• Some factors that do not explain L1 acquisition
• UG in L1 acquisition

Background reading:
• CL Ch 9, §6.1–6.4
0. Course information

• **Exam #2** will be moved from M Nov 1 to **W Nov 3**
  - Trade-off: Material covered on M Nov 1 will be on the final (be sure to attend class or watch the recording!)

• **General reminder:** Exam preparation is not something you should do only the day before
  - Go over outlines (and readings?) **after each class**
  - Go over outlines, readings, & recitation material whenever you are doing a **HW assignment**

• **This week:** Be ready to review in recitation on Fri (TAs may ask you for review topic requests)
1. Review — L1 acquisition key ideas

• Linguists use the term *acquisition* rather than *learning* for children’s language development: *Why*?

• Why is child language acquisition much more connected to *descriptive grammar* / *mental grammar* than it is to prescriptive grammar?
1. Review — L1 acquisition key ideas

• Linguists use the term *acquisition* rather than *learning* for children’s language development: Why?
  → L1 (first-language) acquisition is different from learning a skill

• Why is child language acquisition much more connected to *descriptive grammar / mental grammar* than it is to prescriptive grammar?
  → L1 acquisition is about how a child’s *mental grammar* uses the language *data in the environment* to develop a language system
Today we will consider:

What role do these factors play in L1 acquisition?

• The following types of parent/child interaction
  - Imitation
  - Feedback / “correction” by adults
  - Caregiver speech (“motherese”)

• General cognitive development

→ We conclude that neither of these are a general explanation for L1 acquisition
2. What makes L1 acquisition possible?

Today we will consider:

• Does L1 acquisition provide evidence for innate Universal Grammar (UG)?
3. Acquisition is not just imitation

- Some people assume that children simply learn language by imitating adult speakers
  - Sometimes a child can imitate more accurately than they generally speak

- However, imitation is far from the only process involved in language acquisition
  - What characteristics of language are incompatible with the imitation hypothesis?
  - What often happens when a child is explicitly encouraged to imitate?
3. Acquisition is not just imitation

• What characteristics of language are incompatible with the imitation hypothesis? Why?
  - **Creativity/productivity** of language

  - Morphological **overgeneralization** and other child-specific linguistic rules
3. Acquisition is not just imitation

• What characteristics of language are incompatible with the imitation hypothesis? Why?
  - **Creativity/productivity** of language
    • How can a child be “imitating” if producing something they have never heard?
  - Morphological **overgeneralization** and other child-specific linguistic rules
    • *goed, brought*: What would the child be “imitating”?
3. Acquisition is not just imitation

- **What often happens** when child *asked* to imitate?
  
  Parent: *Why can’t kitty stand up?*
  
  Child: *Why kitty can’t stand up?*  
  
  *(CL, p 378)*
3. Acquisition is not just imitation

- **What often happens** when child **asked** to imitate?

  Parent: *Why can’t kitty stand up?*
  Child: *Why kitty can’t stand up?*  
  (CL, p 378)

- A child is often **unable to imitate** linguistic structures that their mental grammar isn’t yet ready for
4. Acquisition is not just parental feedback

- Some people assume that parents teach language to children by correcting their errors
  - Do children learn from direct correction by caregivers?
  - Do children learn from recasts (repeating child’s utterance with readjustment)?
4. Acquisition is not just parental feedback

- Children often “ignore” (or, their mental grammars can’t interpret) **direct correction**

  *Child:*  Want other one spoon, Daddy.  
  *Father:*  You mean, you want the other spoon.  
  *Child:*  Yes, I want other one spoon, please Daddy.  
  *Father:*  Can you say “the other spoon”?  
  *Child:*  other...one...spoon.  
  *Father:*  Say “other.”  
  *Child:*  other.  
  *Father:*  “spoon.”  
  *Child:*  spoon.  
  *Father:*  “other spoon.”  
  *Child:*  other...spoon. Now give me other one spoon?
4. Acquisition is not just parental feedback

• When are **recasts** used? Do they help identify non-adult-like utterances?
  
i. Child: *Mama isn’t boy; he’s a girl!*
  Parent: *That’s right.*
4. Acquisition is not just parental feedback

• When are **recasts** used? Do they help identify non-adult-like utterances?
  
  i. Child: *Mama isn’t boy; he’s a girl!*
  
  Parent: *That’s right.*

- In this example, the parent is responding to the **content** of the child’s utterance, not the linguistic **structure**

- Parents don’t **reliably** give children cues that their utterances are not consistent with the target adult **grammar**
4. Acquisition is not just parental feedback

• When are **recasts** used? Do they help identify non-adult-like utterances?

  *ii. Child:  *Boy chasing dog.*
  Parent: *Yes, the boy is chasing the dog.*

  *iii. Child:  *The dog is barking.*
  Parent: *Yes, the dog is barking at the kitty.*
4. Acquisition is not just parental feedback

- When are **recasts** used? Do they help identify non-adult-like utterances?
  - ii. Child: *Boy chasing dog.*
    - Parent: *Yes, the boy is chasing the dog.*
  
  - iii. Child: *The dog is barking.*
    - Parent: *Yes, the dog is barking at the kitty.*

- The response in (ii) is an actual correction
- The response in (iii) is just adding information
- Would a child be able to tell the difference?
4. Acquisition is not just parental feedback

- When parents “correct” their children, it’s more likely to be about the **truth** of their utterances than phonology/morphology/syntax

- Even recasts do **not** always serve as a cue for non-adult-like utterances
  - Sometimes they just expand an utterance with additional, optional information
4. Acquisition is not just parental feedback

- BUT! Is there a link between **recasts** and acquisition? Two experiments:
  - No? → Recasts had no effect in a study of the acquisition of determiners \( a, \; the \)
  - Yes? → A single recast was often enough to permit learning the irregular past tense of a novel (made-up) verb

- Can a **principled difference** between these two recast examples explain the different results?
4. Acquisition is not just parental feedback

- Can a **principled difference** between these two recast examples explain the different results?
  - Learning when/where to use determiners is mostly a matter for the...
  - Learning the irregular past tense of a new verb is mostly a matter for the...
4. Acquisition is not just parental feedback

- Can a **principled difference** between these two recast examples explain the different results?
  - Learning when/where to use determiners is mostly a matter for the **mental grammar**
    - A general system (NP) must be developed
  - Learning the irregular past tense of a new verb is mostly a matter for the **lexicon**
    - Unpredictable information needs to be memorized and stored
5. A role for caregiver speech?

- In many (not all!) cultures, adults use a special speech style with young children, known as **caregiver speech** (also called **infant-directed/child-directed speech**, “motherese”)

- Some characteristics of caregiver speech by middle-class English-speaking caregivers (see Table 9.22 on p 377 of *CL* for more)
  - slower speech
  - tendency to refer to “the here and now”

- How might these aspects of caregiver speech be helpful in acquisition?
5. A role for caregiver speech?

- How might these aspects of caregiver speech be helpful in acquisition?
  - Slower speech → phonological acquisition?
  - Tendency to refer to “the here and now” → semantic acquisition?

- But, many aspects of caregiver speech do not seem to affect acquisition
  - We saw earlier that relative frequency of grammatical morphemes (inflectional affixes and function words) does not predict acquisition order
6. Acquisition is not just cognitive development

• Another factor that does not fully explain L1 acquisition is **general cognitive development**

• There are some possible correlations

• But: Evidence that language and cognitive development are at least partly **independent**
  - Language can be intact while cognition is impaired
  - Cognitive function can be normal while mental grammar is impaired
7. So...What makes L1 acquisition possible?

- None of these influences are a *general* explanation for L1 acquisition (though they may contribute in certain specific ways):
  - Imitation
  - Feedback / “correction” by adults
  - Caregiver speech
  - General cognitive development

- Next, we will consider:
  Does L1 acquisition provide any *evidence* for *innate Universal Grammar (UG)?* (Is language acquisition partly *biological*?)
7. So...What makes L1 acquisition possible?

- **Universal Grammar (UG):** “The set of inborn categories, operations, and principles common to all human languages” (*CL*, p 381)

- Does L1 acquisition provide evidence for innate UG? Two important arguments (controversial):
  - The “poverty of the stimulus” argument
  - Evidence for a critical period (next class)
8. Poverty of the stimulus

• The **poverty of the stimulus** argument
  - The argument: Human language grammars are **too complex and abstract** to be learned only on the basis of ambient language data
    → Some parts of mental grammar *must* be innate

• The extent to which this is true is an area of **hot debate** among linguists and psychologists
  - The human brain certainly must have innate ways of organizing information/cognition
  - But — which are *specific* to language?
8. Poverty of the stimulus

• Example: Interpretation of words such as *him* and *himself* (see §6.4 in CL for more details FYI)

We saw these examples on the first day of class:

(a) *Oscar* admires *himself*.

(b) *Oscar* thinks that *Grover* admires *himself*.

* *Oscar* thinks that Grover admires *himself*.

(c) *Oscar* told *Grover* stories about *himself*.

*Oscar* told Grover stories about *himself*.

What can *himself* refer to?
8. Poverty of the stimulus

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(a) \[\text{TP} \quad \text{Oscar admires } \text{himself}. \]

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*Oscar* thinks that [\(\text{TP} \quad \text{Grover admires himself}. \)]

(c) \[\text{TP} \quad \text{Oscar told } \text{Grover stories about } \text{himself}. \]

\[\text{TP} \quad \text{Oscar told Grover stories about } \text{himself}. \]

What can *himself* refer to?
8. Poverty of the stimulus

• What can himself refer to?
  
  (a) \([_{TP} \textit{Oscar admires himself}]\)

  (b) \(\textit{Oscar thinks that} \quad [_{TP} \textit{Grover admires himself}]\)
      \(\star \textit{Oscar thinks that} \quad [_{TP} \textit{Grover admires himself}]\)

  (c) \([_{TP} \textit{Oscar told Grover stories about himself}]\)
      \([_{TP} \textit{Oscar told Grover stories about himself}]\)

• \textit{himself} is restricted to referring to an NP...
  
  - that is in the \textbf{same minimal TP}
  
  - and \textbf{c-commands} it (\(\approx\) higher in the tree but not dominating)
8. Poverty of the stimulus

• Example: Interpretation of words like *him, himself*
  - Requires understanding of “(same minimal) TP”
  - Requires understanding of “c-command”
  - **Could these concepts be acquired from observed language data only?**

  - These concepts appear to be **relevant** to pronoun interpretation in **all languages**
  - *him/himself* (etc.) distinction is **acquired early**

• A good candidate for an **innate principle** of UG