LING-UA 1 *Language*

Acquisition & Signed Langauges, FRH Ch. 9

Jackson Petty

Department of Linguistics
10 Washington Pl, #104

Week 14   3:30PM, 8 December 2025

Logistics

- **Exam 3:**
    - Tuesday, 16 Dec, 2–3:15PM (during class)
    - **19 University Place, # 102** (new room)
    - Bring a laptop/tablet (on Brightspace)
    - ~30 multiple choice questions, 3–5 from each lecture since Exam 2
    - **Review Session** on Monday 15 Dec, after recitation (4:45–close)
- **HW 8:**
    - Due **tonight @ 10PM**!
- **Course Feedback :)**

Questions from HW/Lecture?

The Acquisition Problem

- Children are **very good** at acquiring language

The Acquisition Problem

- Children are **very good** at acquiring language
  - ≈ "Lincoln Center Violinist"

The Acquisition Problem

- Children are **very good** at acquiring language
    - ≈ "Lincoln Center Violinist"
    - ... on the basis of *very minimal data*

The Acquisition Problem

- Children are **very good** at acquiring language
    - ≈ "Lincoln Center Violinist"
    - ... on the basis of *very minimal data*
    - ... with almost only *positive evidence*

The Acquisition Problem

- Children are **very good** at acquiring language
    - $\approx$ "Lincoln Center Violinist"
    - ... on the basis of *very minimal data*
    - ... with almost only *positive evidence*
    - ... and arrive at suspiciously regular generalizations

The Acquisition Problem

- Children are **very good** at acquiring language
    - $\approx$ "Lincoln Center Violinist"
    - ... on the basis of *very minimal data*
    - ... with almost only *positive evidence*
    - ... and arrive at suspiciously regular generalizations
- **How?**

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
  - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
  - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
  - Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
  - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
  - Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space
  - Must postulate **some restriction** on the hypothesis space

Poverty of the Stimulus & UG

- ▶ **Poverty of the Stimulus** (Chomsky):
  - ▶ Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
  - ▶ Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space
  - ▶ Must postulate **some restriction** on the hypothesis space
- ▶ We call this restriction **Universal Grammar**

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
    - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
    - Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space
    - Must postulate **some restriction** on the hypothesis space
- We call this restriction **Universal Grammar**
    - Limits possibility of what human language faculty expresses

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
    - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
    - Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space
    - Must postulate **some restriction** on the hypothesis space
- We call this restriction **Universal Grammar**
    - Limits possibility of what human language faculty expresses
    - Enables rapid acquisition

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
  - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
  - Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space
  - Must postulate **some restriction** on the hypothesis space
- We call this restriction **Universal Grammar**
  - Limits possibility of what human language faculty expresses
  - Enables rapid acquisition
  - Part of neurobiology

Poverty of the Stimulus & UG

- **Poverty of the Stimulus** (Chomsky):
  - Linguistic input (child-directed speech) is too *limited* & too *simplistic* for a general learner
  - Learned generalizations are too structured, cross-linguistically, to be "random" conclusions in an unrestricted search space
  - Must postulate **some restriction** on the hypothesis space
- We call this restriction **Universal Grammar**
  - Limits possibility of what human language faculty expresses
  - Enables rapid acquisition
  - Part of neurobiology
  - Parametric

Acquisition Timeline

- Starts between womb and 6mo

Acquisition Timeline

- ▶ Starts between womb and 6mo
- ▶ Ends after 'critical period'

Acquisition Timeline

- ▶ Starts between womb and 6mo
- ▶ Ends after 'critical period'
  - ▶ Driven by neuroplasticity

Acquisition Timeline

- ▶ Starts between womb and 6mo
- ▶ Ends after 'critical period'
  - ▶ Driven by neuroplasticity
  - ▶ Not language-specific

Acquisition Timeline

- Starts between womb and 6mo
- Ends after 'critical period'
  - Driven by neuroplasticity
  - Not language-specific
  - Not human-specific

Acquisition Timeline

- Starts between womb and 6mo
- Ends after 'critical period'
  - Driven by neuroplasticity
  - Not language-specific
  - Not human-specific
  - Need to acquire language before exiting!

Acquisition Timeline

- ▶ Starts between womb and 6mo
- ▶ Ends after 'critical period'
  - ▶ Driven by neuroplasticity
  - ▶ Not language-specific
  - ▶ Not human-specific
  - ▶ Need to acquire language before exiting!
- ▶ Proceeds in stages

Acquisition Timeline

- ▶ Starts between womb and 6mo
- ▶ Ends after 'critical period'
  - ▶ Driven by neuroplasticity
  - ▶ Not language-specific
  - ▶ Not human-specific
  - ▶ Need to acquire language before exiting!
- ▶ Proceeds in stages
  - ▶ Ordering consistent, individual duration may vary

Acquisition Timeline

- ▶ Starts between womb and 6mo
- ▶ Ends after 'critical period'
  - ▶ Driven by neuroplasticity
  - ▶ Not language-specific
  - ▶ Not human-specific
  - ▶ Need to acquire language before exiting!
- ▶ Proceeds in stages
  - ▶ Ordering consistent, individual duration may vary
- ▶ *Comprehend* patterns before *producing* them

Stages of Acquisition

- Physiological basis

Stages of Acquisition

- Physiological basis
- Babbling

Stages of Acquisition

- ▶ Physiological basis
- ▶ Babbling
- ▶ Holophrasis (=1-word Production)

Stages of Acquisition

- ▶ Physiological basis
- ▶ Babbling
- ▶ Holophrasis (=1-word Production)
- ▶ 2-word Production

Stages of Acquisition

- Physiological basis
- Babbling
- Holophrasis (=1-word Production)
- 2-word Production
- Telegraphic

Stages of Acquisition

- Physiological basis
- Babbling
- Holophrasis (=1-word Production)
- 2-word Production
- Telegraphic
    - No inflection → inflection, word order, negation

Stages of Acquisition

- Physiological basis
- Babbling
- Holophrasis (=1-word Production)
- 2-word Production
- Telegraphic
    - No inflection → inflection, word order, negation
- Done c. 3yrs

Phonological Acquisition

- ▶ Children may learn distinct phonological forms but produce merged phonetic forms: [maʊs] for both *mouth* and *mouse*

Semantic Acquisition

- ► Infants can learn syllable–object pairings

Semantic Acquisition

- Infants can learn syllable–object pairings
- **Overextension:** child's words are broader than adult's (*ball* = all round things)

Semantic Acquisition

- ▶ Infants can learn syllable–object pairings
- ▶ **Overextension:** child's words are broader than adult's (*ball* = all round things)
- ▶ **Whole object principle:** assume a new term means the whole thing

Semantic Acquisition

- ▶ Infants can learn syllable–object pairings
- ▶ **Overextension:** child's words are broader than adult's (*ball* = all round things)
- ▶ **Whole object principle:** assume a new term means the whole thing
  - ▶ cf. Quine's *gavagai*

Semantic Acquisition

- ▶ Infants can learn syllable–object pairings
- ▶ **Overextension:** child's words are broader than adult's (*ball* = all round things)
- ▶ **Whole object principle:** assume a new term means the whole thing
  - ▶ cf. Quine's *gavagai*
- ▶ **Mutual exclusivity:** assume a 1:1 correspondence between forms and meanings

Semantic Acquisition

- ▶ Infants can learn syllable–object pairings
- ▶ **Overextension:** child's words are broader than adult's (*ball* = all round things)
- ▶ **Whole object principle:** assume a new term means the whole thing
    - ▶ cf. Quine's *gavagai*
- ▶ **Mutual exclusivity:** assume a 1:1 correspondence between forms and meanings
    - ▶ cf. plastic/pewter cups/tongs, *cup* blocks hyp. that *biff=cup*

Morphology Acquisition
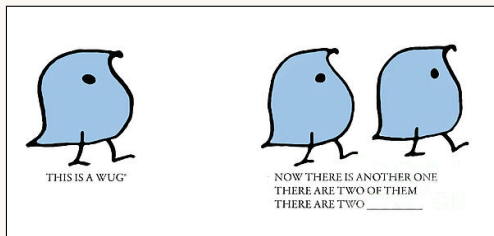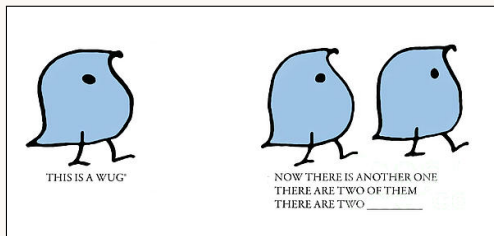
▶ Start with individual form memorization

Figure: Berko's Wug Test for allomorphy

Morphology Acquisition

- ▶ Start with individual form memorization

- ▶ Form an (over)generalization of rules (overextension)

Figure: Berko's Wug Test for allomorphy

Morphology Acquisition

- Start with individual form memorization

- Form an (over)generalization of rules (overextension)
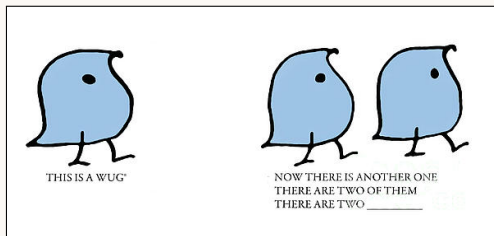
- Re-learn exceptions to rule

Figure: Berko's Wug Test for allomorphy

Comprehension & Production

- Children can recognize "algebraic" patterns before producing them (Marcus)

Comprehension & Production

- Children can recognize "algebraic" patterns before producing them (Marcus)
  - *la ta la, ga na ga → wo fe wo, *wo fe fe*

Comprehension & Production

- Children can recognize "algebraic" patterns before producing them (Marcus)
  - *la ta la, ga na ga → wo fe wo, *wo fe fe*
- Overextension in production, but not comprehension

Comprehension & Production

- Children can recognize "algebraic" patterns before producing them (Marcus)
  - *la ta la, ga na ga* → *wo fe wo*, **wo fe fe*
- Overextension in production, but not comprehension
  - Why? recognition vs recognition + recall?

Acquisition as Parameter Setting

- ▶ If UG is parametric, then acquisition = setting parameters

Acquisition as Parameter Setting

- If UG is parametric, then acquisition = setting parameters
  - head-directionality, null subjects, *wh*-fronting

Acquisition as Parameter Setting

- ▶ If UG is parametric, then acquisition = setting parameters
  - ▶ head-directionality, null subjects, *wh*-fronting
- ▶ **Subset Principle:** start out with restrictive hypothesis, relax if given evidence

Signed Languages

- ASL is it's own language

Signed Languages

- ASL is it's own language
  - Creole of many signed systems, incl. French signed language

Signed Languages

- ASL is it's own language
  - Creole of many signed systems, incl. French signed language
  - Typically SVO, but not always

Signed Languages

- ASL is it's own language
  - Creole of many signed systems, incl. French signed language
  - Typically SVO, but not always
- Has phonology comparable to spoken phonology

Signed Languages

- ASL is it's own language
  - Creole of many signed systems, incl. French signed language
  - Typically SVO, but not always
- Has phonology comparable to spoken phonology
  - Handshape, orientation, movement, location, non-manual markers

Signed Languages

- ASL is it's own language
  - Creole of many signed systems, incl. French signed language
  - Typically SVO, but not always
- Has phonology comparable to spoken phonology
  - Handshape, orientation, movement, location, non-manual markers
- Similar stages of acquisition to spoken languages

Signed Languages

- ASL is it's own language
  - Creole of many signed systems, incl. French signed language
  - Typically SVO, but not always
- Has phonology comparable to spoken phonology
  - Handshape, orientation, movement, location, non-manual markers
- Similar stages of acquisition to spoken languages
- Of comparable complexity to spoken languages

Feedback + Thanks :)