



# ELN101: Intro to Bilingualism

## Week 7 First Language Acquisition

Tomonori Nagano <[tnagano@lagcc.cuny.edu](mailto:tnagano@lagcc.cuny.edu)>

Education and Language Acquisition Dept.  
LaGuardia Community College

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## Announcements & Recap of Week06

### Announcements this week

- Assignments' deadline is always on Sunday
- Paper 1 optional draft deadline on Sunday, April 21, 2024 (the final deadline is 4/28/2024)
  - Look at the paper rubric
  - Analyze the bilingual type of your interviewee (Cite Wei (2009)).
  - Anonymize the participant
  - Use quotes from the interview transcript.
  - Attach the transcript to the paper

## Overview of First Language Acquisition I

- A fictional case of Francisco and his family members

Francisco came to the U.S. from Mexico with his family when he was 5 years old. Alejandra, his sister, was 13 years old. None of his family members, including both of their parents, spoke English when they arrived at the U.S. After 5 years, Francisco speaks English as his primary language. In fact, he feels that he cannot express himself very well in Spanish any longer. Alejandra speaks English fairly well, but she had to stay in ESL much longer than Francisco and she still feels that her English is not perfect. Even after 5 years, their parents have only minimal proficiency in English and the children often have to be informal translators for their parents.

## Overview of First Language Acquisition II

- Why were their final attainments so different?



## Overview of First Language Acquisition III

### First Language Acquisition (FLA)

- Child language development is:
  - predictable (i.e., every child follows the same error pattern)
  - fail-proof (i.e., all children recover from the errors)
  - universal (i.e., all languages follow the same pattern)
- Why is FLA so different from Second Language Acquisition (SLA)?
  - SLA is unpredictable (i.e., every adult follows different patterns)
  - SLA almost always fails (i.e., every adult keeps making errors)
  - SLA is not universal (i.e., our experience varies depending on what language you learn)

## Overview of First Language Acquisition IV

- Why FLA shouldn't look like SLA.

### The logical problem of language acquisition (Baker & McCarthy, 1981)

- Without consistent and useful explicit or implicit negative evidence (i.e., correction), induction is not possible.
- However, children rarely receive corrective feedback from their caregivers or do not pay attention to it. (Bohannon and Stanowicz, 1988)

Child: Nobody don't like me.

Mother: No, say "Nobody likes me."

Child: Nobody don't like me.

[... Eight repetitions of this dialogue ...]

Mother: No, now listen carefully; say "nobody likes me."

Child: Oh! Nobody don't like me.

## Overview of First Language Acquisition V

- Morphological overgeneralization (Pinker, 1989; Braine & Brooks, 1995)
  - *arrive* - *arrived*
  - *call* - *called*
  - *go* - *\*goed* / *went*
  - *throw* - *\*threwed* / *threw*
  - *mouse* - *\*mouses* / *mice*
  - *foot* - *\*foots* / *feet*



## Overview of First Language Acquisition VI

- Why SLA should look like FLA.

### Advantages of adults in learning a new language

- Adults have
  - a higher cognitive ability than children
    - such as understanding logic, accepting error corrections, and identifying patterns etc.
  - more life experience than children
    - existence of irregular members/items in a group etc.
  - more resources
    - foreign language classes, textbooks etc.
  - a language to talk about rules and meanings of another language
    - "What is *perro*?" – "Ah, it's a *dog*"



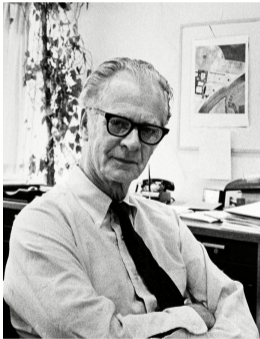
## Overview of First Language Acquisition VII

- Why do you think FLA is so different from SLA?



## Theoretical frameworks for FLA I

- A number of (often contradicting) hypotheses have been proposed to account for the regularity in FLA



## Theoretical frameworks for FLA II

### Behaviorist perspective

- B.F. Skinner (1957)
- Ivan Pavlov's operant conditioning (Pavlov's dog)
- Language acquisition is a consequence of stimulus and response (positive reinforcement → verbal behavior)
- See <https://youtu.be/Vv0IbDI2fro>

## Theoretical frameworks for FLA III

### Innativism

- Noam Chomsky
- Language acquisition mechanism is rule-based and is hard-wired in the human brain (it's innate to human beings)
- Heavy emphasis on the pronoun resolution
  - John said that Fred liked himself.
  - John said that Fred liked him.
- Critical Period Hypothesis (CPH)
  - From the clinical data, Lenneberg (1967) proposed a hypothesis that first language acquisition must complete before the lateralization of the brain (i.e., around the time of puberty).
  - Children acquire language very fast, flawlessly, and effortlessly.
  - Adults have hard time learning a (second) language – it will never reach the fluency attained by the child learner.
- See <https://bit.ly/3jJiyEv>

## Theoretical frameworks for FLA IV

### Interactionist

- Jean Piaget and Lev Vygotsky
- Language acquisition is a consequence of social interaction and a child's cognitive development (Piaget's Stages of Cognitive Development)
  1. Sensorimotor stage
  2. Pre-operational stage
  3. Concrete operational stage
  4. Formal operational stage
- Lev Vygotsky's *zone of proximal development* (ZPD)
- <https://bit.ly/36Tplbu>



## Theoretical frameworks for FLA V

- How do these three different frameworks for FLA address the major questions about the child's language acquisition?
- Behaviorist perspective
  - Adults do not receive sufficient positive reinforcement.
- Innatism
  - Whatever innate mechanism that a baby has will disappear before adulthood
- Interactionist
  - Adults are not good at social interaction (Adults have a very thin ZPD)

# Developmental Stages in First Language Acquisition I

- Let's examine the path of FLA (among English-speaking babies)



## Developmental Stages in First Language Acquisition II

- Milestones in the First Language Acquisition
  - **Before the birth:** The unborn babies in the uterus can hear mother's speech.
  - **Right after the birth:** The a-few-hour-old baby seems to distinguish the speech sounds that exist in mother's native language from the sounds in another language (cf. the sucking procedure)
  - **First few months:** Generating sequences of vowel-like sounds, especially high vowels [i] and [u]
  - **4 months:** Developing ability to bring the back of the tongue into the back of the palate and generating velar consonants [k] and [g]
  - **5 months:** Distinguishing the difference between [i] and [a] and [ba] and [ga]
  - **6-8 months:** Starting sitting up and producing a number of different vowels and consonants as well such as [ba-ba-ba] and [ga-ga-ga]
  - **9-10 months:** Generating recognizable intonation patterns to the consonant and vowel combinations [ba-ba-da-da]; Nasal sounds such as [m] and [n] become common; Syllable sequences [ma-ma-ma]/[da-da-da]



## Developmental Stages in First Language Acquisition III

- Milestones in the First Language Acquisition (cont.)
  - **10-11 months:** The late babbling stage; Being capable of using their vocalizations to express emotions and emphasis. [ma-da-ga-ba]
  - **12-18 months:** One-word stage; Producing recognizable single-unit utterances for everyday objects "milk", "cookie", "cat", "cup", "spoon" etc.

**Table 11.8** Common items in the first fifty words

<i>Entities</i>
Words referring to people: <i>daddy, mommy, baby</i> food/drink: <i>juice, milk, cookie, water, toast, apple, cake</i> animals: <i>dog, cat, duck, horse</i> clothes: <i>shoes, hat</i> toys: <i>ball, blocks</i> vehicles: <i>car, boat, truck</i> other: <i>bottle, key, book</i>
<i>Properties</i>
<i>hot, all-gone, more, dirty, cold, here, there</i>
<i>Actions</i>
<i>up, sit, see, eat, go, down</i>
<i>Personal-social</i>
<i>hi, bye, no, yes, please, thank-you</i>

## Developmental Stages in First Language Acquisition IV

- Milestones in the First Language Acquisition (cont.)
  - **18-20 months:** The vocabulary size becomes approx. 50 words

**Table 11.16** Semantic relations in children's one-word utterances

<i>Semantic relation</i>	<i>Utterance</i>	<i>Situation</i>
Agent of an action	<i>dada</i>	as father enters the room
Action or state	<i>down</i>	as child sits down
Theme	<i>door</i>	as father closes the door
Location	<i>here</i>	as child points
Recipient	<i>mama</i>	as child gives mother something
Recurrence	<i>again</i>	as child watches lighting of a match

## Developmental Stages in First Language Acquisition V

- Milestones in the First Language Acquisition (cont.)
  - **24 months:** A variety of combinations similar to "baby char" "mommy eat" "cat bed" etc.; Producing 200-300 distinct words; Conversational initiative and responsiveness grow
  - **24-30 months:** Producing multiple-word speech (telegraphic speech - only lexical morphemes)

**Table 11.17** Some patterns in children's two-word speech

<i>Utterance</i>	<i>Intended meaning</i>	<i>Semantic relation</i>
<i>Baby chair</i>	'The baby is sitting on the chair.'	agent-location
<i>Doggie bark</i>	'The dog is barking.'	agent-action
<i>Ken water</i>	'Ken is drinking water.'	agent-theme
<i>Hit doggie</i>	'I hit the doggie.'	action-theme
<i>Daddy hat</i>	'Daddy's hat'	possessor-possessioned

## Developmental Stages in First Language Acquisition VI

- Milestones in the First Language Acquisition (cont.)
  - **30 months:** The child's vocabulary expands rapidly and the child is initiating more talk while increasing physical activities such as running and jumping; Incorporating inflectional morphemes - "reading books" "cat sitting" "mommy reading book" "some men" "two feed" "girl's dog"

**Table 11.19** Sample utterances from a child's speech over a 12-month period

Age	Sample utterances
28 mos.	Play checkers. Big drum. I got horn. A bunny-rabbit walk.
30 mos.	Write a piece of paper. What that egg doing? I lost a shoe. No, I don't want to sit seat.
32 mos.	Let me get down with the boots on. Don't be afraid of horses. How tiger be so healthy and fly like kite? Joshua throw like penguin.

34 mos.	Look at that train Ursula brought. I simply don't want put in chair. Don't have paper. Do you want little bit, Cromer? I can't wear it tomorrow.
36 mos.	I going come in fourteen minutes. I going wear that to wedding. I see what happens. I have to save them now. Those are not strong mens. They are going sleep in wintertime. You dress me up like a baby elephant.
38 mos.	So it can't be cleaned? I broke my racing car. Do you know the lights went off? What happened to the bridge? Can I put my head in the mailbox so the mailman can know where I are and put me in the mailbox?

## Developmental Stages in First Language Acquisition VII

### Practice

- We will play audio recordings of the MacWhinney Corpus (<https://childes.talkbank.org/access/Eng-NA/MacWhinney.html>) (MacWhinney, 2012). Identify the age of the child. MacWhinney started recording his sons, Ross and Mark, from age of 6 months to 8 years old.

1. Practice 1: \_\_\_\_\_

2. Practice 2: \_\_\_\_\_

3. Audio 3: \_\_\_\_\_

4. Audio 4: \_\_\_\_\_

5. Audio 5: \_\_\_\_\_

6. Audio 6: \_\_\_\_\_

7. Audio 7: \_\_\_\_\_

8. Audio 8: \_\_\_\_\_

9. Audio 9: \_\_\_\_\_

10. Audio 10: \_\_\_\_\_

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"><li>• 3 months old</li></ul>     | <ul style="list-style-type: none"><li>• 2 Y old</li></ul>          | <ul style="list-style-type: none"><li>• 5 Y old</li></ul>          |
| <ul style="list-style-type: none"><li>• 6 months old</li></ul>     | <ul style="list-style-type: none"><li>• 2 Y 6 months old</li></ul> | <ul style="list-style-type: none"><li>• 7 Y 5 months old</li></ul> |
| <ul style="list-style-type: none"><li>• 12 months old</li></ul>    | <ul style="list-style-type: none"><li>• 3 Y old</li></ul>          |  |
| <ul style="list-style-type: none"><li>• 1 Y 6 months old</li></ul> | <ul style="list-style-type: none"><li>• 4 Y old</li></ul>          |  |

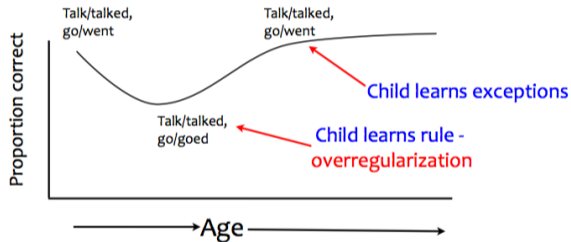
## Developmental Stages in First Language Acquisition VIII

### Brown's morphological acquisition path in English

- Brown observed the language development of three children and found that they all followed the same sequence in the acquisition of English morphology. (Brown, 1973).
  - Present progressive *-ing* (Mommy runing)
  - Plural *-s* (two books)
  - Irregular past forms (Bobby went)
  - Possessive *-s* (Daddy's hat)
  - Copula *be-verbs* (Mommy is happy)
  - Articles *the* and *a*
  - Regular past *-ed* (She walked)
  - Third person singular *-s* (She runs)
  - Auxiliary *be-verb* (He is running)

## FLA: Children's assumptions I

- Initially, children do not distinguish morphologically simple words (e.g., *cat*) from morphologically complex words (e.g., *cats*). Children learn all words as unanalyzed chunks or *amalgams*.



- Signs of children's knowledge about grammatical morphemes
  - Overgeneralization errors
  - Wug* test
  - Sibbing* test

## FLA: Children's assumptions II

### Overgeneralization errors

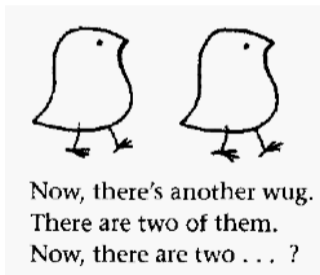
- Children apply regular morphological rules (e.g., plural, past tense etc) to irregular words.
  - \**foots* = children applied the regular plural morpheme -s to an irregular plural word *foot*
  - \**eated* = children applied the regular past morpheme -ed to an irregular past verb *eat*
- Those errors suggest that children know the function or meaning of the bound morphemes -s and -ed.



## FLA: Children's assumptions III

### Wug test

- Introduce a fictional creature, *wug*, to a child. And ask him/her to describe a picture with multiple *wugs*. If the child answers *wugs* [wʌgz], it demonstrates their knowledge about English plural -s (in addition, the phonological rules that apply to it)



## FLA: Children's assumptions IV

### *Sibbing* test

What are (1) *sibbing*, (2) *some pak*, and (3) *the moop*?



## FLA: Basic-level hypothesis I

### Three strategies for word meanings (a.k.a. Basic-level hypothesis)

- **The whole object assumption:** A new word refers to a whole object
- **The type assumption:** A new word refers to a type of a thing, rather than a particular thing
- **The basic level assumption:** A new word refers to types of objects that are alike in basic ways

## FLA: Basic-level hypothesis II



- Children understand that *rabbit* refers to
  - a rabbit rather than *whiteness* or *wooliness*
  - a rabbit as a kind rather than this particular rabbit.
  - a rabbit rather than all other white four-legged animals

## FLA: Basic-level hypothesis III

- Children do make overextension errors
  - *dog* = "hourse" and "cow" (all four-legged animals)
  - *ball* = "balloon" and "a small stone" (all round-shape objects)
  - *moon* = "grapefruit halves" and "crescent-shaped car light"



### Ink-shedding (10 min)

1. What is the difference between FLA and SLA?
2. What are the three major theoretical frameworks for FLA? Discuss one of them.
3. Also, write at least one question that you wanted to ask during the class.

# Bibliography I

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