
  - ♦ 9. Yu no ken duim meri bilong enaderfelo man.
  - ♦ 10. Yu no ken laik stilim samting.

### Learning

- In Hawaii at the turn of the century
  - ♦ workers from China, Japan, Korea, Portugal, The Philippines, and Puerto Rico were brought in to harvest sugar
  - ♦ they developed a pidgin
  - ♦ some were still alive in 1970 and interviewed to see how the pidgin worked

### Learning

- Pidgin is not a true language

- ♦ word order is arbitrary

Me cape buy, me check make.

- ♦ no rules

- ♦ no tenses

- ♦ no prefixes or suffixes

- ♦ can only be understood in context of the conversation

He bought my coffee; he made me out a check.

I bought coffee, I made him out a check.

### Creoles

- The children of these workers speak very differently
  - ♦ if removed from parents (and so unable to learn native tongue)
  - ♦ they transform the pidgin into a *full-fledged language*
    - » *tenses, rules, prefixes, suffixes,...*
- Find the same type of transformations among children learning sign-language

### Sign language

- Nicaraguan schools for the deaf (1979)
  - ♦ tried to teach children to lip-read (poor results)
  - ♦ but children started making a pidgin on the playground
    - » Lenguaje de Signos Nicaraguense (LSN)
- New students took the pidgin and created a language (creole)
  - ♦ Idioma de Signos Nicaraguense (ISN)

### Sign language

- You can even see the *invention* of language in a single child
- “Simon,” a deaf boy who also had deaf parents
  - ♦ parents learned American Sign Language (ASL) late in life and so are not very good at it
- Simon had little contact with other deaf people
  - ♦ but his signing was much better than his parents!
- Language learning is *not* imitation!

### Education

- There is always a group of people who say that we need to get back to the “basics” of education
  - ♦ including studies of grammar
  - ♦ usually, these are veiled versions of racism
- In fact, children do not learn language in school
- No one learns to speak by properly identifying nouns, pronouns, prepositional phrases, verbs, adverbs,...
- Education *is* good for reading and writing
  - ♦ but writing is dramatically different from speaking
  - ♦ and reading is dramatically different from listening

### Education

- But then how do we explain that uneducated people speak improperly?
- e.g. gang member in Harlem

You know, like some people say if your good an' shit, your spirit going t' heaven... 'n' if you bad, your spirit goin' to hell. Well bullshit! Your spirit goin' to hell anyway, good or bad.

### Education

- This person is *not* speaking with bad grammar, but he is also not speaking in Standard American English (SAE)
- He's speaking in a dialect called Black English Vernacular (BEV)
- Both languages have certain rules
- His statements obey the rules of BEV precisely!
- Consider contractions of words

### Rules

- In SAE you can replace some word pairs with contractions
  - ♦ “They are” --> “They’re”
  - ♦ “He is” --> “He’s”
- But you cannot always do this
  - ♦ “Yes he is!” -->? “Yes he’s!”
  - ♦ “Who is it?” -->? “Who’s it?”
- BEV has similar types of rules

### Rules

- BEV allows speakers to drop some words
  - ♦ “...if you are bad...” --> “...if you bad...” is grammatically correct
- BEV does not allow word dropping arbitrarily
  - ♦ “Yes he is!” -->? “Yes he!”
  - ♦ “Who is it?” -->? “Who it?”
- It is difficult for a non-speaker of BEV to notice the application of the rules

### Language

- So if everyone is speaking a language, which is correct?
  - ♦ none, they are just different
  - ♦ they are different *dialects* of English
- Linguist Max Weinreich
  - ♦ “A language is a dialect with an army and a navy.”
- The dialect you speak may give away your personal history, but it is not fundamentally worse than any other dialect.

### Ebonics

- So, should we let everyone speak their own language/dialect without trying to convince immigrants to learn English?
  - ♦ not on the basis of one language/dialect being correct or better
- There are other reasons to want some language uniformity in a society
  - ♦ current debate

### Conclusions

- Language is an instinct
  - ♦ specialized skill among humans
  - ♦ children need little tutoring to learn language
  - ♦ children invent language if one is not readily available
- Language follows rules
  - ♦ even when it doesn’t seem to

### Next time

- Grammar
- Long term dependencies
- Phrases
- Language universals
- *Dr. Francis says something new!*