

General developmental patterns and individual differences in the acquisition of copula and auxiliary *be* forms*

STAN A. KUCZAJ II, *Southern Methodist University*

ABSTRACT

Children's acquisition of copula and auxiliary *be* forms was investigated in order to assess the notion that syntactic development proceeds in a specific to general fashion, with initial specific acquisitions gradually evolving into general productive ones. The results support this view of syntactic development, and highlight the need for more careful consideration of individual differences in syntactic development.

Studies of syntactic development necessarily focus on the nature of the syntactic categories being acquired, as well as the processes underlying the acquisition of such categories. These concerns are intimately related to concerns about the nature of grammatical rules and their acquisition, in that rules operate on form classes. Thus, the interrelation of hypotheses about syntactic categories and syntactic rules is one of mutual constraint. Hypotheses about syntactic categories constrain hypotheses about syntactic rules, and vice versa.

The present study was concerned with the notion that syntactic development is best characterized as a gradual process, one in which children's initial syntactic categories and rules are highly specific, the developmental process being such that these initial specific acquisitions gradually evolve into general fully productive ones (Brown 1973, R. Clark 1974, 1977, Kuczaj 1977, 1978, 1982, Kuczaj & Brannick 1979, Maratsos 1979, Maratsos & Chalkley 1980).

This hypothesis was examined in the present study by investigating the acquisition of certain copula and auxiliary *be* forms. More specifically, the acquisition of uncontracted present tense *be* allomorphs (*am*, *is*, and *are*) was studied. Contracted forms (*'m*, *'s*, and *'re*) were excluded from consideration because of the difficulties involved in determining the status of such forms in young children's speech (Brown, Cazden, & Bellugi 1969, Brown 1973, Kuczaj 1976, 1979, Maratsos & Kuczaj 1978). Past tense *be*

* Address for correspondence: Stan Kuczaj, Department of Psychology, Southern Methodist University, Dallas, TX 75275, U.S.A.

forms were excluded because, unlike present tense *be* allomorphs, they add meaning to a sentence, and I wished to avoid comparing the acquisition of meaningful forms with the acquisition of meaningless forms (see Brown 1973, for a discussion of the semantics of *be*).

METHOD

Subjects

Sixteen children participated in the present investigation. Two of the children (my two sons, Abe and Ben) formed a longitudinal sample. Fourteen children (5 females, 9 males) formed a cross-sectional sample, with two different children being studied at each six-month interval from 2;6 (years; months) to 5;6. These children were all from middle-class homes and appeared to be normally developing children.

Data Collection

The data consisted of spontaneous social speech samples obtained from each child. Abe's speech was sampled for approximately one hour per week from 2;5 through 4;0, and for ½ hour per week from 4;1 to 5;0. Ben's speech was sampled for approximately one hour per week from 1;11 to 3;6. A weekly one-hour sample of speech was obtained from each of the children in the cross-sectional sample for six consecutive weeks.

Data Analysis

The speech samples were analysed for omissions, incorrect uses, and correct uses of *be* allomorphs in specific sentential frameworks (e.g., copula *are* following *they* and preceding a prepositional phrase in the declarative). These detailed analyses of the use of *be* allomorphs provided insights into both the acquisition of particular allomorphs and the acquisition of *be qua* class.

RESULTS

In this section, I will most frequently refer to the results from Abe and Ben's speech. The references will be to either the onset of use of a *be* form in particular contexts or the stable acquisition of the form in those contexts (defined as at least 90% success rate in obligatory contexts, following Brown 1973). Since the data from the children in the cross-sectional sample provided information about each child's knowledge of the *be* allomorphs during a given period, but no actual information about the course of any individual's acquisition of *be*, these data will be compared and contrasted with the data on the developmental patterns in Abe's and Ben's acquisition of *be*.

The results were as follows:

1. In the acquisition of a *be* allomorph, the predominant pattern was one in which children learn to use the allomorph in quite specific contexts. This was true both for the child's initial uses of the form and the subsequent stable acquisition of the form.

Examples of this development pattern in regard to initial uses of a *be* allomorph include the following:

a. At 2;5, Abe sometimes used copula *are* in declarative sentences beginning with *those* or *these* (e.g., 'those are good toys'), but consistently omitted copula *are* in all other obligatory contexts. At 2;6, he began to use copula *are* in declaratives beginning with *you* and simple noun phrases. However, he consistently omitted auxiliary *are* in declarative contexts until 2;8, at which time he began to use this allomorph in limited declarative contexts.

b. Similarly, Ben's use of copula *is* began as a form which always occurred in sentence final position (e.g., 'there spoon is', 'here (it) is', 'there they is'; age 2;0). Although he produced several constructions with *be* in a sentence internal position at 2;2 (e.g., 'toast be in there'), he failed to produce *is* (or *am* or *are*, for that matter) in sentence internal position until 2;3. At this time, *this* was sometimes followed by *is* (e.g., 'this is hot'). At 2;4, Ben began to produce copula *is* in sentence internal position with a variety of forms preceding it (e.g., 'Ben is happy', 'T.V. is on'). However, he also continued to use *is* in sentence final position, but such use was now more likely to be a grammatical construction (i.e., grammatical in terms of adult standards) such as 'there it is.' Curiously, constructions such as 'is key' and 'is here' (with declarative intonation) also began to appear during this time.

Even though these early acquisitions were specific and thereby relatively limited, they were nonetheless partially productive. For example, Ben produced novel forms such as 'coat off. Hot is.' (which context suggested meant 'I want my coat off. It's hot') at 2;1 and 'Abe on chair is' at 2;3.

2. Children do not seem to learn all members of the copula or the auxiliary *be* class simultaneously. In addition to the varying patterns of initial uses, one also finds differences in regard to age of final acquisition (defined as 90% correct usage in obligatory contexts, following Brown 1973). The data which support this claim are the following:

a. For copula *be* in declarative contexts, Abe acquired *am* at 2;5, *is* at 2;7, and *are* at 2;9. For auxiliary *be* in declarative contexts, *am* was acquired at 2;5, *is* at 3;0 and *are* at 3;0.

b. Ben consistently acquired *is* before *are*, and *are* before *am*. This was true for both copula and auxiliary forms, and for declaratives, *yes/no* questions, and *wh*-questions. Moreover, Ben exhibited a consistent lack of integration of allomorphs. For example, when Ben began to use copula *are*,

he used it in sentence final position, as was the case for *is* (his first use of *are* was 'there they are' at 2;1). However, he did not begin to use *are* in sentence internal position until 2;6, ten weeks after he had begun to do so for copula *is*.

c. In *wh*-question contexts, Abe achieved the 90% criterion of use (though not necessarily in the correct post *wh* position) for copula *is* at 2;9, auxiliary *is* at 2;11, and copula and auxiliary *are* at 3;3. The 90% criterion of correct placement in *wh*-questions was achieved at 2;11 for copula *is*, 3;1 for auxiliary *is* and 3;3 for copula and auxiliary *are*.

d. In the cross-sectional sample, one child (D.N.) achieved acquisitional criterion on correct placement of auxiliary *are* in *wh*-questions but failed to do so for auxiliary *is*. Three children (A.B., V.Q., K.M.) exhibited the opposite pattern, achieving the 90% criterion for correct placement of auxiliary *is* but not auxiliary *are* in *wh*-questions.

3. Copula *be* forms tended to be earlier stable acquisitions than auxiliary *be* forms. This was true for the following forms in:

- a. declaratives: *am* (Ben, M.Z.)
are (Abe, Ben, N.E., M.Z.)
is (Abe, Ben, M.Z., D.N.)

Ben's acquisition of copula *be* allomorphs involved different errors than did his acquisition of auxiliary *be* allomorphs. Specifically, there were no sentence initial or final errors for auxiliaries. Thus, errors such as 'is going' or 'we going are' did not occur, although errors such as 'I is drawing' (2;6) did occur.

- b. *yes/no* questions: *are* (Ben, M.Z.)
is (Ben, I.B., M.Z.)

Exceptions: Two of the children in the cross-sectional sample (N.E., I.B.) were more competent at correct placement of auxiliary *are* than copula *are* in *yes/no* questions.

- c. *wh*-questions: *are* (Ben, N.E., H.K., V.Q., K.M.)
is (Abe, N.E., M.Z., H.K.)

Exceptions: One of the children in the cross-sectional sample (A.B.) was more competent at correct placement of auxiliary *is* than copula *is* in *wh*-questions.

4. Most *be* forms were acquired (90% criterion) in declarative contexts before *yes/no* question contexts. This was observed in the following cases:

- a. copula *is* (Abe, Ben, M.Z.)
- b. copula *are* (Ben, M.Z.)
- c. auxiliary *is* (Abe, Ben, M.Z., D.N.)
- d. auxiliary *are* (Ben, M.Z.)

5. *Be* forms also tended to be acquired (90% criterion) in *yes/no* question contexts before *wh*-contexts. This was observed in the following cases:

- a. copula *is* (Ben, M.Z.)
- b. copula *are* (Abe, Ben, M.Z.)
- c. auxiliary *is* (Ben, N.E., M.Z., D.N., H.K.)
- d. auxiliary *are* (Abe, Ben, N.E., M.Z., H.K., V.Q., K.M., A.B.)

Exceptions: Abe exhibited earlier acquisition of copula *is* in *wh*-question contexts (2;9) than in *yes/no* question contexts (3;0). He also exhibited earlier acquisition of auxiliary *is* in *wh*-questions (2;11) than in *yes/no* questions or declaratives (3;0).

6. In regard to the 90% criterion of correct use in obligatory contexts there were no simultaneous acquisitions in Ben's speech. However, there were some simultaneous acquisitions of *be* forms in Abe's speech. These were:

- 2;5 (onset of speech sampling) – copula and auxiliary *am* in declaratives
- 3;0 – copula and auxiliary *are* in declaratives
 - copula *is* and auxiliary *are* in *yes/no* questions (although not necessarily in initial position)
 - copula *are* and auxiliary *is* in correct initial *yes/no* question position.
- 3;1 – copula *is* and auxiliary *are* used in correct *yes/no* question position
- 3;3 – copula and auxiliary *are* used in correct *wh*-question position.

Discussion. Given the semantic emptiness of present tense *be* forms, and the phonological and grammatical dispersion of *be* allomorphs, it is not surprising that children do not appear to relate the allomorphs early in development (although some integration does occur for at least some children, e.g., witness Abe's case; cf. Bellugi 1971, Klima & Bellugi 1966, Miller & Ervin-Tripp 1964). As noted earlier, even these initial acquisitions may be somewhat productive. Children, then, are not simply copying heard relations. Even early on, they appear to be attempting to generalize, but are limited to doing so on the basis of relatively specific lexical relations.

By paying attention to the correspondences among particular syntactic relations, children gradually broaden the bases of their generalizations. Children gradually construct a general system by attending to co-occurrence relations (Maratsos 1979, Maratsos & Chalkley 1980), and generalizing accordingly. Of course, children sometimes err during this process, and so they must continue to monitor their input in order to either confirm or reject their generalization hypotheses.

The notion that syntactic categories and rules begin as highly specific fits well with the individual differences which were observed. If children pay attention to relations among individual lexical items, and gradually attempt to derive more general relations from these, individual differences would be expected to correspond to differences in input, differences in what children focus on, and differences in how quickly and on what basis children attempt

to generalize (which also affects the frequency and types of mistakes). For example, Abe exhibited certain simultaneous acquisitions which suggested that he had related certain *be* allomorphs, whereas Ben did not. This difference reflects the different styles exhibited by Abe and Ben as language learners. Abe seemed to be much more interested in organizing and consolidating the information he had acquired than was Ben, who gave the appearance of attempting to use what he knew as soon as he learned it. Thus, his generalizations usually rested on highly specific and/or inappropriate information. In the future, more attention must be paid to individual differences in language development. The presence and absence of particular differences among individuals is likely to prove as important for theories of language development as will the presence and absence of differences among the acquisition of different languages. Thus, the study of individual similarities and differences and the study of cross-cultural similarities and differences are aspects of the same set of problems. What are the universal characteristics of language development? What are the aspects of language development most susceptible to individual and cultural variation?

Complexity will undoubtedly be one of the factors which influences whether individual and/or cultural differences occur for given acquisitions. For instance, the *typical* pattern of declarative use before *yes/no* question use, and *yes/no* question use before *wh*-question use observed in the present study undoubtedly reflects the relative semantic, syntactic and pragmatic complexity of these forms. Tearing apart such complexity factors will greatly assist attempts to explain language acquisition. Again, however, since this pattern was typical rather than absolute (there were exceptions), attention must be given to the nature and causes of individual differences in language acquisition.

REFERENCES

- Bellugi, U. (1971). Simplification in children's language. In R. Huxley & E. Ingram (eds), *Language Acquisition: Models and Methods* (New York: Academic Press).
- Brown, R. (1973). *A First Language* (Cambridge, MA: Harvard University Press).
- Brown, R., Cazden, C. & Bellugi, U. (1969). The child's grammar from I to III. In J. Hill (ed.), *Minnesota Symposia on Child Psychology*, Vol. II (Minneapolis, MN: University of Minnesota Press).
- Clark, R. (1974). Performing without competence. *Journal of Child Language*, 1, 1-10.
- (1977). What's the use of imitation? *Journal of Child Language*, 4, 341-358.
- Klima, E. & Bellugi, U. (1966). Syntactic regularities in the speech of children. In J. Lyons & R. Wales (eds), *Psycholinguistic Papers* (Edinburgh: Edinburgh University Press).
- Kuczaj, S. (1976). Arguments against Hurford's 'aux-copying' rule. *Journal of Child Language*, 3, 423-428.
- (1977). The acquisition of regular and irregular past tense forms. *Journal of Verbal Learning and Verbal Behaviour*, 16, 589-600.

- (1978). Why do children fail to overgeneralize the progressive inflections? *Journal of Child Language*, 5, 167–171.
- (1979). The influence of contractability on the acquisition of *be*: Substantial, meager, or unknown? *Journal of Psycholinguistic Research*, 8, 1–11.
- (1982). On the nature of syntactic development. In S. Kuczaj (ed.), *Language Development: Syntax and Semantics* (Hillsdale, N.J.: Erlbaum).
- Kuczaj, S. & Brannick, N. (1979). Children's use of the *wh*-question modal auxiliary placement rule. *Journal of Experimental Child Psychology*, 28, 43–67.
- Maratsos, M. (1979). How to get from words to sentences. In D. Aaronson & R. Rieber (eds), *Psycholinguistic Research* (Hillsdale, N.J.: Erlbaum).
- Maratsos, M. & Chalkley, M. (1980). The internal language of children's syntax. In K. Nelson (ed.), *Children's Language*, Vol. 2 (New York: Wiley).
- Maratsos, M. & Kuczaj, S. (1978). Against the transformational account: a simpler analysis of auxiliary overmarkings. *Journal of Child Language*, 5, 337–345.
- Miller, W. & Ervin-Tripp, S. (1964). The development of grammar in child language. In U. Bellugi & R. Brown (eds), *The Acquisition of Language; Monographs of the Society for Research in Child Development*, 29, 9–34.