

A Longitudinal Study of One American Child's First Language Acquisition

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I. Introduction

How do children acquire their first languages? Are the developing stages similar to those of second or foreign languages? This has been a controversial issue in the past decade in the fields of first and second language acquisition.

One of my seminar students had an opportunity to stay for about three weeks at an American host family during the summer of 1989, which enabled her to meet a small American child (boy) at the early stage of his first language acquisition. Her written notes provided the linguistic raw data that made me decide to conduct a longitudinal pilot study on the child's language acquisition. The fact that he uttered what seemed at first to be very strange and totally ungrammatical English interested her, and made me realize the possibility of designing a long-term observation research project on the process of this early childhood first language acquisition.

* The chapter titled "Processes Regarding Child's Language Acquisition" in Roger Brown's *LANGUAGE ACQUISITION* (1976) was frequently referred to in order to come up with a plausible interpretation of this child's early stage of first language acquisition. See Appendix 1.

* I would like to acknowledge the contribution made by my seminar student Noriko Masuda and her host family to the present study.

II. Study

This is a descriptive and qualitative case study of one American child acquiring his first language in a natural environment with his family, consisting of his parents, his two-year older sister, and himself.

1) Research Design

This is a longitudinal case study of one American child named Mason, who is now about three years old and lives in Tacoma, in the suburbs of Seattle, Washington, U. S. A., with his parents and his older sister Libby, who is around two and a half years older than him. The present study lasted about one year, from early August, 1989, to early August, 1990, from when Mason was one year and 10 months old till he became two years and 10 months old.

In addition, when it was helpful in order to establish a firm statement about the child's developmental stage, his two year older sister Libby was referred to in terms of comparisons and contrasts, i. e., similarities and differences observed in their acquisition processes. The references to his sister Libby and her friends are also supposed to describe Mason's expected state of acquiring the language one year later.

2) Procedure

In order to investigate early childhood first language acquisition in terms of the child's process of acquiring words or short utterances, the mother of the child was asked to taperecord their daily conversations on an average of 10 times a week and jot down whatever conspicuous features she was able to recognize and find noticeable for the year following August, 1989.

3) Findings

Here I would like to present a diagram for Mason's utterances according to various situations in daily life, in comparison with the ones made by his older sister Libby and her friends, as well as sometimes with the ones by adults in general. His sister Libby was four years old then and her friends were from three to six on average at that time. In this study, adults are those who are over twelve years old.

[Diagram 1]

Situations	Mason	Libby & friends	Adults
Calling parents	Mommy/Daddy	Mom/Dad	Mom/Dad
Calling Noriko	Riko	Noriko	Noriko
Wanting to show her something	Riko, watch.	Noriko, look at that.	Noriko, look at that.
Inviting others to play basketball	Basketball	Play basketball	Let's play basketball.
Asking for the parents' help	Mommy mommy. Daddy daddy.	Help. Help me. Mom (Dad), help me.	
Spilling something	Milk spilt	Spilt milk. I spilt milk, I'm sorry.	
Seeing Noriko putting lotion on her face	Lotion	You put lotion.	You're putting on lotion.
Telling others to shut up	Lap	Shut up.	Shut up.
Not wanting to eat something one doesn't like	No.	I don't like orange.	
Claiming one's belongings	Mine.	It's mine./Mine.	
Feeling pain in one's stomach	Mommy/Daddy	Stomach hurt.	
Not wanting to follow the parents' orders or commands	No.	I don't feel like . . . ing.	

Wanting Noriko to buy something	Riko, watch.	How about this?
Wanting to take a shower	Shower	I want to take a shower.
Telling friends that one doesn't like them after quarreling	No.	I hate you.
Feeling sleepy	No.	I'm sleepy.
Being hungry	French fried	I'm hungry.

In addition, let me present all the lexical items Mason uttered at the age of one year and ten months by classifying them into different kinds of parts of speeches as well as into some sub-divided categories according to the usage of the items.

(A) Nouns:

- (1) addressing terms: mommy, daddy, Libby, Riko, Mary, Josh, Judy, etc.
- (2) food: milk, water, French fried, meat, pancakes, cake, chocolate, chocolate cake, apple, beans, candy, etc.
- (3) animals: dog, cow, cat, lion, pig, bird, horse, fish, etc.
- (4) furniture: bed, room, chair, etc.
- (5) stationery: pen, pencase, book, notebook, etc.
- (6) vehicles: car, bus, train, etc.

(B) Adjectives: blue, red, pink, yellow, etc.

(C) Verbs: watch, look, spill, go, kiss, love, hit, etc.

(D) Miscellaneous/Others: nigh-nigh(good night), cookie monster (Sesami Street), big bird (Sesami Street), No, mine, Hi, shower, lotion, eye, basketball, ball, toy, shoes, bag, Mc(McDonald), lunch, rain, tree, fire engine, police car, etc.

The following is another diagram of linguistic data taken from the observation of Mason's speech done about a year later.

[Diagram 2]

Situations	Mason	Libby & friends	Adults
Calling Parents	Mom/Dad	Mom/Dad	Mom/Dad
Calling Noriko	Noriko	Noriko	Noriko
Wanting to show her something	Noriko, look at this.	Noriko, look at this.	Noriko, look at this.
Inviting others to play basketball	Play basketball	Play basketball	Let's play basketball.
Asking for parents' help	Help./Help me.	Help./Help me.	
Spilling something	Uh oh Mom, spilt milk.	Spilt milk. I spilt milk, I'm sorry.	
Seeing other people putting lotion on face	You put lotion.	You put lotion.	You're putting on lotion.
Telling others to shut up	Shut up.	Shut up.	Shut up.
Not wanting to eat something one doesn't like	I don't want to eat this.	I don't like orange.	
Claiming one's belongings	It's mine.	It's mine.	It's mine.
Feeling pain in one's stomach	My stomach hurts.	Stomach hurt.	My stomach hurts.
Not wanting to follow people's advice	No! I don't want to.	I don't feel like . . . ing.	

Wanting other people to buy something	I want this, please.	How about this?
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Wanting to take a shower	I want to take a shower.	I want to take a shower.
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Telling friends one doesn't like them after quarreling	I don't like you.	I hate you.
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Feeling sleepy	I'm tired, bed, please.	I'm sleepy.
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Being hungry	Is it time to eat?	I'm hungry.
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III. Data Analysis & Discussion

As expected, what I observed from the findings of Mason's later developmental stage of first language acquisition shows nearly perfectly similar processes as his older sister Libby predictably indicated a year before. In other words, what Mason showed could perform one year later is quite exactly the same as what his sister and her friends were able to perform one year before when they were around Mason's current age, except for a few sample utterances, as indicated in Diagram 2.

In the following, I would like to go over the similarities and differences one by one according to each situation, to compare Mason's performance with Libby and her friends'.

[Results]

1) There are very few words typical to small children, so called "child talk," as shown in the overall sample utterances. In fact, the number of words for the utterances was increasing, for instance, from predominantly single-word, mostly ungrammatical utterances to short utterances of simple grammatically correct sentences.

2) As a matter of fact, he acquired such phrasal verbs as "look at."

3) He learned or acquired a new verb "play" to go with "basketball" to compose an idiomatic expression such as "play basketball," although he has not reached the level of

proficiency to be able to create a new construction starting with “let’s.”

4) He learned or acquired a new verb “help” to go with “me” in situations like “Help me.”

5) The fact that he uttered “spilt milk” shows that he learned the correct word order in a sentence with the omission of the subject “I,” which might be revealed through his initial interjection “Oh, Mom,” which is added to the content of the utterance “spilt milk.”

6) The fact that he could only pronounce/laep/shows that he could not have been able to make out the two word phrasal verb “shut up,” but he could only hear the sound for “up” with the change of the last consonant /t/ into /l/, which was caused by the liaison of the last letter of the verb “shut” and the initial letter of the preposition “up.”

7) It is surprising to know that Mason has learned how to use the infinitive “to” plus an ordinary verb, as observed in the instance “I don’t want to eat this,” although it is naturally already expected that he knows how to use the verb “want.” Moreover, it is worth noting that he could use the negative form of “I want” with the contraction, for it was the first time he used such a contracted negative marker (morpheme), “don’t,” which he used twice again later in utterances such as “I don’t want to.” and “I don’t like you.”, all of which proves his complete acquisition of the negative morpheme for the first person singular present tense.

8) In addition, it is worth mentioning that he could use the pronoun “it” to trigger the S + V + C construction without forgetting to put the contracted form of the linking verb “is,” as can be noticed in his sample utterance “It’s mine..”

9) Furthermore, it is surprising to see that he knows the word “stomach,” a name for a part of the human body. Not to mention, quite amazingly enough, that he could construct such an explanatory sentence as “I’m sick.” in the right situation, revealing his ability to use another contracted form of the linking verb “be” in the S + V + C sentence pattern to account for his stomachache as a reason for feeling pain in his stomach.

10) It is unexpectedly valuable to see that he could utter “I don’t want to.” in the appropriate context, indicating his ability to use both the contracted negative form for the present verb tense “don’t” and the to-infinitive to go with the verb “want,” which can also be shown in the utterance “I want to take a shower.”

11) Again, it is also surprising to see that he could express his own intention or will so directly in such a simple sentence as “I want this, please.” instead of just saying “Mom, look at this.,” which is an indirect and unsophisticated or ineffective speech act to ask for something only be encouraging the mother to pay attention to his remark.

12) Unlike the assumption of a year earlier as to whether or not he has acquired the use and real meaning of the be-verb, he could use such S + V + C construction as in "I'm tired." and "I'm sick," which shows his mastery in terms of how to use the first person singular present form of "be" in its contracted form. In addition, we can come to the conclusion that he has acquired a simple, primitive cause and effect (reason and result) style of discourse or discourse pattern, which can be considered an initial step for the natural flow of thoughts and ideas embedded in oral discourse or speeches within the realm of cognitive thinking processes.

13) Finally, it is worth noting that Mason could use such a highly sophisticated indirect speech act as "Is it time to eat?" with the use of the interrogative sentence to mean that he is hungry and that he would need something to eat by indicating that it's time for everybody to eat, despite the fact that in a more sophisticated way this indirect speech act should be carried out by using the negative interrogative form of the so-called "rhetorical question" such as "Isn't it time to eat?". As a matter of fact, he could have used a simpler and more direct speech act by just uttering "I'm hungry." to convey the same intention.

IV. Conclusion

As shown above, it can be regarded that Mason has acquired his first language much more noticeably and rapidly and strikingly than what was expected from his sister's experience, both in terms of its quantitative capacity and qualitative sense. To sum up his process of first language acquisition, the following are the main comparative features or specific points worthy of observation.

1 . He seems to have learned more nouns, more adjectives, and more verbs, as portrayed through an increased number of occurrences. That is, as he learns a new word, he starts to use it more frequently in a daily conversational context.

2 . Regarding the word order, he has come to acquire it more appropriately and correctly.

3 . It is objectively proved that he has acquired the use of contracted forms for both "am" and "do" in a year.

4 . It can be said that he has acquired the meaning of "be" verb with its correct and appropriate usage in a year.

5 . As for the infinitives, it can be concluded that he has mastered how to use the to-in-

finitive to go with the verb "want."

6 . It is most likely that he has acquired some grammatical rules little by little or step by step, as indicated by his mastery of limited infinitive usage or by that of negative form.

7 . As we can see from the length of his utterances having become longer, combined to some extent with its quasi-grammatical accuracy, it is plausible to conclude that he has established his own grammar or grammatical rules in his own cognitive processes, regardless of degrees of complexity.

8 . When it comes to the rate or speed of acquisition of the first language, it seems "the younger the faster" and that it does not matter how intelligent a child is, as is clearly shown in the case of Mason's being faster than Roger Brown's Adam (cf. Appendix 1), who was about a month older but was supposedly more intelligent than Mason when they are compared to each other on the basis of their linguistic performance data.

[Appendix 1]

According to Roger Brown, most six-month-old children are able to speak comprehensible words. A few months later, they begin to speak lots of words, typically at play around their houses, uttering words such as "table," "doggie," and "ball," or those action verbs like "play," "see," and "drop," or such featured (particular) words as "blue," "broke," and "bad." And probably, most eighteen-month-old children begin to construct two-word-utterances such as "Push car." It is also true that some children show development in terms of their construction processes of various English utterances of up to ten or eleven words in length before they become three years old.

Roger Brown's research in 1962 focused on the syntactic competence as well as the sentence construction processes observed in children aged from one and a half to three years. He made a longitudinal study of two small children, Adam (27 months old) and Eve (18 months old), who were especially intelligent and could speak particularly well. The experimental procedures taken were: 1) to taperecord the mother-child conversation about once every two weeks, and 2) to compose some observation notes to recall important behavior or conduct. The 38th week after the initiation of the experiment he found that the average numbers of words or lexical items acquired by those two children were 3.55 for Adam and 3.27 for Eve. Compared with the average numbers of words or lexical items they had acquired at the very beginning of his experiment, which were 1.84 and 1.40 respectively, it can be concluded that they showed similar quantitative acquisition processes in terms of their acquisition rate/speed.

It was not certain before the experiment was conducted: 1) whether or not the children were

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able to understand the semantic differences between putting nouns at the subject positions and doing so at the object positions, and 2) whether or not they were able to make out clearly what the plural forms were grammatically, i. e., the grammatical meaning of plural forms. However, he could observe several overall regularities of a child's utterances as follows.

- (1) utterances including "a" and nouns
- (2) utterances including nouns and verbs
- (3) utterances including past tense forms of verbs
- (4) utterances including the pronoun "it"

Moreover, he pointed out that the fact that the father of those two children graduated from Harvard University and that the mother also completed her university program could influence the results of the study.

In the following, I would like to establish three tables (Table A-C) with regard to the sample utterances of those children with their mother.

[Table A]

Adam	Mother
"See truck, Mommy."	
"See truck."	
	"Did you see the truck?"
"No, I see truck."	
	"No, you didn't see it?"
	"There goes one."
"There go one."	
	"Yes, there goes one."
"See a truck."	
"See truck, Mommy."	
"See truck."	
"Truck."	
"Put truck, Mommy."	
	"Put the truck where?"
"Put truck window."	
	"I think that one's too large to go in the window."

As we can see from Table A above, utterances made by the mother to the child are not so long and complex as those which adults normally use to each other in everyday conversation. Small children cannot understand the syntactic patterns in English, but they can learn them from what their mothers repeatedly speak to them, in the course of their acquiring first language. Even though they imitate what their mothers have said to them, they sometimes make a mistake and fail to imitate perfectly, as indicated by the sequences in the above Table 1, where the child drops the third person singular morpheme "es" in the mother's utterance "There goes one."

[Table B] Some Imitations Produced by Adam and Eve

Model Utterance	Child's Imitation
"Tank car"	"Tank car"
"Wait a minute"	"Wait a minute"
"Daddy's briefcase"	"Daddy briefcase"
"Fraser will be unhappy"	"Fraser unhappy"
"He's going out"	"He go out"
"That's an old time train"	"Old time train"
"It's not the same dog as Pepper"	"Dog Pepper"
"No, you can't write on Mr. Gromer's shoe"	"Write Gromer shoe"

As Table B shows, the fact that the word order has been acquired by the child illustrates that the child understands the succession or series of words as whole structures in his or her mind the process of constructing basic sentence structures.

[Table C]

Child	Mother
"Baby highchair"	"Baby is in the highchair"
"Mommy eggnog"	"Mommy had her eggnog"
"Eve lunch"	"Eve is having lunch"
"Mommy sandwich"	"Mommy'll have a sandwich"
"Sat wall"	"He sat on the wall"
"Throw Daddy"	"Throw it to Daddy"
"Pick glove"	"Pick the glove up"

In Table C we can see some examples of the mother's complete grammatically correct reproduction of the child's utterances. Although the word order is retained in the child's utterances, such auxiliary verbs as "is" and "will," such prepositions as "in," "on," "to," "and" "up," definite and indefinite articles, and such pronouns as "her," "he," "and" "it" have not been acquired.

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