

SYSTEMATICITY AND VARIATION IN THE NON-NATIVE CHILD'S ACQUISITION OF CONVERSATIONAL SKILLS¹

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This research examines the development of one conversational subsystem, turn-allocation, in children acquiring English as a second language. The purpose of the study was two-fold: to describe the devices used for turn-allocation and to explore the role of prior experience with language in learning a second language under naturalistic conditions. Three female children, native speakers of Japanese, Finnish and Swiss German respectively, served as subjects for this 8-month longitudinal study. The children were found to be similar in several ways including the presence of a limited number of turn-allocation devices from the start and a general increase in the use of such devices over the time period examined. Some of the significant differences between them seemed due to their identifying second language properties that were congruent with features of their respective native languages. The child's use of syntactic and prosodic contrasts from her first language in learning a second language is discussed.

In recent years studies of children learning a second language have been directed at determining the rules children have formulated about the form and content of their new linguistic code (Cancino, Rosansky and Schumann 1975, Gillis and Weber 1976, Ravem 1968, Wagner-Gough 1975). However, little attention has been paid to what means children use to obtain evidence for the formulation of linguistic rules. A fundamental means of eliciting such information is getting another person to talk. Talk from others provides the child with data to be used in formulating generalizations about his new language. As such, the ability to elicit talk potentially offers the second language learning child a unique opportunity to actively manipulate the speech of others. The growth of eliciting talk from others is examined here in terms of the development of verbal turn-allocation (Sacks, Schegloff,

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and Jefferson 1974). Only verbal means of turn allocation are considered in this report although it is clear that the children studied also knew many non-verbal means of soliciting talk from others.

Turn allocation techniques are the means by which conversation is shifted from one speaker to another. They include, for example, Wh-questions, Y/N-questions, self-repetition and various attention-directors. Turn-allocators are interactionally powerful because of the obligation they place on the listener to respond (Speier 1972). Growth of competence in their use provides the child with a central means of assuring talk from other persons. Some devices enable the child to elicit particular linguistic information whereas others simply assist the child in getting his interlocutors to talk. For example, Wh-question enable the child to elicit specific linguistic content³ as illustrated in (1) and (2) below:⁴

- | | | |
|-----|---|---------------|
| (1) | Adult: He's getting ready
to go to school. | where he go ↑ |
| (2) | Adult: Oh, that's a fire
truck. See its big
bell there. | what this ↑ |

In contrast, verbs of notice can be used to elicit non-specific talk from others. For example, if a non-native child is engaged in an activity which he does not know how to describe, he may solicit another's comments as a way of obtaining material to be used in future utterance formation. The use of notice verbs for this purpose can be seen in (3).

- | | | |
|----------------------------------|--|---|
| (3) (building a house of blocks) | Adult: Are you going to
build another house?
Here are some more
blocks. | lookit/

build 'nother house▲ |
|----------------------------------|--|---|

In this way techniques for turn-allocation enable a child to get another to create linguistic context and as such, provide the child with information about the new code he is trying to learn. The child who is without command of such techniques must rely on the willingness of others to talk to him and must depend on less direct means of gaining

³The functions of particular turn-allocators considered here also ought to describe this system for first language learners, although the two systems may differ in ways not discussed here.

⁴For transcription conventions see Bloom and Lahey 1977.

information about this new linguistic code. Furthermore, a child without means for allocating turns is unable to manipulate the particular content of his interlocutor's speech. The development of turn-allocation therefore can be seen as integral to language learning.

One purpose of this study was to describe the development of turn-allocation in children learning English as a second language. Little is known about the development of turn-allocation in child second language learners although the development of one class of turn-allocators (questions) has been explored previously (Cancino, Rosansky and Schumann 1977, Ravem 1968, Wode 1978). These studies examined the ontogenesis of the form and meaning of questions; as such they did not examine questions as part of a larger system for managing a conversation. In contrast, the research reported here was aimed at providing a general picture of the different devices child second language learners adopt to allocate turns in English conversation.

Another aim of this study was to consider the ways in which a child uses his prior linguistic knowledge to acquire turn-allocation in a second language. In particular, two sorts of prior knowledge about language were considered: generalizations about the global properties of one's language and generalizations about particular features of one's native language (Keller-Cohen 1978a). Knowledge of the global properties of one's language includes for example, awareness on some level that language is organized into sequences of units, that linguistic units can have multiple meanings and functions and that language is often tied to the immediate context. Evidence for the use of knowledge of global language properties can be found in second language learners' early speech productions. For instance, many investigators have observed that in initial stages of learning a second language, children often produce utterances of considerable length, apparently not passing through a single word stage of language development. Such utterances appear to be units the children have memorized (Fillmore 1976, Huang and Hatch 1978, Isman 1973). These utterances seem to be learned in frequently experienced salient social contexts such as classroom routines and games. So the child's prior experience with language seems to lead him to look for global properties of language such as large analytic units linked to clear contexts.

Knowledge about the particular features on one's native language includes for example, knowing that a certain word order is used for particular communicative functions or that certain semantic relations are expressed postpositionally or prepositionally. Evidence for this can be found in a child's formation of second language utterances such that they are congruent with the form of such utterances in his native

language (Dato 1977, Wode 1976). A child may also construct utterances such that they exclude features that are incongruous with his native language (Hakuta 1975, Keller-Cohen 1978b). This is not to say that the child consciously avoids incongruous features. Indeed it is more likely that he has not identified such features because they do not correspond to those in his native language (cf. Schachter 1974). Thus, the view presented here is that the absence of such features in the child's second language productions is not avoidance but rather the failure to identify those as properties of the target language.

There are several ways in which this prior linguistic knowledge might influence the acquisition of turn-allocation in a second language. First, as the result of experience with one language, a child is no doubt aware on some level that turns must be allocated in a conversation. The presence of verbal turn-allocation from the very beginning of learning a second language would provide support for this. Second, a non-native child has had previous experience with different techniques for verbally allocating turns in his native language. Evidence that he recruits this knowledge would be the presence of a range of turn-allocation techniques from the start.

It should be noted here that little research exists on the turn-allocation systems employed in different cultures. However, given the essential role played by turn-allocation in accomplishing a conversation in any culture, it is unlikely that allocating turns might only be accomplished by one or two turn-allocation devices. If that were the case, turn-allocation would make for a vastly more redundant linguistic subsystem than we currently have reports of. My claim that children have knowledge of a variety of turn-allocation techniques derives from this view.

Knowledge of particular features of the first language might influence the development of turn-allocation in the second language by directing the child's attention to linguistic mechanisms for allocating turns in the second language that are similar to those in the child's native language; or this language specific knowledge might constrain the hypotheses the child formulates about turn-allocation in the second language such that some devices are ignored. Differences in the frequency with which children use particular turn-allocators in their second language might reflect this. For example, a child who natively speaks a language that does not share structural congruity with English in a particular area may not use English structures that display this pattern. Conversely, the structural congruity between a child's first and second language might lead her to use utterances in English that bear such features. So if one child uses a second language structure which another child does not, it may be due to the similarity

between the child's first and second language. In this way global and particular linguistic knowledge from a child's first language may influence the development of turn-allocation in his second language. Since little is known about how prior linguistic knowledge influences the acquisition of turn-allocation in a second language, this study sought to provide a preliminary view of this question.

Subjects

Three female children acquiring English as a second language in an untutored setting served as subjects for this study. They were between the ages of 4;3 and 5;6 at the outset of this research. Their names and native languages are Toko (Japanese), Maija (Finnish) and Sibylle (Swiss German). Toko had been in Ann Arbor 5 months prior to our contact with her and Maija and Sibylle had been here 2 months. Even so, none of the children had any regular contact with English speakers until one month prior to the beginning of the study. Each child was enrolled in an English speaking school setting (Toko—full day first grade, Maija—½ day preschool and Sibylle—½ day kindergarten). Each child was videotaped from two—four times per month for ½ hour each time in a structured play setting at the English Language Institute, the University of Michigan. A different English speaking investigator was assigned to each girl and interacted with the same child throughout the duration of the study.

The children were videotaped in a laboratory setting rather than at home in order to maintain the greatest amount of similarity across the sessions. Given the considerable cultural differences among the children, data collection out of a child's home seemed necessary. Laboratory data collection was also employed to enhance the quality of the recordings. High quality audio systems and two ceiling-mounted cameras for video-recording were available in the room in which the recordings were made. The recording equipment was controlled by a camera person in a room across the hall from the playroom.

The laboratory setting, restricted the kind of data⁵ elicited in the following ways. First, the adult and child participated in what Goffman (1963:24) has termed *focused interaction*; In Goffman's words, focused interaction is "the kind of interaction that occurs when persons gather close together and openly cooperate to sustain a single focus of attention, typically by taking turns in talking". The adult's attention was almost totally directed at the child, thus reducing the child's need to exhibit her full range of competencies to secure the attention of

⁵I am indebted to Bambi Schieffelin for pointing out this issue.

her interlocutor. Second, the structured setting necessarily limited the range of topics the adult and child could talk about and the kinds of activities in which they could participate. Although any setting simultaneously constrains and enhances interaction, it is still worthwhile observing some of the peculiarities of this data collection context. As such, claims made about language development in research of this sort will necessarily be subject to scrutiny at some future time in different settings. The general properties of the data obtained in these sessions is reported in Table 1.

TABLE 1
Summary of Language Samples

	Number of Sessions	Utterances	Mean Utterances per Session
TOKO			
Nov.	3	425	141.7
Dec.	2	445	222.5
Jan.	2	247	123.5
Feb.	2	321	160.5
Mar.	3	933	311.0
Apr.	3	1042	347.3
May	1	683	683.0
June	3	788	262.7
MALJA			
Nov.	2	110	55.0
Dec.	2	249	124.5
Jan.	2	490	245.0
Feb.	4	463	115.8
Mar.	2	533	266.5
Apr.	4	984	246.0
May	1	365	365.0
June	3	982	327.0
SIBYLLE			
Nov.	3	498	166.0
Dec.	3	750	250.0
Jan.	1	245	245.0
Feb.	2	487	243.5
Mar.	2	487	243.5
Apr.	3	889	296.3
May	3	998	326.7
June	2	817	408.5

¹This table excludes sessions with child-child interaction [Toko: Feb. (1), Mar. (1), May (1); Maija Mar. (1), Apr. (1), June (1); Sibylle Feb. (1), Mar. (1), Apr. (1).]

²The actual volume of speech produced by the children was greater than seen in these figures which represent only those utterances which were fully intelligible.

Results

The entire speech sample of adult-child interaction for each child was examined for evidence of turn-allocation devices. An utterance was coded as a turn-allocator if it could allocate a turn and not if it actually did. Hence, the data reflect what skills the children displayed and do not represent their success in using them. Since the allocation of a turn is partially determined by the interlocutor's decision to pick up the turn, it seemed inappropriate to make a description of a particular child's skills in turn-allocation dependent on the behavior of her adult interlocutor. Table 2 presents the frequencies of all turn-allocators observed as a proportion of the total number of utterances each child produced every month. There was a tendency for the children's speech to contain a greater proportion of turn-allocators over time so that between the first and the last month of the study the proportion of utterances that contained turn-allocators nearly doubled (Toko and Sibylle) or tripled (Maija). However, there was considerable variation during these 8 months so that development could not be considered monotonic.

Subsequent analysis revealed two general classes of turn-allocation devices: question and attention-directors. The first class (questions) was found to include Wh-questions and Y/N-questions. Further examination of the data suggested that Y/N-questions were of two types: those with subject-auxiliary inversion and those without inversion. This latter type of Y/N-questions could be further divided into two types: those with an auxiliary (and rising intonation) and those without an auxiliary (and with rising intonation). For purposes of analysis, uninverted Y/N-questions both with and without an auxiliary were combined since there was no evidence of the auxiliary

TABLE 2
Turn-Allocators as a Proportion of all Utterances.

	Toko	Maija	Sibylle
Nov.	.07 (29) ^a	.05 (5)	.16 (81)
Dec.	.09 (42)	.08 (19)	.18 (135)
Jan.	.11 (27)	.13 (64)	.22 (54)
Feb.	.12 (38)	.31 (142)	.19 (92)
Mar.	.16 (149)	.24 (127)	.14 (70)
Apr.	.11 (115)	.24 (239)	.33 (290)
May	.16 (111)	.18 (67)	.28 (276)
June	.13 (100)	.16 (160)	.27 (220)

^aNumbers in parentheses are raw frequencies of turn-allocators.

TABLE 3
Examples of Turn-Allocators.

Questions	
<i>Wh-Questions (who, what, where, when, why, how)</i>	
(Maija and adult playing store)	
Adult: What do I want?	what you want/ yeah/
<i>Yes/No Questions with subject-auxiliary inversion</i>	
(Playing with a version of pick-up sticks, Sibylle and adult)	
(Pointing to stick under pile)	can you take that away/
Adult: Which one?	
<i>Yes/No Questions without an auxiliary</i>	
(Toko and adult)	
Adult: What is the blue part?	this ones
Adult: Mm-hm	
Attention-Directors	
<i>Self-Repetition</i>	
(Toko and adult)	
(Finding and giving Toko toy policeman)	
Adult: Here's the policeman.	
(Taking and examining the policeman)	oh he is policeman/policemans/
(Looking around)	where's bed/bed/
Adult: Where's his car?	where is bed/bed/
Adult gives Toko a car)	
(Toko tossing car aside)	not car!/where is bed/
Adult: Bed/	yeah/
<i>Look, See, Watch</i>	
(Adult and Maija)	
Adult: OK. Let's put it away and we'll play with it next time again:	
(Maija notices clay Pooh Bear squashed on the floor)	
	oh/look at nalepu*/(*Finnish for Winnie the Pooh)
Adult: He got kind of squashed, didn't he?	
<i>Imperative</i>	
(Maija hands adult playdo can to open)	
Adult: Ouch!	you take it red/
Adult: OK. I'll take red.	

TABLE 3 (Continued)

Attention-Directors	
<i>Here-type Utterances</i>	
(Sibylle had discovered a stray hair in her playdo)	
(Sibylle laughing, putting another piece of hair in the floor in front of adult, Margaret)	this is more clay for . this is more hair for Margaret/
Margaret: (If) Oh you think so, hmm?	
Margaret: . . .	

(Vocatives not illustrated; they are simply calling the hearer's name)

in the children's speech for many months. The second class of turn-allocators (attention directors) was found to include some instances of self-repetition, utterances that requested noticing such as *look*, *see* and *watch*, vocatives, imperatives and utterances that accompanied offering or the transfer of goods such as *here*. Examples of the turn-allocators can be found in Table 3.

The relative frequency of each of the devices for turn-allocation appears in Table 4. Toko and Maija initially displayed strong preferences for a limited number of turn-allocation devices, expanding their repertoire over time. In contrast, Sibylle selected a wider range of such devices from the start. For example, in the first three months of Toko's and Maija's data, one technique for turn-allocation could be said to account for nearly 50% or more of all their utterances for turn-allocation; for Toko it was uninverted Y/N questions, for Maija it was Wh-questions. During the same time period, Sibylle's speech differed from the other children on two accounts. First the turn-allocation device that accounted for the greatest proportion of utterances for turn-allocation changed from month to month. In November it was uninverted Y/N questions, in December utterances with notice verbs and in January it was Wh-questions. Second, whereas in the first three months of Toko's and Maija's speech, one device accounted for nearly 50% or more of their utterances for allocating turns, this was not true of Sibylle's speech until January. In fact, if the first 5 monthly samples are considered, for 4 or 5 months one device for turn-allocation accounted for 50% or more of Toko's and Maija's utterances whereas this is true in only two of Sibylle's samples (January and March). The children were therefore similar in two ways: devices for turn-allocation (hereafter referred to as TA) were present in their speech from the

⁶Some uses of self-repetition were not to allocate turns but rather for other purposes such as emphasis, e.g. *that's mine! that's mine!*

TABLE 4
Turn-Allocators 1,2
As Percentage of all Utterances with Turn-Allocation

	Questions			Y/N-Ques.					Attention Directors					Σ Att. Direc.
	Wh-Ques.	With Inversion	Without ³ Inversion	Σ Q's	Self-Rep.	Look See Watch	Voc.	Imper.	Here					
TOKO														
Nov.	6.9	—	62.0	68.9	31.0	—	—	—	—	—	—	—	—	31.0
Dec.	23.8	—	50.0	73.8	11.9	—	4.8	9.5	—	—	—	—	—	26.2
Jan.	29.6	—	44.4	74.0	14.8	—	3.7	3.7	—	—	—	—	—	25.9
Feb.	60.5	—	18.4	78.9	5.2	—	—	15.8	—	—	—	—	—	21.0
Mar.	56.4	5.4	30.3	92.1	6.0	3.4	6	6.0	7	—	—	—	—	16.7
Apr.	45.2	7.0	26.1	78.3	17.4	9	—	3.5	—	—	—	—	—	21.8
May	45.9	5.4	24.3	75.6	9.0	9	9	12.6	9	—	—	—	—	24.3
June	27.0	11.3	34.7	73.0	8.7	5.2	—	12.2	9	—	—	—	—	27.0
MALJA														
Nov.	57.1	—	14.3	71.4	—	14.3	14.3	—	—	—	—	—	—	26.6
Dec.	57.9	—	10.5	68.4	5.3	10.3	—	10.5	5.3	—	—	—	—	31.6
Jan.	67.2	—	—	67.2	14.1	3.1	—	4.7	10.9	—	—	—	—	32.8
Feb.	53.5	—	—	54.2	8.5	25.4	—	7.7	4.2	—	—	—	—	45.8
Mar.	33.9	3.1	3.1	40.1	4.7	33.9	1.5	12.6	7.1	—	—	—	—	59.8
Apr.	47.7	2.1	1.7	51.5	2.5	31.4	5.9	7.9	8	—	—	—	—	48.5
May	32.8	—	1.5	34.3	1.5	38.8	4.4	19.4	1.5	—	—	—	—	65.6
June	58.8	6	1.9	61.3	5.6	17.5	—	10.6	5.0	—	—	—	—	38.7
SIBYLLE														
Nov.	13.6	—	38.3	51.9	11.1	23.4	—	11.1	2.4	—	—	—	—	48.0
Dec.	11.6	3.0	23.0	37.6	6.7	29.6	7	19.3	5.9	—	—	—	—	62.2
Jan.	66.7	—	9.3	76.0	1.9	20.4	—	1.9	—	—	—	—	—	24.2
Feb.	43.4	2.2	12.0	57.6	2.2	13.0	—	27.1	—	—	—	—	—	42.3
Mar.	50.0	14.3	18.5	82.8	—	10.0	1.4	4.2	1.4	—	—	—	—	17.0
Apr.	59.3	12.8	11.0	83.1	1.7	9.0	3	5.9	—	—	—	—	—	16.9
May	47.5	11.6	10.8	69.9	4.7	12.0	—	12.7	7	—	—	—	—	30.1
June	49.1	13.7	24.0	86.8	1.1	8.0	6	14.3	2.9	—	—	—	—	26.9

¹Percentages are out of total turn-allocators.

²The rows do not always sum to 100 because of rounding.

³With or without an auxiliary

start, and both questions and attention directors were used by all three children. They differed in that Toko and Maija relied more heavily on a single device to shift the conversation whereas Sibylle recruited a wider range of techniques for this purpose.

In general the three girls displayed the same over-all pattern of use for the two major classes of TA. Each child employed questions and attention-directors from the start. Each child also employed questions more often to allocate turns than attention directors. This generalization accounts for all of Toko's 8 monthly samples, 6 of Maija's and 7 of Sibylle's. This can be seen in the summary columns of Table 3. Patterns of the children's use of the two classes of TA devices (questions and attention-directors) are considered below.

The most prominent feature of the children's use of questions is the low proportions of TA utterances accounted for by Y/N-questions with subject-aux inversion in contrast to the frequency of uninverted Y/N-questions and questions with Wh-words. In fact, inverted Y/N-questions are the lowest frequency questions in all of Toko's and Maija's speech and 6 of 8 monthly samples in Sibylle's. On this account, the children were similar in their infrequent use of inverted Y/N questions. Similar reports of the late acquisition of inverted Y/N-questions appear in Hatch (1974).

The children were found to differ in the proportion of their utterances accounted for by Wh- and uninverted Y/N-questions. These differences were apparent on several accounts. Maija always chose Wh-questions more often than uninverted Y/N questions. In contrast, Sibylle used uninverted Y/N questions more often than Wh-questions in the first two months only; after that Wh-questions were more frequent in her speech. Toko's pattern of use could be said to be midway between that of Sibylle and Maija. For the first three months uninverted Y/N questions exceeded Wh-questions in her speech; for the next four months the pattern reversed, with Wh-questions surpassing Y/N-questions. Finally in June uninverted Y/N-questions were somewhat more frequent than Wh-questions.

The frequency with which inverted Y/N-questions were used relative to the other questions also differed for each child. Maija seldom used this question form, the proportion of such questions never accounted for more than 3% of all her utterances for TA. These more well-formed Y/N-questions did not reach even 10% of Toko's utterances for TA until the final month of the study. In contrast, by month 5 more than 10% of Sibylle's question TA's were inverted Y/N-questions. On this account Sibylle can be said to be the only child to display consistent productive use of this form *albeit* in the second half of the study.

The children's use of attention directors reveals a somewhat different course of development. There was a tendency for all the girls to use a narrower range of attention-directors in the first four months (generally from 1-4/month) and a somewhat wider range of such devices in the latter months (generally from 4-5/month). The children were also similar in that they seldom used vocatives and *here*-type utterances. However, they differed in the device they chose most often to direct attention. In four of the months Toko used self-repetition most often; in the other four, imperatives accounted for the greatest proportion of attention-directing utterances. Sibylle's most frequent attention-directors were also divided between two devices: imperatives (in 3 of the months) and notice utterances (in 5 months). In contrast, Maija was the only child to display a clear preference for one device for attention-direction. In 6 of the samples notice utterances exceeded the other devices; in one sample (December) notice utterances were tied with imperatives in frequency. So whereas Sibylle and Toko displayed a preference for two attention-directors, Maija essentially chose only one.

Discussion

Over the time period examined, the relative frequency of utterances that were available for turn-allocation was found to increase. Although each child seemed to display a preference for one or two TA devices, Sibylle's use of turn-allocation seemed to be more evenly distributed over the devices she selected than was true of Maija and Toko. Moreover, she used a wider range of both questions and attention-directors than did the other girls. However, the children were found to differ in their preferences for individual devices to accomplish turn-allocation. Because there is little known about the development of this conversational sub-system in native language learning, it is difficult to determine to what extent the patterns describe here reflect strategies for conducting a conversation and to what extent they reflect the influence of knowledge of particular features of turn-allocation in the child's native language. Hence, any claims made based on these observations must be considered tentative until further evidence is available on turn-allocation in native language learning and in second language learning by children with other native languages. The following section considers the patterns described here in order to shed some light on the role of prior linguistic experience in learning to allocate turns in a second language.

The children's use of turn-allocation here can be compared along two dimensions: **Contour of development** and **focus of development**. **Contour of development** is used here to refer to the child's general approach to a particular aspect of language development, in this case identifying techniques for turn-allocation. How rapidly devices are tagged for this function, how many different devices are used and the extent to which all devices contributed to the task of allocating turns are all aspects of the contour of development. **Focus of development** is used here to refer to preferences a child displays for particular devices or features of language.

The children's contour of development was similar in that each child allocated turns from the start. Whether the proportion of utterances for TA presented here are greater than that of first language learners is not known. Yet it could be expected to exceed that of a first language learner since a non-native child is already aware of the importance of verbal turn-allocation and need not rediscover it.

There were also differences between the children in their contour of development. Sibylle used more devices for turn-allocation sooner than the other girls and displayed a somewhat more evenly distributed frequency of use than did Toko and Maija. One possible explanation for this is the considerable cultural and linguistic similarity between the systems of communication in English and (Swiss) German as against that of English and Finnish or Japanese. Certainly one task in learning a second language is to identify the ways in which one's first and second language are similar and the ways in which they differ. If this is so, then Sibylle ought to have had less difficulty isolating different devices for allocating turns than did Maija and Toko. The contour of development then can be seen in part as reflecting the fit between the child's hypotheses about his second language and the actual properties of that language.

The focus of development was similar across the children in that turn-allocation was accomplished more often by questions than attention-directors. The fact that the child was participating in focused interaction with an adult may explain the lower frequency of attention-directors. The difference between the children in focus of development was in their reliance on certain turn-allocation devices rather than on others. The explanation for this is necessarily tentative in the absence of much comparative data for native language learners. However, the following section attempts to show how some of their preferences for individual devices may result from the influence of language particular knowledge. To accomplish this, some aspects of turn-allocation in their first language are considered. Since more is known about the nature and development of question systems than

attention-directors in these children's native languages, questions are examined below.

Japanese, an SOV language, forms questions by placing an interrogative particle *ka* at the end of an utterance. Rising intonation is placed over the particle in both Wh- and Y/N-questions. Inversion does not typically take place nor do Wh- words appear in utterance initial position in Japanese. These points are illustrated below

JAPANESE

Wh-questions

Kare demon.	wa subj.	koko here	ni loc.	imasu is		"He is here."
Kare demon.	wa subj.	doko where	ni loc.	imasu is	ka? interr.	"Where is he?"

Y/N-Questions

Kore demon.	wa subj.	inn dog	desu. is			"This is a dog."
Kore demon.	wa subj.	inn dog	desu is	ka? interr.		"Is this a dog?"

Finnish, an SVO language, forms Y/N-questions by affixing the interrogative particle *-ko* to the questioned element. In neutral Y/N-questions the particle is affixed to the verb and the V is fronted; in non-neutral questions *-ko* is affixed to the questioned word and it is fronted instead of the verb. In Wh-questions the Wh-word is fronted but no other inversion takes place. Finnish does not employ rising intonation in questions. This can be seen below.

FINNISH

Wh-Questions

Tämä this	on is	kirja. book		"This is a book."
Mikä what	tämä this	on? is		"What is this?"

Y/N-Questions

Pöydällä on table	on is	kahvia coffee		"There is coffee on the table."
Onko is interr.	pöydällä on table	kahvia coffee		"Is there coffee on the table?"

(Swiss) German, an SVO language, forms Y/N questions by moving the first verbal element (an aux or the main verb) after the subject to the front of an utterance. The first verbal element is also fronted in Wh-questions but is preceded by the Wh-word as shown below. Rising intonation is also found in both Wh- and Y/N-questions.

GERMAN

Wh-Questions

Es	ist	ein	Buch	"This is a book."
this	is	a	book	
Wo	ist	das	Buch?	"Where is the book?"
where	is	the	book	

Y/N-Questions

Ist	es	ein	Buch?	"Is this a book?"
is	this	a	book	

There are three dimensions along which question formation in these languages can be compared and then related to the task of forming questions in English: presence and placement of interrogative morphemes, application of movement rules and intonation. (Swiss) German and English are most similar in question formation—movement is similar although not identical, both have Wh-words and no other interrogative morpheme, both place the interrogative elements in utterance initial position, and both employ rising intonation. Finnish is similar to English in the rule of inversion in Y/N-questions but differs from English in the absence of inversion in Wh-questions and in the absence of rising intonation in questions. Furthermore, Finnish makes use of an interrogative morpheme in Y/N-questions whereas English does not. Japanese is quite dissimilar to English—it has no movement in questions, it uses an interrogative morpheme in all questions and Wh-words generally are not in utterance initial position. It is similar to English in the presence of rising intonation in questions although the placement of rising intonation is not identical with English.

This description would seem to predict greater success for Sibylle than Toko or Maija in English question acquisition and that appeared to be the case. Sibylle used a greater number of different questions developmentally sooner than the other children and could be said to be the only child to begin productive use of inverted Y/N-questions. In contrast, Maija rarely used Y/N-questions of any sort despite the similarity between Finnish and English inversion rules in Y/N-questions. The absence of formal similarity between Japanese and English did not appear to hamper Toko's acquisition of questions since she used Wh-questions and uninverted Y/N-questions from the start. However, she was much later than Sibylle in acquiring productive use of inverted Y/N-questions.

An account of these different developmental patterns lies in an understanding of the differential impact of features of one's native language on the learning of a second language. As a result of speaking Finnish, Maija had knowledge of inversion in Y/N-questions but had

no experience with rising intonation in questions. This prior knowledge could have led her to detect inversion in English questions but it clearly did not. In contrast, Toko had no knowledge of inversion in questions but did have prior experience with rising intonation in questions. On the basis of these limited data, it would seem that when both syntactic and prosodic features of the child's native language are congruent with the target language, the child may have greater success identifying significant features of the second language than when they are incongruent. This would account for the salient properties of Sibylle's acquisition of English questions. Where there is more limited match between the child's first and second language, syntactic congruence in similar communicative domains such as questioning does not itself seem to be sufficient to assist the child in unlocking aspects of second language syntax. In contrast, prosodic congruity in similar communicative domains appears to be an important key to discovering the structural properties of the new code. This difference between syntactic and prosodic congruity (in similar communicative domains) seems to account for the properties of Toko's and Maija's acquisition of Y/N-questions. As such, congruence between native and target language may be an essential key to unlocking the structure of one's second language. If the findings reported here turn out to be true for larger populations, it might explain the inability of contrastive analysis to predict certain non-occurrences in second language learning.

The role of prosody in question acquisition has also been observed in first language learning. Klima and Bellugi (1966) and Miller (1973) found that children learning English as a first language used utterances with rising intonation much before they discovered the rules of inversion in English questions. Similarly, in a cross-cultural study of native language development, Bowerman (1973) examined the acquisition of questions in English, Finnish, Luo and Samoan. She observed that if a language uses rising intonation to form Y/N-questions, simple Y/N-questions (declarative utterance with rising intonation) are the first to come under acquisition. Where a language does not employ rising intonation as in the case of Finnish, Wh-questions are found to develop first. Prosody therefore seems to play an essential role in learning a first and a second language.

It could be argued that prior linguistic experience played a minor role in accounting for the patterns observed here. An alternative proposal might be that Sibylle is simply a more successful language learner like Fillmore's Nora (1976). Indeed, there is no way of excluding this as a possible explanation for the children's pattern of turn-allocation use observed here. However, a view of this sort does not

account for the particular differences between the children, as for example the absence of Y/N-questions in Maija's speech and the earlier acquisition of inverted Y/N-questions in Sibylle's. So whereas many factors may contribute to the general success a child displays in learning a second language, it is still necessary to account for particular patterns of second language development. The evidence presented here suggests that a view of the role of prior linguistic experience is integral to an understanding of how children go about learning a new linguistic code. These data then provide support for the position that the child recruits both knowledge of the global features of her native language and knowledge of particular features of her language to organize linguistic material in a second language. This knowledge apparently both assists and constrains the process of learning a new language.

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