The Emergence of CP in Child Japanese

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1. Introduction

Child language research is interesting for many reasons, but what can it tell us about adult linguistic theory? How can language development data can sharpen our understanding of independently postulated hypotheses? The analogy is with studies of aphasia, SLI and other disorders that tell us something about how grammar functions when particular components of grammar are disabled.

The theoretical question to be addressed here is whether the clause structure of Japanese includes a clause-peripheral CP layer, as asserted in Ueda (1991) and Hagstrom (1998). The empirical focus of the study is the onset of CP-related constructions in spontaneous production. Data come from the Aki corpus of CHILDES Miyata (1992).

2. CP in Japanese

The status of the Complementizer Phrase in Japanese has been controversial in the adult syntactic literature for some time. Before the proliferation of functional categories in the nineties, Japanese was argued to be a "non-configurational language," which lacked a VP node (cf. Hale, 1980), and which instead had a "flatter" structure. This idea was refuted by, among others, Saito (1985) who argued on the basis of evidence from scrambling and pronominal reference that Japanese was configurational and must have a VP node.

Though it is now assumed that Japanese is a language with hierarchical structure throughout, Fukui (1986) argued that Japanese has a defective Inflectional system and that it completely lacked a D and C system. Evidence is presented by both Ueda (1990) and Kubo (1992) that Japanese in fact does have a C system, contra Fukui.

Much of the evidence presented in Fukui (1986) against the existence of CP in Japanese was aimed at explaining the fact that Japanese appeared to lack overt wh- movement. Hagstrom (1998), however, argues that Japanese does in fact have overt wh- movement. The difference between Japanese and other languages, however, is that only the [+wh] morpheme (for example –*ka* or –*no*) moves, leaving the wh- word behind. Thus, in a sentence such as (1), -*ka* has moved from a clause-internal position to CP.

(1)   dare-ga t_{ka} hon-o   kaimasita   **ka**?
           who-nom   book-ACC bought.POLITE Q
           "Who bought a book?"   Hagstrom (2001)

Evidence that this kind of movement is taking place in (1) comes from the fact that a similar element cannot intervene between *ka* and its landing site. In terms of the Minimalist Program (Chomsky, 1995), such a move constitutes a violation of ATTRACTCLOSEST. Thus, in (2) the disjunctive *ka* intervenes between the wh- origination site (*nani-o* or *what*) and the landing site in CP, making the sentence ungrammatical. The hierarchical structure of (2) is represented in Figure 1.

(2) ?*   John-ka Bill-ga   nani-o   kaimasita   **ka**.
          John-or Bill-NOM what-ACC bought.POLITE Q
          "What did John or Bill buy?"   (Ibid, p.1)

ka [John-**ka** Bill]-ga [nani-o t$_{ka}$] kaimasita.

Figure 1 – Hiearchical Reprsentation of *ka* Intervention Effects (Miyagawa, 1997, cited in Hagstrom, 1998)

Another reason for believing that Japanese does <u>not</u> have wh- movement is that there appear to be no island effects. Thus, (3) is perfectly grammatical, in spite of the fact that the same sentence in English and many other languages would be ungrammatical as a result of violating what is typically assumed to be island constraints on movement.

(3)   Hiro-ga [Sue-ni **nani**-o   ageta hito-ni] aimasita **ka**.
         Hiro-NOM   [Sue-DAT   **what**-ACC   gave   man-DAT] met.POL **Q**
         "*What did Hiro meet [the man that gave *t* to Sue]?"
         (Ibid, p. 2)

Hagstrom suggests however, that in examples such a (3), the launching site for *ka* is outside of the island. Further, he suggests that this can be diagnosed by the placement of the emphatic element *ittai*. By hypothesis, then, *ka* begins movement from inside an island when *ittai* is in an island, as in the ungrammatical (4), and *ka* begins movement from outside an island when *ittai* is outside an island, as in the grammatical (5). In this view, wh- movement in Japanese is subject to island constraints.

(4)   *Hiro-ga   [Sue-ni **ittai**   **nani-o**   ageta hito-ni]   aimasita **ka**.
         Hiro-NOM   Sue-DAT **ittai**   **what-ACC**   gave man-DAT   met.POL **Q**
         "What in the world did Hiro meet the man that gave *t* to Sue?"

(5)   Hiro-ga   **ittai** [Sue-ni   **nani-o**   ageta hito-ni]   aimasita **ka**.
         Hiro-NOM   **ittai** Sue-DAT   **what-ACC**   gave man-DAT   met.POL **Q**
         "What in the world did Hiro meet the man that gave *t* to Sue?"
         (Ibid., p. 2)

If Hagstrom's view is correct, that overt wh- movement does take place in Japanese, then one of the primary motivations for positing the absence of CP is removed.[1]

3. The Acquisition Question

Here we ask whether data from child language development may contribute evidence to the adult theoretical question of whether or not CP exists. Though the evidence that could be presented in this way is merely suggestive and of a corroborative nature, we will look to see whether those constituents that are typically associated with CP in Japanese appear to be acquired at the same point in development.

If CP constructions in general arise in close temporal proximity to one another in the developmental trajectory of children, then it is possible that they are appearing in production because CP becomes available to host these constructions at the same developmental moment.

4. Aki

The data come from the Aki corpus (Miyata, 1992) from the CHILDES database (MacWhinney &

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[1] Watanabe (2002) argues for the existence of wh-movement in old Japanese.

Snow, 1985). Aki is a Japanese boy from a monolingual family living in the Nagoya area in Japan. Data collection started at age 1;4.7 and ended at 3;0.0. The number of total utterances in the 56 files was 23,935. The exact age, MLU and number of utterances for each file studied is given in Table 1.

Study Period	MLU	Total Number of Sessions	Total Number of Utterances
before 2;0	1.02	7	652
2;0	1.09	4	718
2;1	1.07	4	1,041
2;2	1.12	4	1,354
2;3	1.49	5	2,299
2;4	1.68	4	1,953
2;5	1.51	3	1,594
2;6	1.61	3	1,518
2;7	1.76	4	2,198
2;8	1.82	4	1,996
2;9	1.90	5	2,350
2;10	1.91	4	2,037
2;11	2.11	5*	4,225
		total 56	total 23,935

Table 1 - Description of Aki's language sample
(*These sessions include one that took place at age 3;0.0).

5. Method

The target child was audio-recorded as he played with the researcher or his mother. Data were collected monthly before 2;0 and approximately weekly between 2;0 and 3;0. Each session was 1 hour long. Immediate repetitions of others' statements, unintelligible utterances, and "frozen form" or lexicalized utterances were not included in the analysis. Age of onset was determined as the first productive use of a construction. Because all of the constructions under consideration involve verbs, an utterance was considered a productive use of a construction once it began to be used with more than one verb.

construction	description	meaning
-ne	sentence-final particle	modal (asking for the hearer's agreement,)
-yo	sentence-final particle	modal (assertion, strong will of the speaker)
-no, -ka	sentence-final particle	question marker (used both in yes-no question and wh-question)
nani	wh word in a wh-question	(has to be used in conjunction with the question morpheme *-no* or *-ka*)
-kara	clause-final particle	subordination (*because, since*)
-to	clause-final particle	subordination (*that*)
-te	clause-final particle	imperative marker (truncated, informal form)
-wa	word-final particle	denotes topicalization
	relative clause	

Table 2 - Description of the CP-related constructions examined in Aki's data

These constructions may be considered to be CP-related in that they occur at the clausal periphery and that they correspond to elements taken to be CP-oriented in other languages.

6. Results

construction		age of onset
-ne	tag question	1;11.29
-yo	emphatic	2;0.12
-no	Q marker	2;2.0
-te	imperative	
Nani	wh word	2;3.4
-wa	topic marker	2:3.18
-ka	Q marker	2:4.29
-kara	subordination	2;8.17
	relative clause	2;11.0

Table 3 - The first productive use of the examined constructions

Examples of Aki's first productive use of the above constructions are given below:

(6) tag question *-ne* (1;11.29)
   mother: okyakusan i-nai yo .
   guest exist-NEG EMPHATIC
     "There are no guests."
   Aki: nai ne
    exist-NEG TAG
    "No, there aren't, are they?"

(7) emphatic *-yo* (2;0.12)
   investigator: chitcha-i ?
       small is
       "Is it small?" (talking about a train)
   Aki: okkii yo .
    big is EMPHATIC
    "It's big!!

(8) Q-marker *-no* (2;2.09)
   Aki: ii no
    good is Q
    "Is it OK?"

(9) imperative *-te* (2;2.09)
   Aki: oi te
   put down IMPERATIVE
    "Put it down!"

(10) wh-word *nani* (2;3.4)
   Aki: kotchi nani?
   this   what
    "What's this?"

(11) topic marker *-wa* (2:3.18)
   Aki: kyooryuusan wa .
   Mr. dinosaur TOP
    "How about Mr. dinosaur?"

(12) Q-marker -*ka* (2;4.29)

      Aki: te   kakoo ka ?

         hand draw Q

           "Shall I draw my hand?"

(13) subordination -*kara* (2;8.17)

      (Aki is asking his mother to open the battery box of his toy)

      Aki: dekinai kara

         can't do because

         "(I am asking) because I can't do it."

(14) relative clause (2;11.0)

      Aki: kinoo   katteta yatsu kore

         yesterday bought thing this

         "Is this the thing we bought yesterday?"

As illustrated in Table 3, the constructions broke down into roughly two groups: an early onset group and a later onset group. Both the subordination marker and relative clauses imply the embedding of one clause in another. This appears to be the split between the two groups: <u>matrix vs. embedded CP constructions.</u>

7. Discussion

Claims are limited to production data; facts need to be checked in comprehension and elicited production as well. Much of what we think of as matrix CP-related constructions appear to arise at roughly the same point in development. This suggests the activation or emergence of functional structure that handles the same kind of constructions. Embedded CP constructions arise later.

Why do clause-peripheral elements appear to emerge together? In order to form a question, or topicalize a DP one has to coordinate the use of both grammatical and pragmatic knowledge, such as focus vs. presupposition, topic vs. comment, etc. It has been argued that children fail to integrate these domains of knowledge in other constructions. For example, Grinstead (1998) argues that child Spanish speakers fail to produce overt subjects as a result of an inability to access the discourse knowledge necessary to determine that their interlocutors do not share their perspective in some cases and must have an explicit subject expressed in order to make the referent clear. Similarly, Maratsos (1974) argues that child English speakers overuse definite articles in English because they do assume that their interlocutors share their perspective. Finally, Avrutin (1994) discusses the fact that child English and child Russian speakers fail to apprehend discourse-sensitive aspects of pronoun use.

Is it the case that children develop discourse-pragmatic competence later? This does not seem to be the case. Rather, it has been suggested by Kagan, et al (1978) and Muir & Field (1978), that from infancy children show an ability to distinguish new and old information outside of the linguistic domain. Consequently, we propose that the difficulty is rather one involving the interface between grammar and discourse. This would be similar to the failure to integrate other domains of knowledge with grammar as, for example, in the case of visual and spatial cognition which are reputedly late to integrate, as evidenced by the late acquisition of locatives (cf. Landau & Jackendoff, 1993). Similarly, is argued in Grinstead, MacSwan, Curtiss, & Gelman (1998) that children possess numerical cognition long before they are able to count, by virtue of a delay in the development of the interface between numerical and grammatical cognition. An understanding of why this integration at the interface is delayed awaits further investigation.

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