Cross-linguistic work

An understanding of how children acquire grammatical morphemes is now thought to require a broader perspective than that obtained from studying English alone. A large research initiative has gathered data from children acquiring other languages, especially languages very different from English. Researchers have studied children acquiring Luo, Samoan, Kaluli, Hungarian, Sesotho and many others in an effort to understand the process of language acquisition in universal terms. One finding is that the telegraphic speech style of English children is not universal—in more heavily inflected languages like Italian, even the youngest speakers do not strip their sentences to the bare stems of nouns and verbs.

One of the purposes of the cross-linguistic work is to try to disentangle some of the variables that are confounded in a single language. For example: English-speaking children acquire the hypothetical (if…then statements) rather late, around four years of age, but the hypothetical form is complex in English grammar. It requires an ability to imagine an unreal situation. Cross-linguistic studies provide a way to tease these variables apart, for Russian has a very simple hypothetical form, though its meaning is as complex as the English version. Research shows that Russian children do not use this simple form until after they are about four years of age. Most morphemes vary along multiple dimensions: phonological, semantic and grammatical. The full program of research may reach fruition only when the massive matrix of possibilities across the world’s languages can be entered into a computer, complete with detailed longitudinal data from children learning those languages.

Auxiliaries

Children’s first sentences lack any auxiliaries or tense markers:

*Me go home
*Daddy have tea

and they also lack auxiliary-inversion for questions at this stage:

*I ride train?
*Sit chair?

They also lack a system for assigning nominative case to the subject, that is, adult sentences mark the subject as nominative:

Adult: *I want that book

but children at this stage frequently use the accusative case:

Child: *Me want that book

These facts lead some to conclude that young children’s sentences lack the full syntactic structures typical of adult sentences, and undergo a radical restructuring as they develop. Others argue that the limitation is not so much at the level of knowledge of grammar, but merely performance limits, so preserving the continuity of form at an abstract level between child and adult.

In addition to learning the basic word order and inflectional system of the language, a child must learn how to produce sentences of different kinds: not just simple active declarative, but also negatives, questions, imperatives, passives and so forth. In English there are word order changes and auxiliary changes for these sentence modalities.

One type of question is called a yes/no question, for the simple reason that it requires a yes or a no answer. A second kind of question is called the Wh-question, so-called because it usually begins with the sequence Wh in English (in French, they are Qu-questions). Wh-questions do not require a simple yes or no response: instead they ask for information about one of the constituents in the sentence. *What, who, when, where, why, and how* all stand in for possible phrases in the sentence—the subject, or object, or a prepositional phrase. Discourse permits us to respond elliptically with only the missing constituent if we choose:

*What is he buying?*
*Coffee.*
*Where is she going?*
*To the store.*
*How is she getting there?*
*By bike.*

The structure of such questions is similar to that of yes/no questions because the auxiliary and subject are inverted, so that transformation is involved in both. In addition, the Wh-word is in initial position, though it stands for constituents in varied sentence positions. Linguistic evidence suggests that the Wh-word originated at another site in the structure and was moved there by a grammatical rule, called, appropriately, Wh-movement. Children’s responses to such questions reveal the sophisticated nature of their grammatical knowledge.

Negation also involves the auxiliary component in the sentence, because for simple sentence negation, the negative is attached to the first member of the auxiliary, and may be contracted:

*She isn’t coming home.*
*He won’t be having any.*

How do children acquire these rules of English? When auxiliaries do emerge, it seems that they come in
first in declarative sentences. Before children master the placement of the auxiliary, they ask questions using rising intonation. They may also pick up a few routine forms of yes/no questions, particularly in households that demand politeness from young children, as in:

May I have one?

When auxiliaries do begin to appear in initial position, what has the child learned? One of the claims made by modern linguistic theory is that the rules of natural languages are “structure dependent,” that is, they always refer to structural units, constituents such as “noun phrase” or “auxiliary verb,” not to other arbitrary units such as “the first word beginning with ‘f’.” The case of auxiliary inversion provides a nice illustration, used by Noam Chomsky to make this point. The child could hear sentence pairings such as:

\[ \text{The man is here,} \]
\[ \text{Is the man here?} \]
\[ \text{The boy can swim.} \]
\[ \text{Can the boy swim?} \]
\[ \text{The dog will bite.} \]
\[ \text{Will the dog bite?} \]

and draw the conclusion that to make a question, you take the third word and move it to the front. Of course, that hypothesis would soon be disconfirmed by a pair such as:

\[ \text{The tall man will come.} \]
\[ \text{Will the tall man come?} \]
\[ \text{not: Man the tall will come?} \]

More likely, the child might form the rule “move the first word like can, will, is, etc. up to the front,” which would fit all of the above and hundreds of other such sentences. However, that is not a structure-dependent rule, because it makes no reference to the grammatical role that word plays in the sentence. The only disconfirmation would come from the occasions when a subject relative clause appears before the auxiliary:

\[ \text{The man who is the teacher will be coming tomorrow.} \]
\[ \text{Will the man who is the teacher be coming tomorrow?} \]

but our earlier, structure-independent rule would produce:

\[ \text{Is the man who the teacher will be coming tomorrow?} \]

The child who formulated the almost-adequate rule would fail in such circumstances, but no child has been observed to make the mistake. Hence even from the inadequate data that children receive, they formulate a complex, structure-dependent rule.

**Wh-questions**

Wh-questions appear among the child’s first utterances, often in a routine form such as “Whazzat?” The forms are routines because they are invariant in form, but more varied productions are not slow to emerge in children’s grammar. The first, stereotyped forms may be tied to particular functions or contexts, but genuine interrogatives are varied not only in form but in use.

Just as in yes/no questions, the auxiliary must be in front of the subject noun phrase in a Wh-question, and children seem to have more difficulty with auxiliary-inversion in Wh-questions than in yes/no questions. At the same time children can say:

\[ \text{Can he come?} \]
\[ \text{they might say:} \]
\[ \text{Why he can come?} \]

failing to invert the auxiliary in the Wh-question.

What else does the child have to learn in Wh-questions? One factor concerns the link between the Wh-word and the “missing constituent.” Certain of the Wh-words enter children’s speech earlier than others, and there is some consistency across studies in that order: What, who, and where tend to emerge before why and how, with when coming later. Some have explained the order in terms of semantics, or rather concreteness, of the ideas contained in these words, since when and how depend upon cognitive developments of time and causality whereas what and who do not. The question why seems to be late for this reason: it is only through discourse that a child can determine the meaning of why, which may be the reason some young children ask it endlessly. It is also a question that rarely elicits a one-word answer, so it may be a way to keep the conversation going when you can’t say much yourself yet!

**Creativity**

A feature that is markedly evident in young children is their creativity with language. Children, like adults, continually produce sentences they have not heard before, and one can more easily recognize that novelty in children because sometimes the ideas are rather strange. For example, after hearing many “tag questions” such as “That’s nice, isn’t it?” and “You’re a good girl, aren’t you?” and “You can open that, can’t you?” a three-year-old figured out how to make her own tags, and used the rules to say, “Goosebumps are hairy legs, aren’t they?” and “He’s a punk rocker, isn’t he?,” which were definitely not sentences she had heard. In addition, the creative use is revealed because children overextend rules to exceptional cases. For example, a child may say “My porridge is getting middle-sizeder” as he struggles through a