Kansas Working Papers in Linguistics

edited by

John Kyle

Volume 23, Number 2
1998

Partial funding for this journal is provided by the
Graduate and Professional Association of the University of Kansas

ISSN 1043-3805

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Volume 23, Number 2
1998

ACQUISITION OF THE PASSIVE

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Abstract: This single-subject pilot study, modeled after de Villiers' 1973, investigates the subject's acquisition of the passive construction (i.e., 'The boy was hit by the girl', as opposed to 'The girl hit the boy'). The purposes was to determine and analyze the subject's level of acquisition of the English passive. Three reversible full passive and three reversible active constructions were presented to a child with an MLU of 4.26. Results from the test show the child may have been receptively aware of the passive.

Introduction

Comprehension of the passive construction is an interesting feature of language acquisition to observe because of its complexity and infrequency in both child and adult speech. Research by Horgan (1978) and Maratsos & Abramovitch (1975) show that adult spontaneous speech has infrequent passive constructions. Even by college age, the passive construction is not regularly used. Despite its complexity and infrequency, children may exhibit an awareness of the passive construction at an early age. Given that comprehension precedes production, Maratsos and Abramovitch propose that the passive construction may be comprehended before evidence of use.

Test data from de Villiers and de Villiers (1973) show that children beyond Stage I (MLU 2.00 or greater) are aware that passives are formally different from actives. The results also show that children are aware that the passive construction is a form they have not yet acquired. Children in Stage I use either a non-linguistic strategy (e.g., 'when told to "make the cow kiss the horse," the child kissed the cow or the horse or both') or refuse to respond when dealing with passives (337). De Villiers and de Villiers use this data to suggest that children at Stage I have no understanding of the passive construction.

The responses of children beyond Stage I are similar to those in Stage I, in that, children continue to respond to passives with a non-linguistic strategy or by refusing to respond. The degree of these type of responses, however, is noticeably different. Children beyond Stage I exhibit a greater tendency to treat passives exactly like actives. Ingram (1989) notes this is suggestive that children beyond Stage I are receptively aware of the passive construction. The data from the de Villiers and de Villiers' study show that children begin to acquire the passive by

Stage IV. This is evidenced by dramatic change in responses to the passive construction, a marked decrease in the non-linguistic responses, and refusals and a marked increase in the percentage of reversals of passives.

Ingram (1989) notes that later studies on the English passives, such as Pinker (1984), mainly discuss the acquisition of passive syntax and meaning. Ingram points out that although these later studies may include a discussion about the tendency to treat passives as actives at a specific stage, such studies give no account for such phenomena (Ingram, 1989 472).

The purpose, therefore, of this pilot study is to determine and analyze the subject's level of acquisition of the English passive construction based on previously conducted research. In this pilot study, I investigate the subject's acquisition of the passive construction (i.e., 'The boy was hit by the girl', as opposed to the active construction 'The girl hit the boy'). If the subject has learned the rules governing active and passive constructions, he should be able to process reversible active and passive sentences correctly (reversible sentences are constructions in which 'the subject and object are capable of being interchanged, for example, "The boy hit the girl" vs. "The girl hit the boy" ') (Ingram, 1989 254).

Method

The Subject. The participant was an African-American boy, age 3;4, with an MLU of 4.26[1]. The mother was a Speech Pathology student in her Senior year at the University of Kansas. I visited the child in the home and tested him in one twenty-minute session.

In the participant's spontaneous speech transcript[2], recorded eight weeks earlier, a knowledge of word order was apparent. A sample of the type of constructions from the subject's spontaneous speech are as follows:

Sentence	Sentence No.
Can you pick my bike up	118
I can show you my cars	86
I gotta get my shoes first	115
I'm gonna ask her	121
It's called the hit game[3]	39
Michele take me there	31
Mom, can you show me how	36
Mom, can you help me do this game	52

Sentence	Sentence No.
Wanna watch me ride my pickup bike	114
With this, I can clean my house	44
Yeah, I'm looking for the white one	143
You have to do like this[4]	82
You need to get a car too	95
You play like hit things	41

Table 1: Samples from the subject's recorded spontaneous speech

For a child who exhibits correct word order in spontaneous speech, a comparison can be made of their use of word order to their comprehension of reversible active and passive sentences, in which 'contrasts in meaning are signaled by word order alone' (de Villiers, 1973 332).

The Procedure. This sample test followed the method of de Villiers and de Villiers (1973). The subject was presented with three reversible active and three reversible passive sentences and asked to act each out. The nouns in each sentence were designated as either an agent or an object. To assure the subject's response, I introduced test sentences with the command 'Make the ... ' The de Villiers and de Villiers study proposed that the use of the command 'Make the ...' was a better test phrase than the command phrase 'Show me ...' They suggested that a test sentence introduced by the command phrase 'Show me' might be difficult to process, being an embedded phrase.

Additionally, I used reversible sentences, as defined above. I used reversible sentences to avoid the subject's use of semantic probabilities. For example, 'the child could correctly act out the command "Make the cow eat the flower" because of its knowledge of *eat*, not because of word order -- the child knows that cows eat flowers but flowers do not eat cows' (Ingram, 1989 254).

Materials used included: 1 Hot Wheels Lambourghini Contach #4384, 1 Hot Wheels Surf Patrol #5348, and 2 Hercules Play Sets — #67818 and #67824. Before asking the subject to act out the sentences, I assured myself that the child knew the name of each toy used in the test constructions.

The sentence set was as follows:

Actives

Make the truck push the car.
Make the horse bite the monster.

Make the girl kiss the man.

Passives

Make the car be pushed by the truck.
Make the monster be bitten by the horse.
Make the man be kissed be the girl.

I assumed that the subject of this pilot test was receptively aware of full passives in his comprehension and knew they were a form he had not yet acquired in his production. I expected the subject to exhibit one of four responses to the task asked to complete:

a) produce a correct response,
b) treat the passive as an active,
c) use a non-linguistic strategy (e.g., instead of the child making the horse bite the monster, the child bites the monster himself), or
d) refuse to complete the task.

According to data from the de Villiers and de Villiers study (1973), a subject, who has an MLU of 4.26, should exhibit a greater tendency toward the second response, treating the full passive as a form he already knows -- the corresponding active. It was expected that there would be little or no use of a non-linguistic strategy or refusals to respond.

Results

The following table shows the results of the experiment:

	Correct	Reversed	Child as agent	Refusals
Actives	3	0	0	0
Passives	0	2	0	1[5]

Table 2: Results with active and passive constructions

The participant correctly acted out all reversible active constructions. With the reversible passive constructions, the participant exhibited a tendency to treat the passive as an active by using the first toy noted in the test sentence as the agent.

There were no instances of the child using non-linguistic responses. There was only one instance of a refusal to respond. I graded this later reaction as a

refusal to respond due to its uninterpretability. Rather than using one toy to act upon the other, the child retrieved one toy in each hand, spread them apart in an eagle-wing fashion, and smashed them together. It should be noted that this response could be recorded as an incorrect response or even a non-linguistic response, rather than a refusal to respond. As the action occurred with the passive construction rather than with the active construction, I could have concluded that the child was aware of the construction, but was unable to correctly respond or used a non-linguistic strategy to respond.

Discussion

The data reflect that the subject may be receptively aware of the passive construction. The de Villiers and de Villiers study showed that children exhibited a tendency to reverse the meaning of the passive sentence by using the first noun as the agent. Evidence that my subject may be receptively aware of the passive construction is indicated by the word order reversal strategy in which he treated passives exactly like actives. He correctly acted out the active sentences, but was unable to correctly act out the reversible passive sentences. With the reversible passive sentences, the subject consistently used the first noun as the agent, indicating his willingness to respond, but inability to do so.

Data from de Villiers and de Villiers indicated that for children in early Stage I, one-third of the responses to passive sentences were non-linguistic responses. If the subject of this study was at the stage of development where he was still unaware of the passive construction, he too should have tended to use non-linguistic responses or simply not respond at all. If the subject was at the stage of development where he comprehended the passive construction, but was unable to produce them, he should have correctly acted out the reversible passive test sentences.

The results demonstrate that this procedure is suitable for testing the passive construction. Use of the command *make* assured some type of response from the child. Use of reversible sentences helped to avoid predictable uninterpretable results. For example, if the subject correctly acted out a command such as, 'Make the horse bite the apple', rather than the test sentence, 'Make the horse bite the monster', the response could be attributed to the child's knowledge of the verb *bite* and not because of knowledge of word order. I could conclude that the child knows that horses bite apples, but that apples do not bite horses. The test materials used were well known to the subject and, therefore, the child exhibited a high interest in participation. Toys in the likeness of a man, however, may have contributed to the one instance of uninterpretability. With the animals and vehicles, the child tended to leave them on the ground and animate one or the other whereas people-toys seemed to require simultaneous animacy. The

uninterpretable result may also have been due to the verb choice *to kiss*. The intimacy and affection relayed in this type of verb seemed to require mutual consent and thus, simultaneous animacy. If I ran the experiment again, a different choice of materials or verbs may be warranted to assure more consistent responses. The possibility also exists to include more of these types of materials or verbs to compare the response to other materials and verbs.

NOTES

[1] According to Brown's (1973) five stages of grammatical development, the subject's Mean Length of an Utterance (MLU) at age 3;2 was MLU 4.35. This placed him in Stage V of grammatical development. The MLU was computed as follows:

$$Mean = \frac{ColumnD}{ColumnC}$$

A. No. Of Mor-phemes	B. Sentence Number (Type 1-3, 6-7)	C. No. of Sentences with X Morphemes	D. Total Morphemes (AxC)
0	40, 49, 50, 56, 69, 74, 102, 10	N/A	N/A
1	61, 68, 72, 87, 94, 96, 98, 100, 104, 105, 122, 126, 134, 137	14	14
2	53, 70, 99, 111, 136	5	10
3	33, 79, <92>, 108, 116, 117, 120, 140	8	24
4	30, 31, 34, 47, <80>, 89, 91, 107, 123, 124, 125, 127	12	48
5	35, 37, 57, 73, 101, 121, 130, 131, 133, 144	10	50

6	36, 41, (55), 58, 82, 86, <93>, 118, 119, 145	10	60
7	39, 44, 95, 113, 114, 115	6	42
8	52, <141>	2	16
9	67, 143	2	18
10	65, 106	2	20
11	109	1	11
	TOTALS	72.00	313.00

Table 3. Sentences calculated in MLU computation.

[2] A 30 minute spontaneous speech session involving the child, the mother and the experimenter was tape-recorded six weeks prior to the pilot study. A written transcript of approximately 100 utterances was made from which the Mean Length of Utterance (MLU) was calculated.

[3] Review of the interpretable data from my subject revealed only one potentially spontaneously produced passive: Sentence number thirty-nine.

[4] I interpreted the word *like* as serving the same function as in sentence eighty-two.

[5] This response was graded as a refusal because it was uninterpretable.

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