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A PRACTICAL STUDY ON BERNSTEIN'S SOCIO-LINGUISTIC CODE THEORY IN JAPAN: DIFFERENCES IN LINGUISTIC CODE IN CHILDREN IN THE 1ST YEAR

YUSAKU MAEBA*

Abstract

The aim of this paper is to consider two issues from the viewpoint of Bernstein's socio-linguistic code theory. First, do children have a tendency for differences in linguistic performance? Second, what are the environmental factors that provide for a different linguistic code?

First section summarizes the socio-linguistic code theory that is referred to as the main concept in this paper. Second part, showing the outline of the investigation, clarify differences in the socio-linguistic code that each child uses gives rise to differences among children in linguistic performance. Finally, this paper examine environmental factors that make the difference in each child's socio-linguistic codes.

Specifically, this research conducted an investigation on "story making" among first graders in elementary school and analyzed the relationship between linguistic performance and family background. To analyze the data, this paper focus on the subject or case particle omissions observed characteristically in the Japanese language from the point of view of context dependence.

As a result, two findings were obtained. First, children who did not have an elaborated code and who were apt to omit subjects showed a tendency to require a long period of time before making an utterance. The other finding shown in this paper is that acquisition of the elaborated code was dependent on parents' occupations and family structure. Regarding this point, the paper further points out the probability that the personal modes of control pattern of using an elaborated code are especially enhanced among the white collar class. Additionally, since there is a difference in acquisition codes by family structure, the chances for the acquisition of the elaborated code are relatively low in a fatherless family and among children who have older siblings.

Key words: socio-linguistic code, social class, family background

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1. Introduction

The aim of this paper is to consider, from the viewpoint of socio-linguistic code theory, the differences in children's linguistic performance at the time of starting first grade of elementary school, and the factors causing such differences.

“Language skills” or “communication skill” are ubiquitously heard these days as the answers to the question of “What competency do children in this age need or lack?” The new educational guidelines put a premium on language skills, and language skill cultivation has been integrated not only in Japanese language class but also in every other class. Acting in concert with this, various language-related lesson practices and lots of other know-how fill the pages of educational newspapers.

Furthermore, among the key competencies that the Organization for Economic Co-operation and Development (OECD) defines, language skill holds a prominent position (Rychen & Salganic 2003, translated version, p. 202). That is, the skill of interacting with heterogeneous others and the skill of utilizing tools interactively are strongly demanded, but it is not limited to simply vocabulary. It also emphasizes logical expression skills and context-independent linguistic performance.

Language is drawing more and more attention, but it is unclear if people understand the initial conditions. Needless to say, since children who just started elementary school have a lot of differences from each other, it might widen the gap in their educational achievements if they are taught language skills without awareness of this.

Bernstein introduced the concept of elaborated code and restricted code. The former creates context-independent linguistic performance, and latter is situation dependent (Bernstein 1971). He also brought up the connection with social classes. This theory has surely provided a critical point of view for explaining the class differences in cultural reproduction and academic achievements. These views used to be something to explain the differences in children's language operation characteristics from the angle of “social classes,” but they remained as one of the powerful theory in the sociology when language skill is considered to be an important competency. Even in Japan, in spite of the fact that there exists practical research using the framework of Bernstein's socio-linguistic code theory (Nakano 1974, Azuma et al., 1981), not many researches have been conducted since the 1980s.

This paper is constructed as follows. Section 2 outlines socio-linguistic code theory, which is the primary concept used in this paper. Section 3 shows the investigation's outlines, and section 4 clarifies how differences in the socio-linguistic code that each child uses gives rise to differences among children in linguistic performance. Section 5 identifies the environmental factors that determine the differences in each socio-linguistic code, and finally, section 6 gives a summary.

2. Literature Review

2.1. *Socio-linguistic code theory*

Bernstein took particular note of language to answer the question “Why are the educational achievements of blue collar class children low?” and proposed a socio-linguistic code theory made up of the restricted code and elaborated code. In the beginning, Bernstein had used the term “code” for the principles which regulate the processes of verbal planning (Bernstein 1971, pp 81–82).

Each code produces different types of language. As Bernstein writes that “elaborated codes orient their users towards universalistic meanings, whereas restricted codes orient, sensitize, their users to particularistic meanings.” (Bernstein 1971, p. 176), the language articulated by elaborated code is considered to have lower dependency on context (situation), while that of restricted code is considered to be highly dependent on context (situation).

Generally children from blue collar families are said to conduct linguistic performance using restricted code, and children from the middle class mostly conduct linguistic operation using elaborated code. This is rooted in the main code differences in which codes those families use. However, in school education, the use of elaborated code is more required than restricted code, so children who are not familiar with elaborated code from blue color families find it difficult to succeed at school.

2.2. *Socio-linguistic code theory in Japan*

How has socio-linguistic code theory been developed in Japan? Nakano (1974) tackled the issue of classes and language using Bernstein’s framework to demonstrate socio-linguistic theory in Japan. She divided Japanese into written and spoken languages to conduct an examination of writing examples and interviews targeting children in the upper grades of elementary school. It turned out that rural schools (where more blue-collar families are based) showed a characteristic of tending to use restricted code. On the other hand, suburban schools (where more middle-class families are based) showed a tendency to use elaborated code. However, his research does not cover individual class backgrounds nor the impact of school education because of the limited target of upper graders in elementary school, so there are still some issues for consideration.

Besides, Azuma, Kashiwagi, Hess (1981) conducted a large-scale comparative investigation between Japan and the U.S. in the 1970s regarding the mother’s involvement in children’s intelligence development. Its findings cover a lot of ground. From the point of interest of this paper, the following points are worth taking a look at. First, mothers of higher class families in both countries interact with children in a professor style, which emphasizes children’s initiative or activeness, and it seems that this urges the development of children’s language ability and intelligence. Further, they point out that the extent to which the elaborated code dominates in the family’s linguistic environment might be affecting the children’s academic performance and

adaptation in school (Azuma et al., 1981, pp. 301–313). Particularly, even when using the same form of expression, “a finding that the psychological meanings are different between Japan and the U.S. because the meanings are bonded to the characteristics of each language, culture, and parents-children relationship” (Azuma, et al., 1981, p. 302) is highly suggestive and tells us the importance of covering each regional context. At the same time, in spite of the importance of the findings, they seem to deviate from what Bernstein was expecting at the beginning as the socio-linguistic code differences were handled as intelligence development measurements.

In the 1970s to 1980s, Osaka Prefectural Education Center conducted an investigation focusing on children’s language to unravel the low academic skill problem in districts targeted for antidiscrimination measures. As a summary of the series of results, it was found that the children (preschool children) are having difficulty in organizing and understanding sentences, and also their understanding of stories is comparatively low compared to those who are from outside of the districts (Osaka Prefectural Education Center, Research Report Vol. 87–99). However, this research cannot reveal the components of language skills because the main theme of this research was to find out the gap of the language skills between children from dowa districts and from non-dowa districts.

Even so, judging from the series of results, it is almost doubtless that class and language have a certain connection, but after the 1980s there has not been much research related to these issues, and there is still no consensus on the factors that cause the linguistic performance differences. The reason could be the fact that problems related to classes or gaps are considered taboo around education and also that Japanese society is homogeneous compared to Europe or the United States, which conceals the class differences among Japanese. Now that educational gap issues are drawing the attention of the public, there might be a chance to present a crucial theme for discussion on educational achievements and academic skills by questioning, from the viewpoint of the socio-linguistic theory, the language operation of elementary first graders.

2.3. Recognition rules and realization rules

“Since Bernstein’s attitude toward research was always heuristic and exploratory” (Shibano 2001, p. 23), his code theory refined thanks to Bernstein’s research-oriented attitudes.. The aforementioned categories of restricted code and elaborated code developed in a way not limited to language after being combined with the concept of “orientation toward meaning” (which context will be selected as the relevant context) as “assigning meaning in a limited direction (local context)” and “assign meaning in an elaborated direction (non-local context).” He states “code is a regulative principle, tacitly acquired, which selects and integrates relevant meanings, the form of their realization and evoking contexts.” (Bernstein 1996, p. 110).

Moreover, according to Bernstein, There is another code, which is pedagogic code. Pedagogic code means the code controlling pedagogy, which is a special communication form. Orientation toward meaning in pedagogical practices is the one that is elaborated. Furthermore, to understand the

meaning, the one needs to comprehend it and possess the rules to execute what being comprehended. This is what is called recognition rules and realization rules. The recognition rules determine what the context demands, which makes comprehension of the context possible. Whereas realization rules determine the meaning to be built to create the correct text. Bernstein pointed out that the process of acquiring these rules is the process of code acquisition (Bernstein 1996).

The above concepts can be applied to the linguistic codes. These rules make it possible to understand linguistic performance in two steps. The first step is to recognize what is required to say and how to do it, and the second step is to realize the text in practice. These concepts might be able to help us avoid categorizing things as a simple language skill when analyzing linguistic performance scenes. Employing these recognition rules and realization rules, the present research analyzes not only language competence but also recognition frame.

3. Method

3.1. Data Collection and Procedure

The targets of the investigation were 93 first grade elementary school children and their parents. First graders were selected because they are at the beginning of the school age. In other words, they have received the least impact from the school environment¹⁾.

The children are from three public elementary schools located in the north part of Osaka prefecture, which are under the same school district of a junior high school. The breakdown of the 93 children by each school is 27 (all first grade), 36 (all first grade) and 30 (1 class out of 5 classes). The characteristics of each school are: a school from a district containing a *dowa* district, a school in which most children are living in public housing apartments, and a school located in a new residential area. it covers children of various social class backgrounds.

Data on the parents was collected through a questionnaire including the frequency of reading to children, the reading environment, and the frequency of conversation, the main earner's occupation, as well as the academic background of the parents. The questionnaire sheets were distributed through each school to the children using envelopes with their "attendance number (number given based on alphabetical order)" printed on it, and the parents were asked to submit them to the homeroom teachers (the number collected: 87, the rate of collection: 93.5%)²⁾. The parents were notified in writing that the research was on children's language use and family

¹⁾ If one eliminates the impact of school education, then preschool children could be targets, but because a composition investigation (not used for analysis) was conducted children who can write letters were targeted this time.

²⁾ The reason for the high response rate compared to general investigations was probably because it was conducted via schools, and each homeroom teacher had encouraged the parents at the parent-teacher group meeting. Prior to the investigation, the schools were informed that this investigation is to find out an actual image of children's language use and the properties of their parents. The fact that the author had been involved in a school as a school support volunteer, and was able to share the problem consciousness regarding this research helped to get cooperation in this investigation.

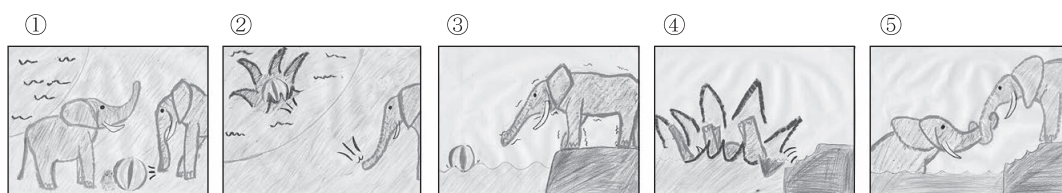


DIAGRAM 1. Picture-card show used in “story making”

environment, and that children would be matched and recognized by the attendance numbers, but the data wouldn’t identify children’s individual names when analyzing them nor would they be disclosed to schools.

3.2. “Story making” Investigation

In the middle of July 2007, I conducted a “story making” study on the first graders in elementary schools to collect language controlled by code³⁾.

First, in a separate room (an unused room), the investigator faced the child and put five pictures (Diagram 1) on a desk one by one to show to the child. After checking the order of the pictures with the child, the investigator asked the child to make up their story by asking, “Please tell me your story as best as you can based on these pictures.” After asking, “Are you ready?” and the child agreed, the investigator began recording. Later, the recordings were transcribed, and analyzed. During the investigation, only the investigator and the child were in the room, and tried to create an atmosphere in which child could relax such as starting off with a simple chatting.

4. Difference in linguistic performance controlled by socio-linguistic code

4.1. Characteristics of the Japanese language

Before analyzing the data, this section summarizes the characteristics of Japanese language. Toyama states, “the Japanese language is a language of an island, which is different from European languages that have developed in countries having other countries connected by land. If a single language is used by a single nation for a long period, mutual intelligibility becomes quite high. You could say that the logic of the language spoken within the family has widely permeated throughout society” (Toyama 1973). Concerning this, Morita (1998) says that Japanese people tend to speak based on the situation, and because of the high dependency on the

³⁾ This research got the inspiration from Hawkins’ work (1973). Hawkins had conducted the same investigation, and discovered that children from the labor classes use more pronouns that indicate outside of the sentence (exophora) compared to those from the middle classes. This research was designed to be interesting for the first graders, and used pictures after consulting about it with the homeroom teacher of the children, which is different from Hawkins’ study.

situation, subject omission or vagueness at the end of sentences happens. On the whole, the Japanese language is a language highly reliant on the situation compared to English in a way.

Despite such characteristics of Japanese, the written language requires that sentences present the situation in each scene because the target is a large indefinite number of readers who do not necessarily share the same experience of the topic (Morita 1998). Toyama (1973) points out that the logic of the spoken and written languages are different from each other. Therefore, Japanese users must master these two logics. While the Japanese language is primarily a high-context language, which is similar to the restricted code, the user has to also master universalistic side of Japanese language, which is similar to the elaborated code. Besides, spoken language and written language do not mean what is spoken or what is written. They distinguish a difference in logic. In other words, the logic of the spoken language is the restricted code and that of the written is the elaborated code (Shimizu 1991). Considering the above points, whether the user possesses the elaborated code or not in Japanese might be more apparent than in English.

4.2. Paying attention to subject or case particle omission

The preceding section discussed the Japanese language's high dependency on context, but that characteristic tends specifically to appear in subject or case particle omissions (Osaka Prefectural Education Center 1984). Sentences without subjects or case particles are not only grammatically incomplete but also extremely context dependent sentences. That is because subjects are necessary for expressing agents, and particles, including case particles, are very important function words "to elaborate the sentences to make it understood by the listeners or readers" (Yokoyama 1997, p. 132). If a sentence does not have a subject or particles in a string of words, then without sharing the context, there might be a case in which the content cannot be understood. He goes on to add that acquiring particles, specifically case particles, is tough for children (Yokoyama 1997). Furthermore, considering self-awareness about grammatical rules during the period of pre-school, three points are emphasized in grammatical instruction: recognition of subjects, recognition of case particles, and ability to construct complex sentences and connecting sentences (Osaka Prefectural Education Center 1984).

Taking into account the above discussion, in this paper, I made the judgment that focusing on subject and case particle omissions in the Japanese performance of elementary school children is effective in understanding the use of restricted and elaborated code, and I decided to focus the examination on their use.

4.3. Categorizing socio-linguistic code groups

One of the aims of this paper is to find out the factors that determine the socio-linguistic code. Now this paper uses an approach to understand the differences between groups utilizing different linguistic performance to analyze rather than the approach used in conventional research (Hawkins 1973 etc.) to understand the differences in linguistic performance utilized in different

social classes. That is, keeping in mind two different groups⁴⁾ using different socio-linguistic codes, the approach examines the factors controlling the differences. The categories of the groups are explained below. First, the “stories” analyzed were presented in the forms shown in [Case 1] and [Case 2].

[Case 1] Playing with a ball. Throwing a ball. Trying to retrieve a ball. Drowning. Gave help.

[Case 2] An elephant was going to play with a ball, and it dropped the ball, and when the elephant tried to retrieve it, the elephant fell, and the other elephant helped it.

First, I observed the conditions of the children’s language use in a story like this. The index used was (1) a use of the subject (elephant) in the first scene and (2) the use of the subject (elephant) in the final scene, (3) the number of subjects being used over the five scenes and (4) the number of times case particles were omitted⁵⁾.

For example, in [Case 1], (1) no subject (coded as 0), (2) no subject (coded as 0), (3) subject 0, (4) case particle: 0. On the other hand, in [Case 2], (1) subject (coded as 1), (2) subject (coded as 1), (3) subject: 4, (4) case particle: 0.

The subjects in the first and the last scene are counted double. However, whether to use a subject in the first scene or not and whether to use a subject in the transit from the fourth scene (as the first appearance of a new agent) was anticipated to affect the result significantly, so I decided to count them separately. Since the first and the last scene depict two elephants, and it requires an appropriate subject in order to give a universal description, so much value was attached to it.

Of course, the concept of the coding is theoretical, so the actual conditions cannot be understood so easily. Therefore, this paper tries to categorize them into two groups: a group supposedly mainly using the elaborated code and a group supposedly mainly using the restricted code, by understanding the expressed linguistic performance that is controlled by code⁶⁾. A hierarchical cluster analysis (group average method using square Euclidean distance) was done to categorize the 91 children into two groups, and it was conducted based on the elaborated and restricted codes using four indexes coded as seen in above Table 1.

One side of the cluster categorized based on dendrogram is the group that used subjects and with fewer omissions of case particles. It is called the elaborated-code group (hereafter referred to as “EC group”). The other is the group that did not use subjects and often omitted case

⁴⁾ The two groups categorized by elaborated code and restricted code only indicate the trend toward the base code of linguistic performance, and do not indicate definitive base code.

⁵⁾ The particle “wa” in Japanese is not a case particle. However, it is very difficult to judge whether “wa” or “ga” is omitted in a sentence like “*Zou asonderu* (Elephant playing).” In such case like this, case particle is assumed to be omitted.”

⁶⁾ To analyze, children were divided into these groups, but there was an opinion that the difference of these two groups became vague because of the concept of “colloquial speech variants.” (Onai 1995, p. 25).

TABLE 1.
Code groups and differences in linguistic performance

	Rate of subject use in the first scene	Rate of subject use in the last scene	Average number of times subject was used	Average number of case particle omissions
EC group (n = 64)	92.2%	76.6%	3.63	0.14
RC group (n = 27)	37.0%	22.2%	1.11	0.22

particles, which is called the restricted-code group (hereafter referred to as “RC group”).

There were 27 in the RC group and 64 in the EC group. It was assumed that 70.3% of the targets possess elaborated code. On the contrary, about 30% of the children do not. Furthermore, to be on the safe side, this categorization only indicates tendencies in the possession of elaborated code and does not indicate that children in the RC group do not have elaborated code.

To reiterate, children in the EC group and RC group use subjects differently (Table 1). For example, 92.2% of EC group children used a subject in the first scene while 37.0% of the RC group did. For the last scene, 76.6% of the EC group children used a subject, but only 22.2% of the RC group did.

4.4. Socio-linguistic code and the recognition rules/realization rules

This section focuses on the time it took to start telling the story. The time mentioned here means the time from recognizing the task until executing it. The correlation between this time and the socio-linguistic code is examined here.

In this investigation, children were given instructions before the interview as “Please make a long story. Tell me when you are ready,” and when the children sent a signal that they were ready (nodding or saying “OK”), I started the audio recording. I measured the time until the utterance after the signal, and the result is as shown in Diagram 2. An average time of 3 seconds or less

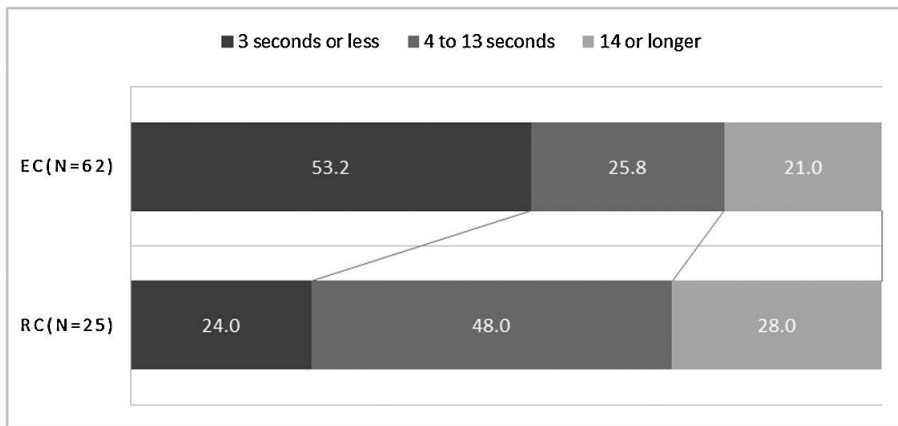


DIAGRAM 2. Socio-linguistic code group X time until utterance

was seen in 24.0% of the RC group, and 53.2% of the EC group. Furthermore, 48.0% of the RC group and 25.8% EC group took 4 to 13 seconds. This result showed that EC group children gave a shorter pause before uttering, and the RC group children tended to give slightly longer pause. Furthermore, creating a cross-tabulation table referring to Diagram 2, and performing a square test gave $p = 0.039$, $p < 0.05$ shows it was statistically significant.

The recording started from the time the children said they were ready. Therefore, children who could not talk smoothly thought they were ready at first, but they found out they need some more time to follow the direction. In the prior research, one result showed that elaborated code requires a longer time before initiating speech in order to select vocabulary and consolidate their thoughts (Bernstein 1971, Nakano 1974). At a glance, this result and the result from Diagram 2 seem to contradict each other. However, what this research measured was the time from the start of recording, and not the time to consolidate thoughts. In other words, what I measured here was the time from the completion of consolidating their thoughts to beginning talking.

What is unclear here is the reason for the tendency toward swift initiation in children using the elaborate code and the sluggish initiation in children using restricted code. The following part explains how to comprehend the cause of this time gap using the recognition rules and realization rules.

The group using elaborated code might have first recognized the special context (unusual situation of facing an unknown adult individual, plus being told to make a story), and then made an appropriate story. In the meanwhile, since the children possess realization rules, they were able to create, without delay before realization, a story with subjects. It is possible to interpret this as the children having already acquired the pedagogic code, namely recognition rules and realization rules.

On the other hand, the children in the RC group recognized the situation as unusual at first, but were not able to follow the direction immediately. That appeared in the form of time lag. This time lag indicates important outcome of linguistic mechanisms. The children in the RC group might have possessed the recognition rules, but not the realization rules. Although the children, the acquirers of such rules, might have sensed what the investigators (the messengers) demanded, and decided to say “Ok,” they might have not been able to reach a specific realization⁷⁾. The incarnated form of this situation is possibly the time lag before initiation of their story as well as subject or case particle omissions controlled by restricted code.

⁷⁾ In fact there has been such case. Some children started off without hesitation “first grade, class No. 1, Attendance Number XXX. My name is XXX. An elephant is...” While some children speak like, “Eh?” tilting their head to a side, or stopped and froze as soon as the recording started.

5. Elaborated code controlling factors

5.1. Environmental factors

The preceding section discussed the correlation between socio-linguistic code and recognition rules/ realization rules. This section discusses what factors control the acquisition of the elaborated code.

According to Bernstein, the socio-linguistic code is distributed unfairly in social classes. In order to analyze this issue in modern Japanese society, the effects of various elements might have to be considered, and not simply the application of a schema.

For the first step, the analysis used in this research dealt with followings elements: parents' occupations⁸⁾, mother's academic background, mother's age, child's gender, birth month, and family structure. Table 2 shows the results summarized from a cross analysis and chi-square test on Language code groups and these elements. As a result, the rate of children in the EC group differs based on the occupation and whether or not they have older siblings (statistically significance at 1% standard). With other elements, there were no statistically significant differences found (even at 10% standard). In particular, occupations made a bigger difference: among children of blue collar parents, 35.0% were in the EC group, and among children of white collar parents, 83.3% were in the EC group. In short, white collar parents strongly connected with the children's linguistic performance controlled by elaborated code. This point resembles Bernstein's opinion that the middle class and the elaborated code have a strong correlation.

One of the reasons for such an outcome could be the difference in control patterns used in the family. According to Bernstein's socio-linguistic code, the different control patterns used in each family creates such differences in code (Bernstein 1971). Besides, imperative modes of

TABLE 2.
Correlation between elaborated code and environment

	n	Category (n) ratio of percentage of EC group	
Gender	75	M (43) 69.8%: F (32) 71.9%	
Parents' occupation	68	Blue collar (20) 35.0%: White collar (48) 83.3%	$p < .001$
Mother's academic background	72	Non university graduate (37) 64.9%: University graduate or upper (includes junior college) (35) 74.3%	
Mother's age	74	20's (9) 55.6%: 30's (54) 72.2%: 40's (11) 72.7%	
Single-mother household	75	Single-mother (8) 62.5%: Parents (67) 71.6%	
Older siblings	75	No (43) 83.7%: Yes (32) 53.1%	$p < .01$
Younger siblings	75	No (42) 69.0%: Yes (33) 72.7%	

⁸⁾ The reason why "the parent's occupation" instead of "the father's occupation" was used is to match the situation of single mothers for which the category of "the father's occupation" is not appropriate. white collar occupations are: expertise/technical occupation, executives, clerical work and sales related positions. Blue collar occupations are: skilled occupation/labor, transportations and maintenance/services.

controls involving physical punishments can be observed more often in the working class, and an appealing pattern that urges children's decision-making using indirect wording (personal modes of control) can be more observed in middle-class families (Cook-Gumperz 1973). The aforementioned "personal modes of control" is a pattern focusing on the child's special properties and not on properties such as age or gender (Bernstein 1996). The imperative modes of control is a messaging pattern via restricted code, while the personal modes of control is via elaborated code (Bernstein 1971). In this way, the code that the parents use is passed down to their children. The schema obtainable from past research makes it possible for us easily to comprehend the correlation between occupational social classes and socio-linguistic codes⁹⁾.

In addition, the result shows that the existence of older siblings affects socio-linguistic codes. That is, those with no older siblings belong more in the EC group and others belong more in the RC group. The reason for this will be discussed in section 5.3.

Up to this part, the paper has discussed the correlation between occupational social class, the existence of older siblings, and social-linguistic code. Now the paper will take a look at the outcome from binomial logistic regression analysis using the socio-linguistic code as explained variables in order to measure the independent effects of each element (Table 3).

The results likewise show a high correlation between parents' occupations and the existence of older siblings. The correlation with single-mother families was newly confirmed. This indicates the existence of both a father and a mother tends to lead to the EC group. Furthermore, what needs to be underlined is that impact from innate differences in development such as gender and parents' academic background is low.

TABLE 3.
Results from binomial logistic regression analysis

Explained variables: Socio-linguistic code (elaborated code = 1, restricted code = 0, n = 65)			
	B	Exp (B)	p
Gender dummy (Girl = 1, Boy = 0)	0.14	1.15	.85
Birth month (April = 1, May = 2, ... March = 12)	-0.04	0.96	.72
Parents' occupation dummy (White = 1, Blue = 0)	2.22	9.23	.01
Mother's academic background (Graduated from university = 1, Not graduated from university = 0)	-0.34	0.71	.67
Mother's age (20's = 25, 30's = 35, 40's = 45)	0.03	1.03	.67
Single-mother family (Parents in family = 1, Single-mother family = 0)	2.52	12.46	.08
Older siblings (Yes = 1, No = 0)	-1.39	0.25	.06
Younger siblings (Yes = 1, No = 0)	0.01	1.01	.99
Constant	-3.09	0.05	.34

Cox & Snell R²: 0.31, Nagelkerke R²: 0.44

⁹⁾ However, there are various arguments on Japan's social classes and parenting such as that people in the higher classes give more positional discipline (Azuma et al. 1981), or the higher the mother's academic background, the more individually centered the appeal type (personal modes of control pattern) is (Shibano 1989).

5.2. Involvement of parents

This part briefly studies the correlation between parents' involvement and socio-linguistic code to the extent that the mothers' responses to the questionnaire covers.

The involvement of the parents can be figured out from factor analysis using the responses from the parents, and two factors were extracted¹⁰⁾. The first factor expresses the frequency of parent-child communication, labeled as "communication." The second factor is related to reading environment or TV watching, labeled as "environmental conditions."

Table 4 compares the RC group and EC group element points. There were no significant differences between the RC group and the EC group even when performing the t-test ("communication" $p = .917$, "environmental conditions" $p = .562$).

In addition, even after analyzing the new models using "communication" and "environmental conditions" as the explanatory variables of the binomial logistic regression analysis used in the previous section, neither model has significant control over socio-linguistic codes, and there were no changes in other odds ratios (Table is omitted). These results say that creating a reading environment and active communication between parents and child have nothing directly to do with socio-linguistic codes. As discussed earlier, whether possessing the elaborated code at the time of entering elementary schools or not depends on parents' occupations, whether or not it is a single-mother family, and the existence of older siblings.

TABLE 4.
Element points for parent involvement

	Communication		Environmental conditions	
	mean	S.D.	mean	S.D.
RC group (n = 22)	0.07	0.85	-0.05	0.77
EC group (n = 51)	0.04	1.02	0.07	0.86

¹⁰⁾ Points for "environmental conditions" and "communication" are factor points obtained by factor analysis on questionnaire responses that ask about reading picture books to children and parent-child conversations. Considering the children's age, which is first grade of elementary school, the children's actions such as "time to watch TV," "time for playing game" and "read books alone" are regarded to be activities into which parents possibly intervene, and are handled equal to other questions. As a result of factor analysis using maximum-likelihood method's promax rotation, two major factors were extracted (Table 5). Furthermore, as for factor analysis, responses were digitized as follows. For the responses to the question, "Did you read picture books or books to your children?" 5 points are given to the response "every day," 4 to "once in 2-3 days," 3 to "once in a week," 2 to "once in a month" and 1 to "none" respectively. For the responses to the question, "How many children's books or picture books do you have at home?" 1 point to "5 books or less," 2 to "6-10 books," 3 to "11-20 books," 4 to "21-30 books," 5 to "31-40 books," and 6 to "41 or more books." For the responses to the question, "Do you go to libraries with your children?" 7 point to "once a week," 6 to "once every two weeks," 5 to "once a month," 4 to "once every 3 months," 3 to "once every 6 months," and 2 to "once a year" 1 to "seldom do." For the responses to the questions, "How long do your children watch TV daily?" and "How long do your children play games daily?" 7 to "seldom do," 6 to "about 30 minutes," 5 to "about 1 hour," 4 to "about 2 hours," 3 to "about 3 hours," 2 to "about 4 hours," and 1 to "longer than 4 hours." For the responses to the question, "Do you talk with your children about the TV program that you have just watched afterward?" "Do you talk about what children did or play with friends?" and "Do you talk about school study with your children?" 4 to 1 points respectively according to the frequency between "very often" and "seldom do."

5.3. *Why is elaborated code acquired unfairly among children?*

Based on the controlling factors of socio-linguistic code that was confirmed so far, this section discusses the reasons why they are the controlling factors. One possibility is that it may be because white collar parents utilize a personal modes of control with elaborated code more than the other parents as seen in the conventional schema.

Another possibility is because white collar parents are gradually forcing a personal modes of control on their children. Makino (2009) points out that the “capability” referred in business magazines assumes a readership that is antithetical to non-permanent employees. Similarly in modern Japan where “various comments on the educational method of ‘post-modern type ability’ at home crop up in mass media daily” (Honda 2005, p. 70), it might be right to think that such comments are targeting white-collar parents. What might be inferred here is that white-collar parents who reacted sensitively put more effort into personal modes of control, which seems to urge a holistic ability education rather than imperative and positional modes of control. The abovementioned “post-modern type ability” indicates a holistic ability integrated with personality and emotion. However, because such a configuration largely comes from daily life and interaction with others since childhood, there might be a great increase in the gap among the family (Honda 2005). Considering this, children of white-collar parents might find it much easier to acquire elaborated code.

The next point to consider is the influence on elaborated code acquisition from being in a single mother family or having older siblings. This might be explained by decreasing by half the number of sources (parents), which encourages acquiring elaborated code, and increasing the receptors (children). In short, due to having half the number of parents, characteristic encouragement (control) supposedly given by parents may physically diminish by half. Having older siblings also divides encouragement from parents by two and parents are possibly inclined to give more encouragement to the older children. This point is supported by Hirasawa’s (2006) discussion in that the later one is born among their siblings, the more disadvantages they have regarding educational development. Understanding personal modes of control as a type of capital makes the above interpretation possible. That is, it is natural to infer that if a family has children attending elementary school or a more advanced school, then the parents tend to spare more time for personal modes of control on them.

Finally, I will briefly discuss the question of why no correlation has been observed between children not possessing elaborated code and the mother’s academic background or the family environment.

It seems that education-oriented environment does not have any impact on acquisition of language codes. However, it is still open to debate. The research by Heath (1983) in the U.S. and the research of a Japan-U.S. comparison by Azuma et al. (1981) contain contradictions. Although this paper has focused on subjects and case particles in order to examine features in Japanese language use at the time of entering elementary school, a different outcome might have been

arrived at due to such a restriction. From that perspective, it would be more reasonable to assume that the results from this investigation indicate the controlling factor is subject use or case particle use, which works as a split point between elaborated code and restricted code. In the future, if research is conducted on children who have higher language performance using much more complicated grammar and logic, or analyzed after digitizing the content comprehension as Azuma et al. (1981) did, the influence of education-oriented family environment might be strengthened. Still though, more extensive scrutiny will be needed.

6. Conclusion

Finally, the findings from this paper are as follows.

First, this paper categorized the children into two groups such as those who conduct linguistic performance using elaborated code and those who do using restricted code in terms of subject and case particle omission. Next, section 4 pointed out the possibility that children using restricted code possess recognition rules under unusual situations, but not realization rules. Then section 5 indicated that acquiring elaborated code is dependent on the parents' occupations and family structure.

The first findings are detailed as follows. This investigation put children in an unusual situation. It is easy to imagine that they could not help but feel uncomfortable with the situation in which an unknown investigator (the author) asked them to create a story. Bernstein argues that "the experimental setting is context-independent setting" (Bernstein 1971, p. 254). In such a setting, children chose the recognition rules for unusual situations. While children having acquired elaborated code could respond immediately, those children without it were inclined to take more time for realization even though they succeeded in recognition.

Bernstein points out the difference between classes in terms of recognition rules (Bernstein 1996, translated version pp. 62–63), but this paper drew out slightly different findings in that children might have been choosing the same recognition rules regardless of the acquired code. However, it could be understood that this difference was created due to the recognition under an absolutely unusual situation (space-wise and time-wise). That is, the situation was special in that the recognition rules for unusual situations were easily selected. From such a perspective, the selection of recognition rules may be strongly controlled by the context. Either way, it is worth noting that "because a code is restricted it does not mean that a child is non-verbal, nor is he in the technical sense linguistically deprived" (Bernstein 1971, p. 196).

Another finding of this paper is that acquiring elaborated code is dependent on the parents' occupation and family structure. In this regard, the paper emphasizes the possibility that personal modes of control is more enforced in a white-collar social class. Furthermore, in terms of family structure, it is argued that there is a lower possibility of acquiring elaborated code.

Compared to restricted code, which is a basic code, acquiring elaborated code is optional.

Moreover, linguistic performance controlled by elaborated code is considered official, and is higher up in the hierarchy. When people put more of a premium on linguistic education, it is assumed that elaborated code will be put in such position in the hierarchy but acquiring elaborated code is strongly influenced by family environment, as this paper has indicated. Without being aware of this point, the gap will be widen because families using restricted code, such as blue-collar jobs, single-mother families, and those with more siblings (born with multiple older siblings) are at the risk of financial insecurity, and that might have a big impact on their educational achievements in the later stages. Furthermore, the risk of even more unfairness may be created by tangling such multiple factors. Because of this, findings here should be considered to address educational inequity.

The remaining issues for the future are discussed here at the end of this paper, as closing remarks. First, the samples presented in this paper are very limited, and understanding only one side of language is one issue. Second, the question of whether or not codes could be acquired in school should be examined more in addition to the correlation between codes and academic achievements (= academic performance). Furthermore, while going over such issues, a variable and not fixed socio-linguistic code theory needs to be developed.

TABLE 5.
Results of factor analysis

	1st factor	2nd factor
	Communication	Environmental conditions
Do you talk about what children did or play with friends?	1.007	-.035
Do you talk about school study with your children?	.643	.006
Do you talk with your children about the TV program that you have just watched afterward?	.269	.112
Do you go to libraries with your children?	-.169	.665
Did you read books or picture books to your children before they entered elementary school?	.035	.590
How many children's books or picture books do you have at home?	.195	.556
How long do your children watch TV daily?	.013	.539
How long do your children play games daily?	.094	.414
Initial characteristic value	2.547	1.611
Square sum of loading after rotation	1.681	1.683

Factor extraction method: maximum-likelihood method

Rotation method: Promax rotation that requires Kaiser's normalization

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