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Development of Metalinguistic Awareness: a Case Study

*Yukio Otsu*¹

¹ Institute of Cultural and Linguistic Studies, Keio University

I. Introduction

This squib reports results of an experiment concerning development of metalinguistic awareness with a particular focus on the awareness of syntactic category.

The experiment makes use of a word game known as *shiritori*, which literally means “picking up the end of a word.” It is a word chain game typically played by two. A player says a word, and then the other player responds with a word which begins with the last mora of the first word. The first player then responds in the same fashion. The game continues until a player cannot come up with an appropriate word. The game also ends if a player says a word ending with /N/, which cannot be used to begin a word. The game is popular among young children in Japan¹.

Children typically come to learn the rules of the game by observing their friends playing the game, except for a simple statement: “Find a word which begins with the last portion of your friend’s *kotoba*².” Note that the “last

¹. The *shiritori* game has been used in studies designed to test development of linguistic knowledge and metalinguistic knowledge (e.g., Hatano and Inagaki 1992, Takahashi 1997, and Kubozono 2000), but to my knowledge there is no research so far which investigates development of metalinguistic awareness with focus on syntactic categories.

portion” is not explicated. Children come to realize that the “last portion” which is crucial in this game is the “last mora” without any explicit instruction.

On top of that, it is also important to realize that there are some hidden rules usually not explicitly conveyed to children. One thing is that the words that can be used in this game are restricted to nouns. Another is that the expressions that can be used are restricted to words, not phrases or sentences. Children also seem to come to realize those hidden rules without any explicit instructions since they never use (i) words that belong to other syntactic categories like adjective, adverbs, and verbs, or (ii) other linguistic units than words, i.e., phrases or sentences.

The nature of the *shiritori* game briefly summarized above allows us to test development of metalinguistic awareness with respect to syntactic categories and linguistic units. The experiment to be reported in this squib tests the former.

II. Method

2.1 Subjects

Fifteen elementary school students and five junior high school students participated in this experiment. For the former, there were five students each in second, fourth, and sixth grades. For the latter, all are first graders. They are all mono-lingual speakers of Japanese and students of public schools in Tokyo and Yokohama.

2.2 Procedure

An experimenter and a subject play *shiritori*. In the first session, *shiritori* is played in a usual fashion. In the second session, two adjectives (*kitanai* “dirty”, *shiroi* “white”), two adjectival nouns (*keiyo doshi*) (*kireina* “clean”, *shizukana* “quiet”), and two verbs (*kiru* “cut”, *osu* “push”) are introduced by the experimenter. Attention is paid to how the subject responds when such items are introduced. When a subject questioned the validity of such an

² “Kotoba” is multiply ambiguous. Among the meanings it can bear are (1) linguistic expression, (2) word, and (3) (a) language.

answer, the experimenter asked the subject why he or she thought that the answer was not appropriate.

III. Results

TABLES 1-3 show the number of subjects who questioned the validity of experimenter's answer.

Table 1. Adjectives

Number of times subject questioned validity	2	1	0
grades			
junior high	5	0	0
6 th graders	4	1	0
4 th graders	2	2	1
2 nd graders	1	2	2

Table 2. Adjectival Nouns

Number of times subject questioned validity	2	1	0
grades			
junior high	5	0	0
6 th graders	4	1	0
4 th graders	1	3	1
2 nd graders	1	3	1

Table 3. Verbs

Number of times subject questioned validity	2	1	0
grades			
junior high	5	0	0
6 th graders	4	1	0
4 th graders	3	1	1
2 nd graders	2	2	1

Among the responses collected are:

Second grader:

E: *Akai* (“red”).

S: Oh, that’s not good.

E: Why?

S: I don’t know.

Second grader:

E: *Osu* (“to push”).

S: (laughter)

E: Weird?

S: Weird.

E: Why?

S: I don’t know.

Fourth grader:

E: *Shizukana* (“quiet”).

S: That’s not fair.

E: Why?

S: I don’t know.

Sixth grader:

E: *Akai* (“red”).

S: That’s not fair.

E: Why?

S: ‘cause it’s not a thing.

Junior high student:

E: *Osu* (“to push”).

S: You cannot say that!

E: Why?

S: Because it is not a noun.

Junior high student:

E: *Akai* (“red”).

S: That’s out!

E: Why?

S: Because *akai* is an adjective, not a noun.

IV. Discussion

The results reported above suggest that some children in the second grade of elementary school already possess metalinguistic awareness concerning syntactic categories. However, they are not mature enough to manifest their awareness in an adult-like manner. They only can indicate that they felt some strangeness when non-nouns are introduced in the *shiritori* game.

It is only when they are over ten years of age that they begin to give the reason why they felt it strange when non-nouns are introduced. Even when children reach that age, though, it is not clear whether they are sensitive to a syntactic category Noun or a non-linguistic category Thing. When they enter junior high school, they begin to use such grammatical terms as “noun” or “adjective” in their comments.

There are two problems in the above experiment. One is in its procedure. Shiro Ojima (p.c.) pointed out to me that the experimenter being an adult might have influenced the results. For young children, adults are likely to be the source from whom they learn various things. Children might have thought that adults would not do a wrong thing, and hence they might simply have accepted the experimenter's responses whatever they were. The results of a pilot experiment in which a subject watches a video clip showing an interaction between a foreigner who is not good at Japanese and an adult show that Ojima's conjecture was right. A full-scale experiment is now under way.

As pointed out above, it is not clear in this experiment whether sixth graders are sensitive to a syntactic category Noun or a non-linguistic category Thing. In order to clarify this point, another experiment is also under way in which abstract nouns like *yume* “dream” and *kibo* “hope” are introduced.

Putting those problems aside, the present experiment has shown the validity of use of *shiritori* word game as a potential tool for revealing development of metalinguistic awareness concerning syntactic categories.

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