The Real Story of Child Language Acquisition

Day 5

0. Questions

- I couldn't even understand the reason why underextensions are less frequently noticed than overextensions [redacted]
- Is LAD in this class the similar (or the same) concept of "Universal Grammar?" [redacted]
- Does culture play a role as to why people from the same linguistic community have the same understanding of the same word? [redacted]
- By what age children become able to speak without over/under-extension? [redacted]. I think that overextension is used by adults too sometimes. If you not know the word *sleet* (or 'mizore') and see sleet for the first time, you may call it snow (or 'yuki') [redacted]
- Which method is most commonly used among adults to create new words in English? How about Japanese? [redacted]
- I want to know how to test a process of language acquisition properly. How do researchers conduct experiments? [redacted]

HW Review

Good examples

[redacted]

<Language Acquisition Model>

(1) a. Primary linguistic data: PLD (= examples in specific situations)

↓

b. Language Acquisition Device, LAD

↓

c. knowledge of language, K (= "system"; grammar)

(2) Children acquire:

a. words

b. meaning of words

c. how to build a sentence (using words they know)

d. how to compute the meaning of a sentence

e. speech sounds

Today's topic: (2b) How Children Acquire the Correct Meaning of Words (Part 2 of 3)

(3) "Gavagai!"

How do children pick out the correct meaning out of various possible meanings in the particular situation?

1. **Children's Strategies to Learn Noun Meanings** (pp.52 – 61)

(4) Children use reasonable strategies (a kind of LAD) to guide them to "good initial guesses." Four types of such strategies are discussed in the text.

a. cognitive constraints

b. social constraints

c. linguistic constraints

d. organizational constraint

(5) Using these strategies (i.e. **LAD**) and experiencing various linguistic and/or communicative inputs (i.e. **PLD**), children eventually acquire the roughly "correct" meaning of each word and each idiomatic expression.
(NB: "correct" here means "shared by many speakers in the linguistic community." Hence, it may vary among individuals, and changes as time goes by.)

1.1 Cognitive Constraints

(6) "Gavagai!" ➔
a. rabbit (i.e. whole object)
b. ears (i.e. part of the object)
c. fluffy/cute (i.e. properties of the object)
d. It ran away (i.e. activity it has done)
e. animal (i.e. more general term)
f. "Gavagai" (i.e. the name of the rabbit)
...

(7) **The Whole Object Assumption**[1] ← LAD
A new word refers to a whole object.

(8) By (7), the possibilities in (6b), (6c), and (6d) are excluded.
(6) ~~b. ears (i.e. part of the object)~~
~~c. fluffy/cute (i.e. properties of the object)~~
~~d. It fell down (i.e. activity it is dong/ has done)~~

(9) **The Type Assumption**[2] ← LAD
A new word refers to a type of thing, not just to one particular rabbit.

(10) By (9), the possibility in (6f) is slashed out.
(6) ~~f. "Gavagai" (i.e. the name of the rabbit)~~

(11) **The Basic Level Assumption** ← LAD
A new word refers to types of objects that are alike in basic ways.

(12) By (11), the possibility in (6e) is ruled out.
(6) ~~e. animal (i.e. more general term)~~

(13) These assumptions give children good initial guesses of new words they hear.
(NB: They may be mistaken, of course. "Gavagai" can be the name of the rabbit)

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[1] Macnamara, John. 1982. *Names for things: A study of human learning*. MIT Press.
Markman, Ellen. 1989. *Categorization and naming in children: Problems of induction*. MIT Press.
[2] Clark, Eve. 1993. *The lexicon in acquisition*. Cambridge University Press. (For (11) as well.)

1.2 Social Constraints

(14) It is not always the case that a new word is introduced to a child by pointing out the relevant object for the child.

(15) Rather, very often, children acquire new words simply observing someone around them talking (and doing something).

(16) Then, children have to figure out what other people are talking about. How can they do that?

(17) **Class Work 5-1**
Where is the apple?

(18) **Theory of mind**[3]
You see the world from your own perspective, but you can also understand how the world looks like from someone else's perspective.
"an understanding of how other people's mind work" (p.55)

(19) Given theory of mind, children can correctly infer what other people are talking about, and thus this gives them a big chance to acquire new words even when the relevant new object is not directly pointed out for them.

(20) **The Social Strategy:** ← LAD
To figure out what new words mean, think like other people think.

(21) a. **Experiment 1:** The child's attention was deliberately drawn to one toy (lightening it up), but still s/he understands what the adult was looking at and "Modi" refers to it, not to what the child had been looking at.

b. **Experiment 2:** In this situation, the fourth object is only new to the mother who had left the play site for a while and returned. The child understands that the fourth object is new to the mother although it is not new to him/her, when the mother said "Oh, look. A modi!"

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[3] Tomasello, Michael. 2000. The social-pragmatic theory of word learning. *Pragmatics* 10, 401-13.

c. **Experiment 3**: The experimenter threw a novel object into a curved pipe. He said nothing when he threw the first two, but said "Now, modi!" just before throwing the third object. The child watching all of this quickly realizes that the third object is called Modi.

d. **Experiment 4**: The experimenter, using a single novel object, does something with it, and then some other thing with it without saying anything. Then, he threw the object into the curved pipe, saying "now, Modi!" The child watching all of this concludes that midi was the name of the action throwing an object into the pipe.

1.3 Linguistic Constraints

(22) Given two objects (e.g. dolls) that are identical except for one property):

a. Look what I've brought you. This is Zav.
After a while, when the child is told "give me Zav," she picks up the particular object called Zav.

b. Look what I've brought you. This is a zav.
After a while, when the child is told "give me a zav," she picks up either of the objects.

(23) Children (19 m. old) are sensitive to the presence/absence of the article *a*.[4]

(24) animate vs inanimate
In the same experiment as in (22) using blocks, children's performance is not very good to distinguish the presence and the absence of the article *a*.
=> children seem to know that "dolls are more likely to have their own names than are inanimate" objects. (p.56)

(24) group vs. individual (Look at the figure on **p.57**)

a. This is a fendle. (name for a group of objects)

vs.

b. These are fondles. (name for each individual in the group)

(25) names of solid objects vs names of substance

➔ **HW 5(A)**

- Class Work 5-2

Adults usually do not try to correct children's grammatical mistakes directly.
Then, how do you think a child who once said "breaked" can learn that "broke" is the correct form and "breaked" is not.
Discuss. Try to be specific.

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[4] Katz, N, E. Baker, and J. Macnamara. 1974. What's in a name: A study of how

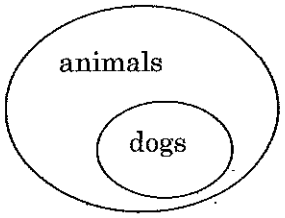
1.4 Organizational Constraint

(26) Children try to "organize" their entire vocabulary.
(Not just randomly add new words into their storage = mental lexicon)

(27) **The Mutual Exclusivity Assumption**[5] ← LAD
Things should have only one label.

(28) A pug is a kind of dog. Does a pug have to be an animal?
a. Yes-answer by 6-year-old = 90%
b. Yes-answer by 4-year-old = 60%

(29) The Mutual Exclusivity Assumption helps the acquisition of semantic inclusion relations.



(30) Children tend to treat new words as names for objects whose names they don't know yet. (Recall triangle-hexagon experiment in HW4(B))

(31) Whole Object Assumption (=(7)) "has to be overridden at some point." (p.60)

(32) Children who already know the meaning of the word *rabbit* would not assume that *cute* or *fluffy* in the "gavagai" situation is another name of rabbit as a whole, but rather assume that it refers to a subpart or some property of the animal. ← Mutual Exclusivity Assumption works here.

2. How to Learn Meanings of Verbs (pp.61 – 67)

(33) Most of children's early verbs are[6]
a. activity type (denoting actions with no particular endpoint)
or
b. accomplishment type (denoting actions with a clear endpoint)
see the chart on p.62.

(34) a. <u>activity type verbs</u>
run in the park, play with the toy, ride on a horse, laugh, etc.
b. <u>accomplishment type verbs</u>
write a book, knock down a pile of blocks, tear a photo out of a newspaper, etc.

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children learn common and proper names. *Child Development* 45, 469-73.
[5] Clark, Eve. 1993. *The lexicon in acquisition*. Cambridge University Press.
[6] Clark, Eve. 1996. Early verbs, event types, and inflections. In C. Johnson and J. Gilbert (eds.). *Children's Language*, Vol. IX. Erlbaum, 61-73.

(35) **Class Work 5-3**

Divide the following verb phrases into activity type or accomplishment type:

build a house
walk along the river
eat in the kitchen
run a mile
draw a circle
push the cart

2.1 How to acquire abstract verbs: Grammar helps. (pp.63-64)

Basic grammar gives children a reasonable first step toward the acquisition of abstract verb meanings.

(36) Syntactic bootstrapping

Use some syntactic frames to make a good guess on the meaning of the verb.

(37) Mary **FLUMPED** them to her father.[7]

(38) **FLUMP** may have some similar meaning to *give*, *bring*, *send*, *pass*, etc, because all of them appear in the syntactic frame [NP ____ NP to NP]

(39) Daddy **ZWIGS** that we should have spaghetti for supper.

ZWIG may have some similar meaning to *say*, *state*, *think*, *know*, *believe*, etc, because they all appear in the syntactic frame [NP ___ *that* + sentence]

(40) NB: This is actually what a good learner of a foreign language is doing.

2.2 Tough Cases (pp.64-67)

(41) The acquisition of verbs describing mental states and processes is generally quite slow. (You cannot tell the difference between *think*, *know*, and *believe* simply by looking at the subject person anyway!)

(42) The meaning of the verb *forget* for young children is slightly different from the meaning of the same verb for adults.

(43) The meaning of the verb *promise* for young children is slightly different from the meaning of the same verb for adults.

➔ **HW5 (B)**

(44) The meaning of the verb *fill* for young children is different from the meaning of the same verb for adults. Look at the pictures on p.66.

(45) Which is an example of filling?

(46) Many four- and five-old-year children pick the bottom pictures, assuming that "filling" means "pouring into," not necessarily "making full."

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[7] O'Grady (2005; p.63)

3. Summary

How Children Acquire the Correct Meaning of Words (Part 2 of 3)

- Children's strategies to acquire meaning of words

(47) Cognitive Constraints

a. The Whole Object Assumption

b. The Type Assumption

c. The Basic Level Assumption

(48) Social Constraints

a. Good understanding of the situation

b. Theory of mind

Children know how the world looks like from others' perspective

(49) Linguistic Constraints

Grammatical markings tell us the semantic type of the words; e.g., whether the word refers to an individual object or a type of the object.

"Give me Zav" vs "Give me a zav".

(50) Organizational Constraint

Children try to "organize" their entire vocabulary

The Mutual Exclusivity Assumption

"One thing does not have two different names"

"Gavagai!" →

"rabbit!" →

"fendle!" →

"zav!" →

http://www.clker.com/clipart-185714.html

(51) Syntactic bootstrapping

Grammatical "frames" in which a word appears may help children understand the type of the meaning of the word

(52) Abstract meanings are still difficult, and children occasionally have slightly different meaning: *promise, forget, fill.*

(53) Children are not just passively receiving PLD to learn meaning of words; rather, they are very actively trying to acquire meaning, deliberately employing various innate strategies (LAD).

Next week: **How Children Acquire the Correct Meaning of Words (Part 3 of 3)**

learning: adjectives

prepositions

pronouns

HW5

(54) Post Class Work

Homework Assignment 5

1. Turn in **by Tuesday 12:30**

   via Email (MSWord file attached to email)

   Make the name of the file as [ID_your name_hw5]

   [redacted]

   [redacted]

   *If you have trouble sending your files attached via Email, let me know.

2. Write as concisely as possible. Write the number of words at the end of each Q.

3. Restrict yourself to A4 paper one page long.

A. Read pp.57 – 58 of the text. Then, summarize what "sort all of this out" (on line 6 of p.58) means here (use about 50 words). Be concise. Write the number of the word at the end.

B. Read pp.64 – 66, and summarize what the young children's understanding of the meaning of *forget*, and what the young children's understanding of the meaning of *promise*. Be concise. (use about 100 words)

C. Read Section "Size" (pp.68 – 70) of the text and summarize the point. Be concise. (use around 120 words).

D. Any comments/questions on this homework assignment and/or the last class discussion.

E. Read the text up to page 79.