

## The Real Story of Child Language Acquisition

### Day 7

#### 0. Questions

- In the region I grew up, most children only speak French, but a lot of them are able to understand a regional dialect (which is used by their parents/grandparents, but they mostly speak the child in French). They are able to understand anything in that dialect but cannot produce any sentence. How is that possible? [REDACTED]

\* This is a very interesting situation, but not necessarily very rare. In some situation, children can acquire passive/perceptive ability of the language, by listening to the real life interaction of the language. Children want to talk like their school friends, not like their parents or grandparents. They do understand a dialect their grandparents use, but they do not (and many cases, cannot) speak it by themselves.

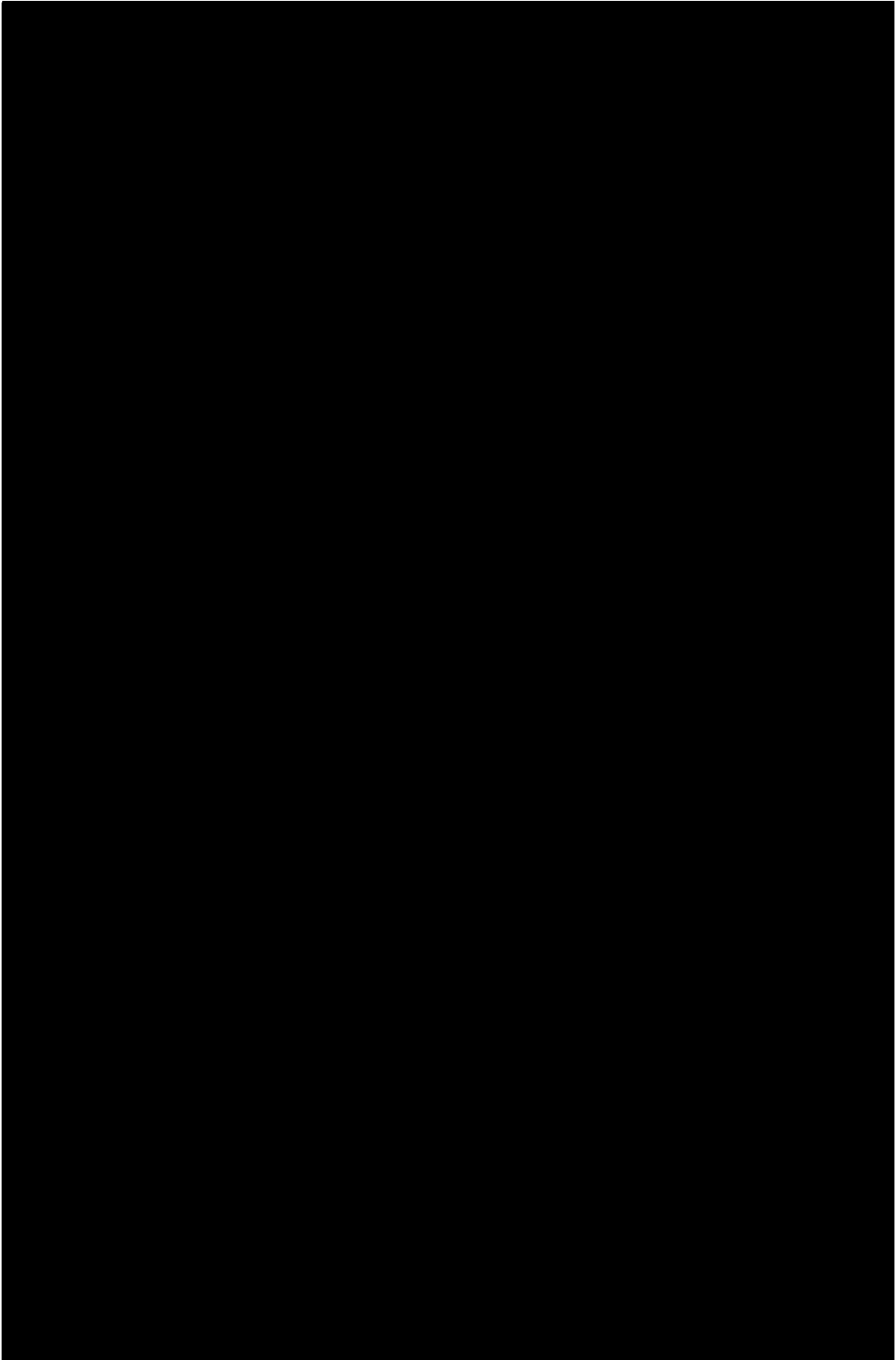
- When children acquire more than one language in their early age, can they speak them as their native languages? [REDACTED]

\* It depends on what we mean by "native language". If the household is a bilingual situation (e.g., mother only speaks Spanish, and father only speaks German, to their children), it is highly likely that the children will have a good command of both languages at least for the household purposes. Then, after that, many things depend on various conditions: e.g., what is their school language, what is their local community language, whether they learn reading and writing skills in which language and how much in each language, etc. It is not very conceivable that a single individual has a natural good command of both languages completely equally, including the reading/writing ability. In reality, as far as I know, all "bilingual" persons have one strongest language for them, and the other language is somewhat weaker at least in some respects. Then, the question is whether we can call the weaker language one of their "native language." There seems to be no linguistic/scientific definition to demarcate them.

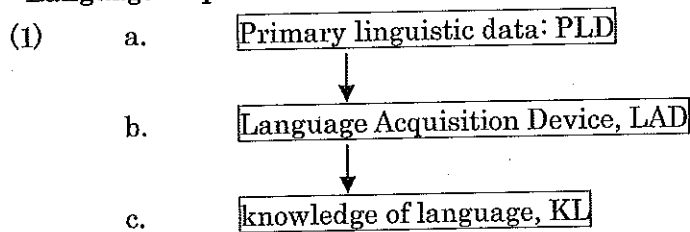
- Small children may make mistakes in their language, but they become not to make such mistakes eventually. How is this process? They make less mistakes gradually, or they just become to use correct form from one day? [REDACTED]

\* Interesting question. It is not easy to trace all the process of language development of a certain individual (or a group of individuals). At least for some cases reported, there is a period during which a child use both correct and incorrect forms sporadically, but it seems that the period is very short and this does not happen for every child.

HW Review: Good example



<Language Acquisition Model>



(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: (2c) How children acquire sentence-building skills (part 1 of 4)

1. Basic characters of phrases/sentences of human language
- (3) (hierarchically) structured
- (4) recursive

<Hierarchically Structured>

Class Work 7-1: "Is John a liar?"

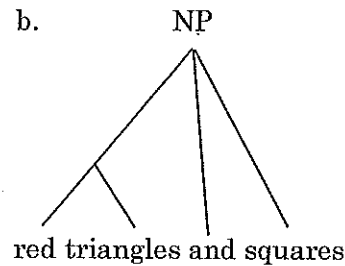
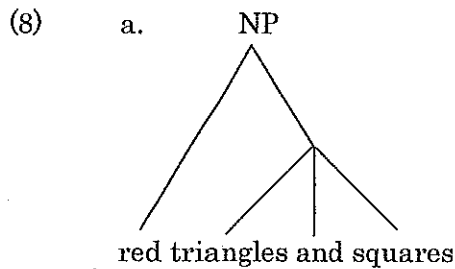
- (5) Situation A: There are two red triangles and three red squares on the desk.  
John's report of this situation: "There are red triangles and squares on the desk."

Q1: Is John a liar?

- (6) Situation B: There are two red triangles and three blue squares on the desk.  
John's report of this situation: "There are red triangles and squares on the desk."

Q2: Is John a liar?

- (7) Situation A and Situation B are completely different. Nonetheless, "There are red triangles and squares on the desk" correctly describes either of the situations. Hence, "There are red triangles and squares on the desk" may carry two completely different meanings. Why is this possible?



- (9) Human languages are (not only linear-order based, but also) structure-based.  
 => Children have to acquire a system that produces structured phrases.  
 => Human syntactic knowledge is not just about how to put words in linear order

<Recursive>

- (10) This is the house that Jack built.  
 (give a direct translation into your native language as well)
- (11) This is the malt  
 that lay in the house that Jack built.
- (12) This is the rat  
 that ate the malt  
 that lay in the house that Jack built.
- (13) This is the cat  
 that killed the rat  
 that ate the malt  
 that lay in the house that Jack built.
- (14) How long can we continue? (See appendix)
- (15) Human languages have a mechanism that allows recursiveness.  
 => Children have to acquire a system which allows recursiveness.

2. First Appearance of Building System (pp.80-86)

- (16) One word stage
- (17) Two word stage: around 15 months old  
 vocabulary < 50  
 start using two word utterances
- (18) Rapid growth of sentence length and complexity (pp.83-85: HW6 (C))
- 27 month: function words are missing (See the chart on p.85)
  - 30 month: questions and negations are coming in.
  - complex clauses (see 32, 34, 36, 38)
- (19) a. First, item-based "system"  
 b. Then, rule-based grammar

3. Sticking around Core Words and Pre-Made Frames (pp.86 - 88)

(20) Item-based learning

- a. pivotal (see chart on p.86)<sup>1</sup>
- b. cut-and-paste strategy (see chart on pp.86 - 87)<sup>2</sup>

(21) a. creative on use of new nouns

but

- b. conservative on use of new verbs

(22) a. Nouns: "when they learn a new noun, they immediately begin to use it in a variety of ways." (p.87)

- b. Verbs: "Initially, children may use a new verb only in the particular way that they have heard it used." (p.87)<sup>3</sup> See also HW7 (A).

4. Toward a Rule-Based Grammar (pp.88 - 90)

(23) Class Work 7-2

Suppose:

John is the "doer" (i.e. "giver" in this case)

The book is the "undergoer" (i.e. the one to be given)

Tom is the "receiver"

How do you describe this situation (i) in English (using the verb *give*), and (ii) in your native language (using the verb corresponding to *give*)?

(There could be more than one way in a language. Try hard.)

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<sup>1</sup> Braine, Martin. (1963) The ontology of English phrase structure: The first phase. *Language* 39, 1-13.

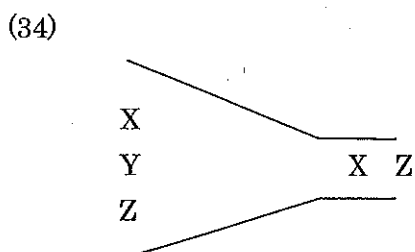
<sup>2</sup> Tomasello, Michael. 2000a. A usage-based approach to child language acquisition. *Berkeley Linguistic Society* 26, 305-19.

<sup>3</sup> Tomasello, Michael. 2000b. The item-based nature of children's early syntactic development. *Trends in Cognitive Sciences* 4, 156-63.

- (24) a. isolating type languages: English, etc.  
 b. dependent-marking type languages: Japanese, etc.<sup>4</sup>
- (25) Word order is very important in English to indicate basic grammatical relations (which is “doer” and which is “undergoer,” etc.)
- (26) Children are very “careful” (or “conservative”) about word order.
- (27) **Quiz**  
 About *John* (doer) *pushed Mary* (undergoer), how many word order patterns are “logically” possible?
- (28) Even small children use the correct order more than 95% of the time.<sup>5</sup>
- (29) One minor exception:  
 Verb-subject order (with intransitive verbs of “motion” or “change of state”)  
 See p.88.
- (30) Notice:  
 a. There arrived a beautifully fit gentleman.  
 b. Into the room ran a girl with a huge hat.  
 c. John broke the light. / The light broke.  
 d. Mary grows tomatoes. / Tomatoes grow.
- (31) Big rules vs. little rules  
 a. big rules: rules for all types of verbs (adult grammar)  
 b. little rules (small kids): verb by verb  
 => HW7 (A)

#### 5. Missing Major Elements (pp.90 - 92)

- (32) Small children sometimes omit an essential element in a sentence.
- (33) “processing bottleneck”  
 It is known that small children’s “working memory” is smaller than adults’.  
 When you have to say more than three words in a sentence, it is too much burden on small children’s mental processing: processing bottleneck.



What element is frequently missing?

<sup>4</sup> There is a third type in human language; head-marking type languages: Ainu, Mohawk (native American), etc., in which the relevant grammatical relations are marked on the verb.

<sup>5</sup> Pinker, Steven. (1984) *Language learnability and language development*. Harvard

(35) *Missing subject*: most frequent (30 – 60% of the time)<sup>6</sup>

\_\_\_\_\_ see boy. \_\_\_\_\_ ate fish.

(36) *Missing verb*: rare<sup>7</sup>

Ken \_\_\_\_\_ water. (= Ken is drinking water)

Eve \_\_\_\_\_ lunch. (= Eve is eating lunch)

(37) *Missing direct object*: 4 – 14% of the time (for 22 – 26 month olds)<sup>8</sup>

Lady do \_\_\_\_\_. Man taking \_\_\_\_\_.

(38)

he \_\_\_\_\_  
ate \_\_\_\_\_ ate fish  
fish \_\_\_\_\_

(39) **Class Work 7-3**

Why is subject drop more frequent than object drop?

=> HW7 (B)

### Summary

(40) Human sentence building mechanism

Recursive structure building

(41) It seems unconceivable that children “acquire” this mechanism from data (since PLD are just “examples”).

Recursive structure building mechanism → part of LAD (innate ability)

(42) From “baby” syntax to adult syntax

a. From “item-based grammar” to “rule-based grammar”

b. From “little rules” system to “big rules” system

(43) grammar type: isolating type (English) / dependent-marking type (Japanese)

Children learn the importance of word order

(44) Missing major pieces

Processing bottleneck, but why subject drop?

### HW7

### Post Class Work

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University Press.

<sup>6</sup> Bloom, Paul. (1990) Subjectless sentences in child language. *Linguistic Inquiry* 21, 491-504.

<sup>7</sup> Macrae, Alison. (1979) Combining meanings in early language. In P. Fletcher and M Garmon (eds.) *Language acquisition*. Cambridge University Press, 161-76.

<sup>8</sup> Valian, Virginia. (1991) Syntactic Subjects in the early speech of American and Italian children. *Cognition* 40, 21-81.

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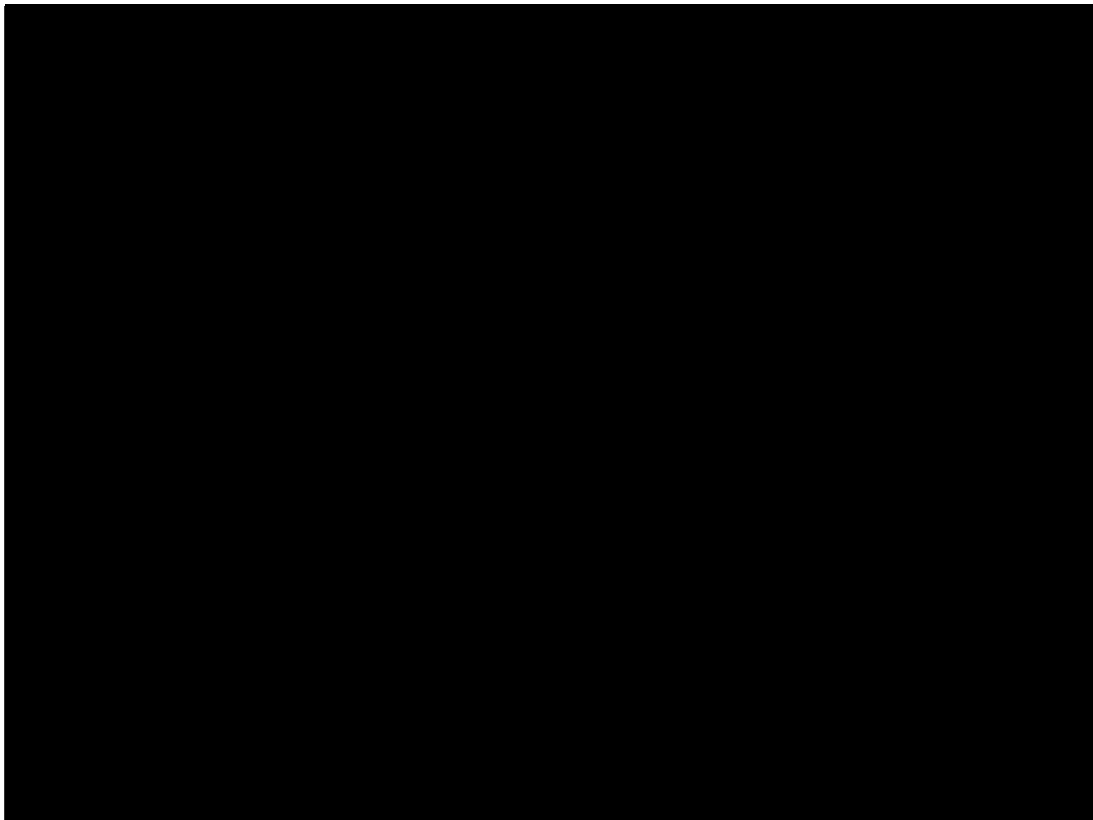
Appendix: Mother Goose Rhyme

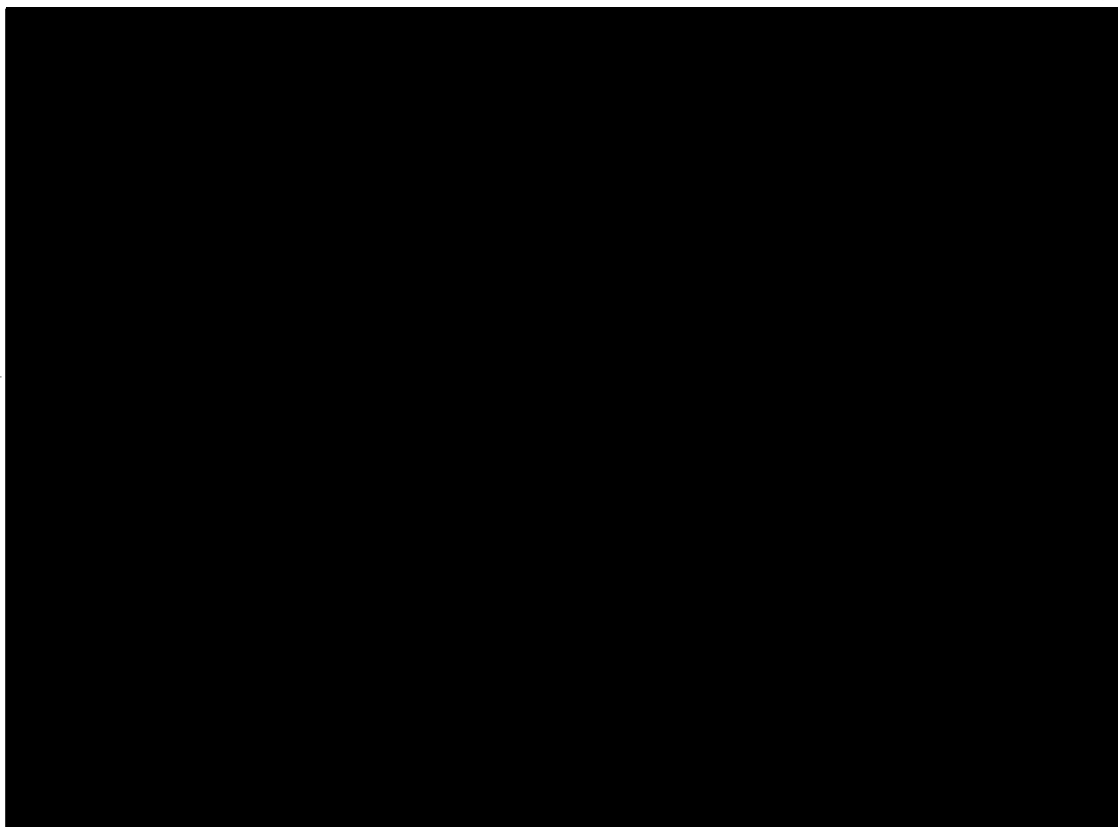
1. This is the house that Jack built.  
2. This is the malt  
That lay in the house that Jack built.
3. This is the rat  
That ate the malt  
That lay in the house that Jack built.
4. This is the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.
5. This is the dog  
That worried the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.
6. This is the cow with the crumpled horn  
That tossed the dog  
That worried the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.
7. This is the maiden all forlorn  
That milked the cow with the crumpled horn  
That tossed the dog  
That worried the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.
8. This is the man all tattered and torn  
That kissed the maiden all forlorn  
That milked the cow with the crumpled horn  
That tossed the dog  
That worried the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.
9. This is the priest all shaven and shorn  
That married the man all tattered and torn  
That kissed the maiden all forlorn  
That milked the cow with the crumpled horn  
That tossed the dog  
That worried the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.



10. This is the cock that crowed in the morn  
That waked the priest all shaven and shorn  
That married the man all tattered and torn  
That kissed the maiden all forlorn  
That milked the cow with the crumpled horn  
That tossed the dog  
That worried the cat  
That killed the rat  
That ate the malt  
That lay in the house that Jack built.

11. This is the farmer sowing the corn  
That kept the cock that crowed in the morn  
That waked the priest all shaven and shorn  
That married the man all tattered and torn  
That kissed the maiden all forlorn  
That milked the cow with the crumpled horn  
That tossed the dog  
That worried the cat  
That killed the rat  
That ate the malt that lay in the house that Jack built.





『谷川俊太郎自作を読む』（草思社）1988

## Homework Assignment 7

1. Turn in by Tuesday 12:30

via Email (MSWord file attached to email)

Make the name of the file as [ID\_your name\_hw7]



\*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.

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- A. Read Section *Big rules and little rules* in the text (pp.89 – 90), and summarize the point. Be concise. Write the number of the word at the end. (use about 100 words)
  
  - B. The text (pp.91 at the bottom – 92) discusses why subjects are dropped more often than direct objects? Read this part. Then, are you convinced by the text argument here? If yes, discuss why you are. If no, discuss why you are not. (See also the Chart on the top of page 91). Be specific. Try hard. Write the number of the word at the end. (use about 100 words)
  
  - C. Children aged 18 – 30 months sometimes use sentences in which negative comes first. Read the section *A Negative Beginning* (pp.98 – 99). Summarize three possible accounts of this type of sentences discussed in the text. (use about 100 words)
  
  - D. Any comments/questions on this homework assignment and/or the last class discussion.
  
  - E. Read the text up to page 102.