

# LING 001

# Introduction to Linguistics

## Lecture #4

## **General Features of Human Languages**

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# Announcements

- For those just joining us, **welcome!** You can catch up with the **recorded lectures** and **study guides**.
- My **office hours are cancelled today**.
- **Exam 1** is just 2 weeks away!
- **A/V issues are being resolved** and the loud heater is being fixed.

# How to do well this week

- Do the assigned reading (~1 hour)
- Attempt the practice problems (~2 hours)
  - Go to recitation!
- Briefly review the past study guides (~20 min)

# Main points on Acquisition

- Children **impose structure** and derive **underlying rules** on their linguistic input that goes way **beyond what is present in the input**
  - They will **do things** that adults would not
  - The range of their errors is quite limited & revealing
- The nature of language acquisition thus further supports the idea of **a Language Instinct**
- Link back to **Critical Period Hypothesis:**

The capacities at play are **only present** during a certain **developmental time window**

# All Languages are equal

- All human languages share fundamental properties
- **In a deep way**, they are all equal
- But they are of course not identical
- They are **equal** in
  - Acquisition
  - Complexity
  - Expressiveness

# Equality in...

- **Acquisition:**

All human languages are **acquired by children in the same general way**, using their language instinct

- **Complexity:**

All human languages have **complex rules** for phonology, morphology, and syntax

- **Expressiveness:**

All human languages are equally capable of **expressing complex thoughts**

# Acquisition as Re-invention

- A family of '**natural experiments**':

What happens when children are in an  
environment without a fully formed language?

- **3 case studies:**
  - Pidgins vs. Creoles
  - Nicaraguan Sign Language
  - Deaf children without native signer contact

# Pidgins vs. Creoles

- Various **historical contexts** led to groups of people from different backgrounds having to work together
- Lacking a common language, a so-called **pidgin language** emerges
- Features:
  - No fully fleshed out **grammatical system**
  - Strong **dependence on context** to infer meaning
- **Miraculous next step:**  
Children exposed to pidgin turn it into a **creole** - with a **fully fleshed out grammatical system**



# Illustration: Pidgin vs. Creole

- **Pidgin (Hawaii):**

**Me cape buy, me check make**

**Intended:**

‘He bought me coffee; he made me out a check’

- **Hawaiian Creole:**

**Da firs japani came ran away from japan come**

‘The first Japanese who arrived ran away from Japan to here.’

(from Lee Bickerton’s work, reported in Pinker)

# Where did the Creole come from?

- The children were not exposed to any full-fledged language with a standard, complex grammar
- Nonetheless, their mental acquisition device turned what they heard into such a system
- So creoles would seem to be excellent case studies providing a perspective on what the language instinct contributes in language acquisition!

# Nicaraguan Sign Language

## Background:

- Up to Sandinista take-over in 1979, **deaf children were at home, isolated** from other deaf people
- **Deaf children** typically had their own **rudimentary gestural signing system** to communicate with their families
- The Sandinista created first **schools for the deaf**
- Some efforts were made to teach the children **lip reading** and **speech**, but without much success

**However...**

# What happened - Part I: LSN

- Being thrown into a **community** of other deaf children, **conventions** about some of the home signs quickly **evolved**
- **Result:** equivalent of a **pidgin**

Lenguaje de Signos Nicaraguense (LSN)

- This pidgin **continues to be used** by those children that were already into their **early teens** when they started school
- Typical **limitations of pidgin:**  
**no full grammatical system, many circumlocutions, substantial variation...**

# What happened - Part II: ISN

- The **younger children** (4+) that entered the schools observed their older peers communicating in their pidgin
- Their own use of the signing system quickly **took on a new life of its own**
- They soon exhibited a **far richer morphological and syntactic** system, which evolved into

## **Idioma de Signos Nicaraguense (ISN)**

- Today, this is is a **full-blown sign language** of its own

# Same trick all over again

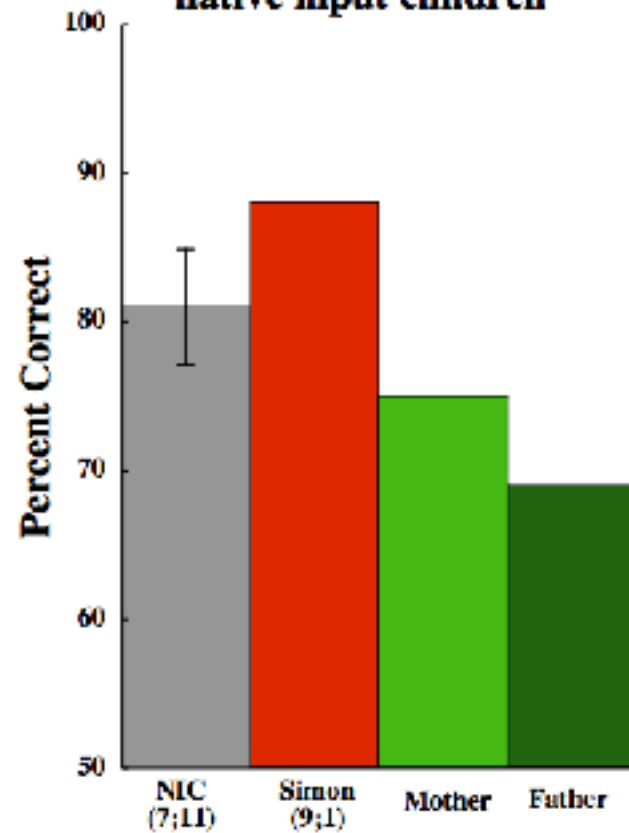
- The younger children had no exposure to a language with a fully developed grammar
- They turned what they saw into such a language
- Once again, this provides evidence for an innate language acquisition device at work

# Another story of a deaf child: Simon

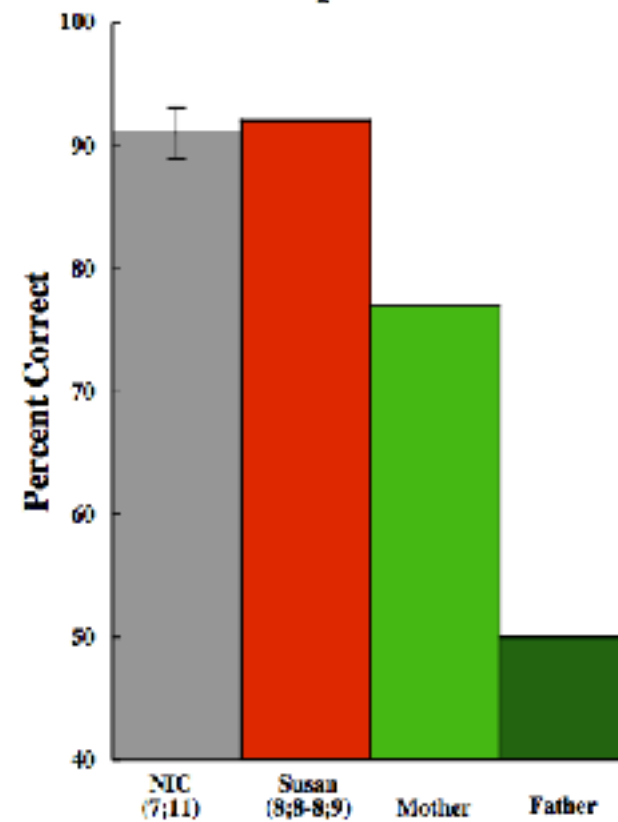
- The Nicaraguan case is an **extreme version** of a much more **common situation**
- Deaf children are commonly born to
  - hearing parents that do not know sign language
  - deaf parents that only acquired sign language later in life
- Thus, many deaf children **grow up without much, or any, native sign language input**
- **Extreme case:** Simon (Singleton and Newport)
- **Long story short:**  
Simon was a much better signer than his parents without any substantial native signing input

# Simon, Susan, and Stewart

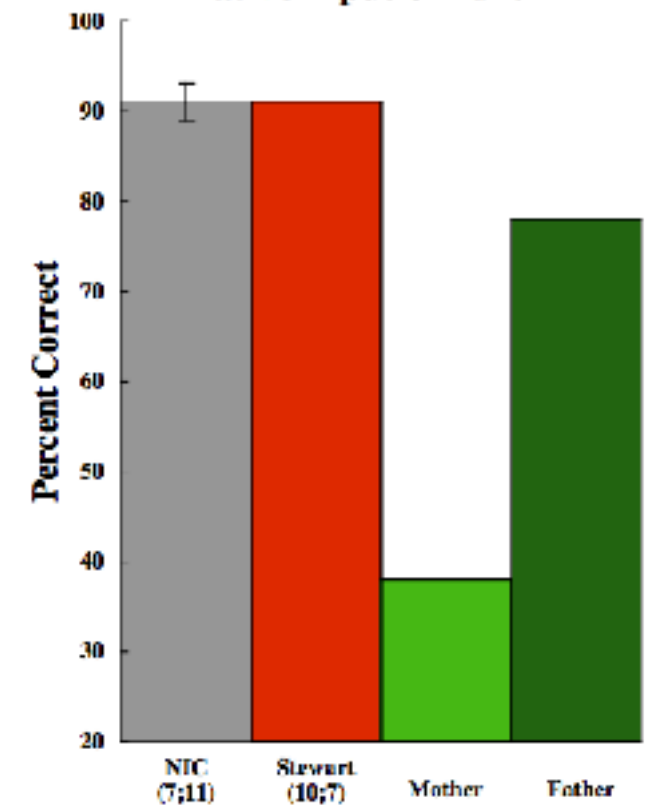
**Correct ASL movement morphemes  
for Simon, his parents, and  
native input children**



**Correct ASL movement morphemes  
for Susan, her parents, and  
native input children**



**Correct ASL movement morphemes  
for Stewart, his parents, and  
native input children**





# A far more common pattern

- In many ways, the situation of hearing children in standard linguistic environments is not principally different
- They, too, do not get exposed to the full grammar of their language in what they hear

- **'Poverty of the Stimulus'** argument:

Children's linguistic knowledge couldn't possibly be derived entirely from their linguistic experience

- **Bottom line:**

Language acquisition quite generally involves what essentially amounts to **reinvention** of the language

# Equivalence in Acquisition

- Because all languages are acquired the same way, they **share core features**
- The **deeper structural commonalities** of the world's languages thus **reflect the constraints that 'Universal Grammar' places on possible human languages**

# Equality in...

- **Acquisition:**

All human languages are **acquired by children in the same general way**, using their language instinct

- **Complexity:**

All human languages have **complex rules** for phonology, morphology, and syntax

- **Expressiveness:**

All human languages are equally capable of **expressing complex thoughts**

# Equivalence in Complexity

- All languages exhibit **comparable structural complexity** based on rules on multiple levels:
  - The level of **sounds** (Phonology)
  - The level of **word** formation (Morphology)
  - The level of **sentence** formation (Syntax)
- Languages vary in **how much complexity** is **present on each level**
- **Example:**
  - English has **little morphology**, and depends on word order to encode crucial information
  - Yupik Eskimo encodes most information with **suffixes**

# Yupik Eskimo



# Equivalence: Dialects

- **Dialects** are languages of their own
- **No** linguistically **special status** for 'standard' dialects
- **Example:** AAVE  
(see discussion of Larry, interviewed by Labov, in Pinker, pp. 16-19)
- AAVE has its own **intricate grammatical system**, which in some ways diverges substantially from standard English
- You'll hear more about this when we talk about dialects and socio-linguistics in more detail

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# Equivalence in Expressiveness

- All human languages are **equally capable of expressing complex thought**
- Famous counter-hypothesis by Sapir and Whorf: **Language determines thought**
- **Example:** Whorf claimed that Hopi has **no tense marking** on verbs and **no word for time**, thus Hopi people have **no sense of time!**
- **But Malotki's rebuttle:** "Then indeed, the following day, quite early in the morning at the hour when people pray to the sun, around the time then he woke up the girl again."
- Incorrect claims about grammar, faulty arguments



# Equivalence in Expressiveness

- **Apache**

- The boat is on the beach | 'It is on the beach point wise as an event of canoe motion'
- He invites people to a feast | 'He, or somebody, goes for eaters of cooked food'.
- "How utterly unlike our way of thinking!" - Whorf
- But consider **English** translation
  - He walks | 'As solitary masculinity, leggedness proceeds'

# Expressiveness: Vocabulary

- **The worry:**  
don't some languages have simpler, less complex vocabularies than a language like English?
- **The reassurance:**  
Vocabulary is closely linked to culture. Complex areas of culture have complex vocabularies.
- All languages readily add new words when culture changes.
- This is different from rules of language, which change much more slowly.

# Expressiveness - Words for Snow

- Popular Myth:  
The Eskimo have 100 words for 'snow'



# Expressiveness - The truth about 'snow'

- Eskimos have only **two words for snow**:
  - **qanik** 'snow in air/snowflake'
  - **aput** 'snow on the ground'.
- Of course, they can say many more things about the properties of snow, but so can **avid skiers, extreme mountain climbers**, etc. in English
- See **links on Canvas** to
  - numerous 'Language Log' posts on this topic,
  - as well as to 'The Great Eskimo Vocabulary Hoax'

# Equivalence of Languages

- Languages are equivalent in various ways
- This is so because all human languages are acquired in the same way, using the language instinct
- Language is as much a shared characteristic of humans as bipedal locomotion, manual dexterity, or sophisticated visual perception
- Thus, linguists primary interest is in '**Language**' as opposed to '**Languages**'!

We ultimately want to understand what the shared biological make-up reflected in the shared properties of all languages consists of.

# Up Next

- **Animal Communication**

- The sophistication of honey bees
- The limits of primates
- And more!