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CONSTRUCTIONAL PROCESSES IN THE SOCIAL INTERACTIONAL ACTIVITY IN THE PEER GROUPS OF JAPANESE NURSERY SCHOOL CHILDREN : AN INTERIM REPORT

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Abstract

From the standpoint of social constructionism, the processes of the peer interaction in the group play activities were observed during three years longitudinally. The video-taped data for this study were collected in a microgenetic approach of peer plays, i. e., social pretend play, associative play, and cooperative play etc., in a natural setting in a Japanese nursery school.

This study contained the microsociolinguistic analyses of 300 video-taped peer interactive episodes by children of 3 to 5 year old age groups.

The main purposes of this study were as follows.

1. To clarify the interactive nature of the peer play of Japanese nursery school children.
2. To find out the relationship between the processes of the peer interactive activities during the peer play and the constructional processes of the peer groups.

Two older age groups (4 and 5 years old) were able to successfully enter into one of the ongoing peer play episode. They could also negotiate the playing activity or share the script (theme of the peer play) with each other in their role play. Therefore, the sequences of their play episode were longer than that of the younger one. Through microsociolinguistic analyses, the following findings were obtained. Two older age groups have used a wide variety of access strategies, i. e., entry strategies to accessing to an ongoing play episodes, and also used effective strategies for sharing and maintaining the role play activities or the script in the episode. The youngest age group (3 years old) children could not use the above effective strategies.

From the longitudinal data, it was found that the interrelationship among the peer members of the two older age groups, especially 5 years old age group, were more sophisticated and highly organized, and therefore, the structural nature of their age groups were medium of their social interactive activities in the peer plays.

Key Words : social interaction, peer play, preschool children.

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INTRODUCTION

One of the earliest psychological statements implicating peers in normal social development emanated from Piaget's early work concerning communicative development and the growth of moral judgemental skills. In his writings, Piaget noted that it is the cooperation and mutuality engendered in peer relationships that allow children to gain broader cognitive perspectives about their own social world (1965). However, the issues of the peer relation and social interaction did not occupy a central position in Piaget's later work.

The constructivist approach, which is best represented in Piaget's cognitive development theory, stresses the children's active role, arguing that children interpret, organize and use information from the environment and, in the process, construct mature skills and knowledge. Corsaro pointed out that "although the general acceptance of constructivism clearly moved theory and research in the right direction, it still clings to the doctrine of individualism (1992)."

From the standpoint of the Piagetian social interactionism, Perret-Clermon et al. (1991) also claimed that the "unit of analysis" must be focused not on the individual and his other specific behaviors but on the social interaction itself. Nowadays, the developmental psychology is beginning to try to abandon the individualism and organicism of previous theorizing.

On the other hand, the extensive literatures on children's play have reflected a major concern with the individual child's social skill and the function of play in the child's individual cognitive, psychosocial development (Asher & Coie, 1990). If social play is to be fully understood as constructed by children together, children must be studied not first as individual but as a group of individuals collectively establishing and communicating meaning together as they play.

It is necessary to shift to an account of human development not as an individual's construction of social skills or cognitive structure, but as a collective social production through participation in social contexts, i. e., children's social interaction, the structure of the peer relationships (friendships) among children (Kindermann, 1995; Meckley, 1995), and some environmental factors (Montagner et al., 1988).

AIMS OF THE PRESENT STUDY

It is the purpose of this study to describe the structure of spontaneous episodes of social play in the natural settings of a Japanese day-nursery school, and to suggest the influences of interpersonal relationships among peers which underlie the processes of their peer interactions and social play activities.

1. In order to analyze the organization of social plays of 3 age groups from 3 to 5 years old, we examined the processes of social interactions in children's spontaneous play activities. We ask the question: How the peer interactions are carried out in the children's spontaneous social play?
2. It also examined the interactive nature of peer plays at each age groups and compared the interactive activities among 3 age groups. We ask: How do interactional activities change from age 3 to age 5?
3. To find out the relationship between the processes of the peer interactive activ-

ities with the structure of the interpersonal relationship (friendship) or peer contacts in group settings, we observed the nature of children's behavioral orientations and peer contacts in group settings longitudinally. Our goal was to chart the children's behavioral orientations and patterns of peer contact within a particular social setting that characterized the children's interactions in peer group play. We examined the degree to which individual differences in children's behavior orientation and peer contact patterns remained stable over time through the longitudinal observation.

METHOD

Subjects

Subjects of Cohort 1 were about twenty five children from 3 age groups starting at age 3 at a day nursery school in a large city of Japan (Table 1). Subjects of Cohort 1 were observed continually for one year period. The majority of children came from middle-class families.

Children of 4 and 3 years old who were participated in the first year of the project as subjects of Cohort 1 were followed subsequently for one and two years later respectively. Subjects of the observation at 1994 were named Cohort 2 and subjects at 1995 were named Cohort 3 (Fig. 1).

Data Collection Procedures

Two observers video-taped children's social play during their regular day care hours in each age group's classroom and at play ground of the nursery school.

We observed peer interactive episodes of their group play once or twice per week for each age-group.

Observations were made of peer interaction (a round of at least two behaviors

Table 1 Number of Subjects

| | 3-years old | 4-years old | 5-years old |
|---|-------------|-------------|-------------|
| N | 25 | 25 | 26 |

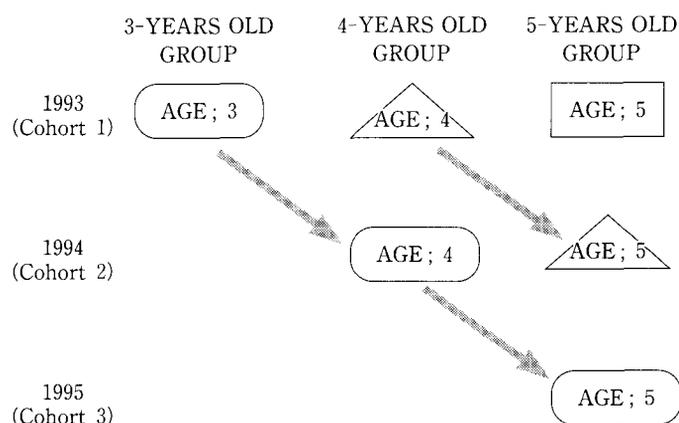


Figure 1. Schedule of Observation

by at least two children relating to the same object, activity or subject) and of the person with whom the interaction occurred.

We observed peer routines and peer interactions based on the principle of the participatory observation, and recorded the interactive episodes in the field notes as well as video recording.

In accordance with Corsaro's definition (1985), interactive episodes are defined as those sequences of behavior which begin with acknowledged presence of two or more interactants in an ecological area and the overt attempt(s) to arrive at a shared meaning of ongoing or emerging activity. Episodes end with physical movement of interactants from the area which results in the termination of the originally initiated activity.

During three years observation periods, about 300 interactive episodes, all video-recorded, were gathered.

Transcripts containing the children's actions, utterances, and the objects used in their play were prepared from the video-tapes by two assistants, and the further analysis of the social interaction were carried out.

RESULTS and DISCUSSION

In 1993 we observed the peer plays of each age group as Cohort 1 subjects during one year longitudinally in a naturalistic settings, and derived 164 interactive episodes of peer plays. The data of interactive episode were obtained for some interactional analyses.

1. Developmental change of the collaborative play

To describe the extent that children enact play together documenting the continuous flow of collective and interactive play within and between players and play groups, we classified the children's social play under four categories according to the following two criteria.

interconnectedness: The play events of children were not only consistent in sequence of actions and within time but also show an evolution and interconnectedness with one another.

shared knowledge: Participants in the group play shared the world of their playing make-believe reality and their role and rule each other in their collective play.

Interrater reliability for the classification between two coders was .72.

Type 1: not-sharing the rule and role/lack of collaborative play, i.e. parallel play

Type 2: partly sharing the rule and role/partly collaborative play

Type 3: fully sharing the rule and role/partly collaborative play

Type 4: fully sharing the rule and role/fully collaborative play

Table 2 and Figure 2 show the number of play episodes of each age group at 4 categories. These data generate the following results: From 3 to 4 and 5 years of age, the frequency of parallel play decreased and group play increased. The frequencies of unoccupied and onlooker behaviors decreased, whereas conversations with peers and group-constructive play increased.

It was cleared that the number of Type 4 play increased but the number of Type 3 play decreased at the stage of the last half of 3 years age period comparing with at the stage of the first 6 months of 3 years age from a one year longitudinal observation data (Fig. 3). That is, during the last half of 3 years, children showed tendency

Table 2 Number of Play Episodes at Each of the 4 Categories

| | TYPE 1 | TYPE 2 | TYPE 3 | TYPE 4 |
|-------------|--------|--------|--------|--------|
| 3-years old | 4 | 13 | 24 | 22 |
| 4-years old | 1 | 9 | 9 | 32 |
| 5-years old | 0 | 7 | 6 | 37 |

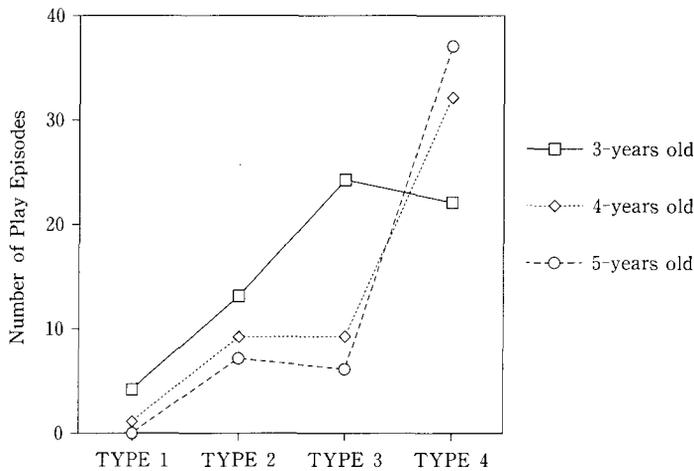


Figure 2. Number of Play Episodes at Each of the 4 Categories

toward shifting to group-construction play.

2. Pattern and structure of peer interaction

(1) Developmental change of interactive behavior in group play

Table 3 and Figure 4 show the degree of verbal and nonverbal behaviors in attempting to maintain control over the communally constructed and shared play activities. Children's interactive activities fell into eight categories.

"A" categories were strategies used at the starting and entry-into the group play.

A1: invite other child (ren) for gathering and attending the ongoing group play

A2: ask about ongoing plans and scenarios of fantasy or peer play

A3: propose or explain about the plans and scenarios of fantasy or peer play to other participant(s)

A4: accept the plan and scenarios of fantasy play which other participant(s) proposed

"B" categories were maintaining and negotiating strategies for the collaborative play which were used during the ongoing peer play

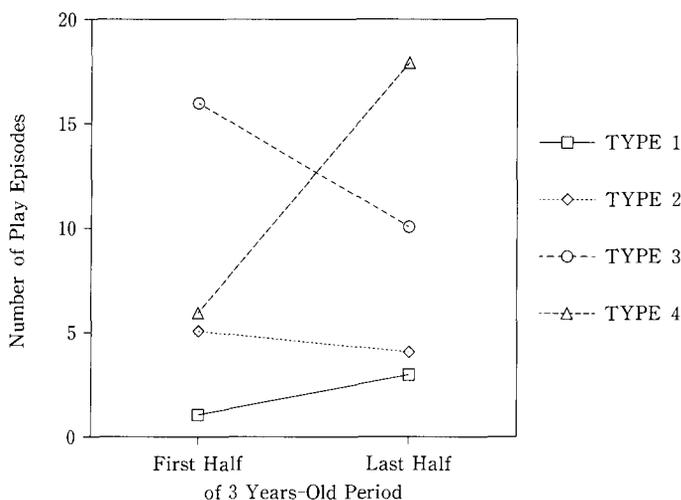


Figure 3. Number of Play Episodes at Each of the 4 Categories (3 years old)

Table 3 Frequency of Interactive Activities at Each of the 8 Categories (%)

| | A1 | A2 | A3 | A4 | B1 | B2 | C | D |
|--------|-----|-----|------|-----|------|------|-----|------|
| AGE: 3 | 1.7 | 3.1 | 22.6 | 6.3 | 40.5 | 10.1 | 3.6 | 11.9 |
| AGE: 4 | 0.6 | 3.5 | 25.2 | 1.7 | 12.7 | 11.2 | 4.3 | 10.8 |
| AGE: 5 | 1.1 | 2.8 | 28.1 | 4.3 | 43.2 | 6.4 | 4.6 | 9.6 |

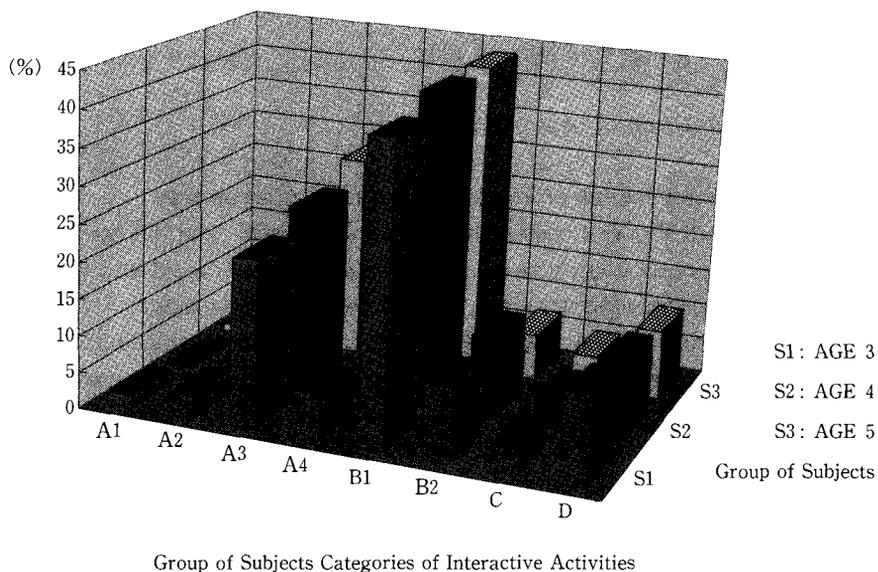


Figure 4. Frequency of Interactive Activities at Each of the 8 Categories

- “B1”: strategies for maintaining their shared play activities
- “B2”: joint other play activity with ongoing play
- “C”: discord the plans and scenarios of ongoing play with other participant(s)
- “D”: not shared play activities

Total numbers of eight categories derived from the observation at each three age groups were 1,273, 1,388, and 1,272 respectively.

Two older groups were used to apply strategies such as A3 and B1 category more than the youngest one, and those results suggested that 4 and 5 years old children utilized the effective strategies to sustain and continue the collaborative play. Behaviors of category A3 are necessary to share the rule and role in the group play with each other, and strategies of B2 are also essential strategies and techniques for maintaining and negotiating the contents of their play involving plans, actions and objects.

(2) Sequential analysis of interactive activities in peer plays

Figure 5-1, 5-2, and 5-3 show the results of the sequential analysis of the eight categorical behavior of each age-group. These results suggested that the commonly and frequently occurred pattern through three age-groups were the direction of from A3 to B1, that is, after children proposed about the plan or scenario of the play activity (A3), they played and adopted a technique for maintaining the scenarios of the peer play which was proposed by the participants.

When the other play activity occurred with ongoing play episode (B2), children of two older age-groups often used the procedures of reestablishing the continuum of within-frame episode and negotiating the content of their main play theme (B2→A3). The youngest one did not appeared to adopt such strategy.

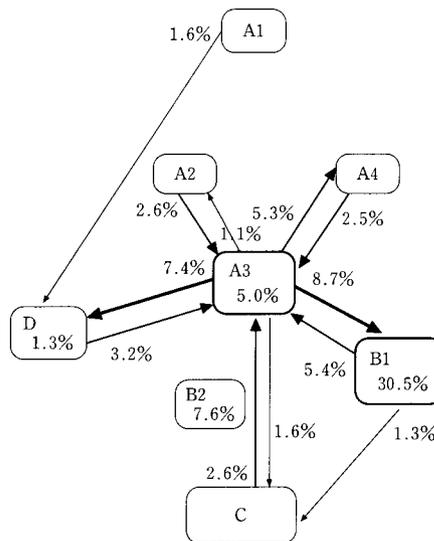


Figure 5-1. Sequential Pattern of Interactive Behaviors (3 years old)

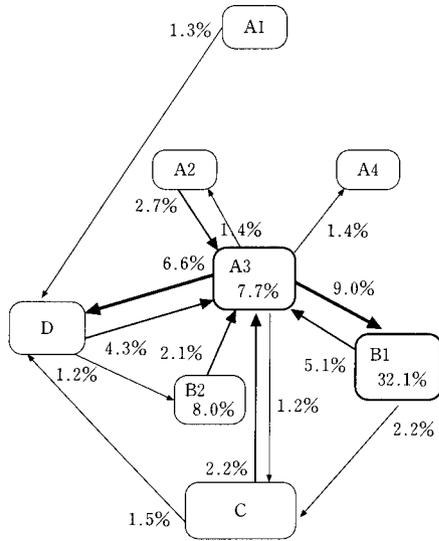


Figure 5-2. Sequential Pattern of Interactive Behaviors (4 years old)

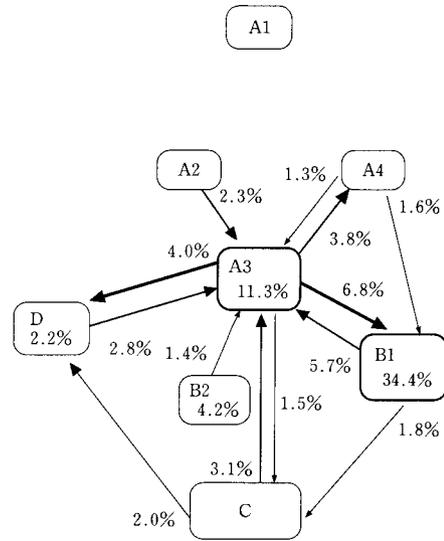


Figure 5-3. Sequential Pattern of Interactive Behaviors (5 years old)

In comparison with two older age groups, children of the youngest group (3 years old) more frequently inclined to shift from A3 to D, i.e., they were easily tend to differ the play scenarios or plans with each other and destroy the collaborative play ongoing play episodes. It might be one of the reasons for the lack of the shared play activities at the youngest group.

(3) Typical processes of peer interactions at each three age groups

1) Case No.009 Constructive play *Making an animal park with woody blocks* (5 years old)

They utilized a system of rules and procedures to sustain and continue collaborative play with implicit pretend rule at times.

At the stage of proposing the plan and scenario, J and R did not show their plan of peer play verbally, but they shared knowledge and procedures of playing activities properly by making reference to their ongoing activities with each other. It seemed that they could infer about the plan or script of play which was intended by the other participant from attending to the other participant's ongoing behavior, since they have shared many experiences of collaborative play with each others for a long time (2 or 3 years).

| <Transcription> | <Interpretation> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <i>proposing plan & scenario</i> J starts to make a circle with wood blocks with no verbal interaction, and then he gathers blocks of animals. | →J: monological activity |
| <i>playing within-frame</i> R begins to make a round circle with J with no verbal reaction. J & R arrange blocks of animals within the circle | →R: monological activity It seems that R understands the plan of the play (making an animal park) which J intended. |
| J: This is a place where animal eat, OK? | →J & R: dialogical activity |
| R: Yes, food is in this box. | J & R effectively share the plan and |
| J: This is a special kind of food. | scenario with each other, and group- |
| R: This food is indispensable to their life. | constructive play progress well. |

2) Case No. 084 Fantasy group play *Travel to the outer space* (4 years old)

M and K participated a fantasy play with a magnetic board.

M and K shared an outline of the play theme which they traveled to the fictitious cosmos with a flying disc in a made-up story, but they did not share the concrete plans and scripts of their fantasy play. So, in order to maintain and negotiate their shared play activities, they confirmed the content of each scenarios and actions of their peer play which were proposed by the participants each other at the individual stage of the interactive processes.

| <Transcription> | <Interpretation> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <i>proposing plan & scenario</i> K: We can travel to any stars by this flying disc (pretending that the hexagonal magnetic button is a flying disc). Which do you like to visit the star of yellow, red or blue? | →K & M: dialogical activity K proposes a fantasy play and M accepted her proposal |
| <i>Playing within-frames</i> M: To the star of blue! K: I can't understand where the star of blue is. So, please tell me another one. M: Well, the red one! K: The red star is filled with sweet candies. Let's travel to the red star. | →K & M: dialogical activity K & M play within same frame. |
| <i>proposing another plan</i> K: (Picking up the magnetic of another animal toy) I'd like to travel with your animal. | K proposes the expanded play activity |
| <i>playing within-frame</i> M: (Picking up a toy giraff) I'd also like to travel. K: I'm afraid this disc won't take two animals. M: Well, (talking to the giraffe) please look after the house in our absence. | K & M enact the shared play |

3) Case No.064 Family role play (3 years old)

T and I continued to play within-frame in a short while, however, the shared

play activities were interrupted in the middle of their role playing. These failures were caused mainly by T missing his cue as the husband in the family role play. They could not persist in seeking to maintain control over their shared play activities.

| <Transcription> | <Interpretation> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>Playing within frame</i> (T ; husband, I ; wife) T : Good night. I : Good night. T : Are you sleepy ? I : Yes, I'm. T : Here is a glass of water. I : Thank you. (She drinks it.) (T went out to take another glass of water.) T : I put it on the floor. I do not drink it and begin to sleep in. T again went out suddenly.</p> | <p>→T & I : dialogical activity They played in a family role playing properly.</p> |
| <p><i>Playing within frame</i> T & I are in the kitchen room and then telephon rings I : My darling, you are wanted on the phone. T : What ? I : You (T) must act the role of a husband. T : I don't understand what you are saying. I : There's a telephon call for you (husband).</p> | <p>→T suddenly enacts the behavior out of context, and at this time the shared play was interrupted.</p> <p>→T forgets his role as husband in the family role play.</p> |

3. Change and stability of the structure of interpersonal relationship

To describe the structure of interpersonal relationships among peers, we analyzed children's reactions towards the others and the persons with whom they interact during group play sessions from video-recording data.

One objective of this analysis was to determine whether there were temporal changes in children's contact patterns and interactional contexts over many years.

We also examined the relationships between the patterns of the interpersonal contacts and the interactional activities in the group play.

Interactive episodes of 3 to 5 years old boys were only focused for analyzing data.

Figure 6-1 shows the structure of the interpersonal relationships among 5 years old boys who were participated as 5 years old subjects at 1993. Play leader : J and sub-leader : S organized the collaborative play activities. For example, they often controlled the block play events by which they invited M to participate to their peer play as the co-worker, since he was good at constructing the block in spite of his low status in the peer group.

The structure of the interpersonal relationship of their peer group was highly inter-connected and organized, and such social relational roles (status and grouping) were consistent during one year observation period. As leaders, J and S often appeared to create situations and new games. The group members learned the cultural rules of status and managed to control this particular play community.

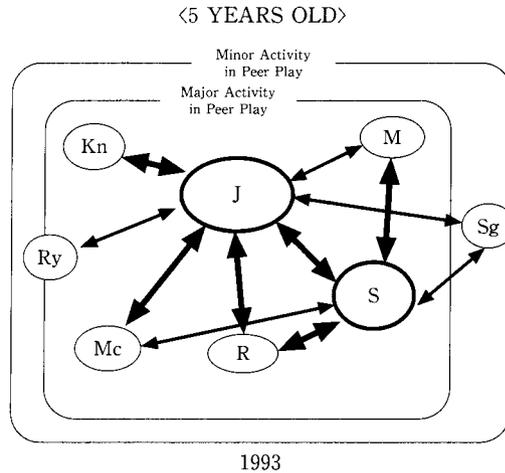


Figure 6-1. Structure of Relationship among Peers (5 years old at 1993)

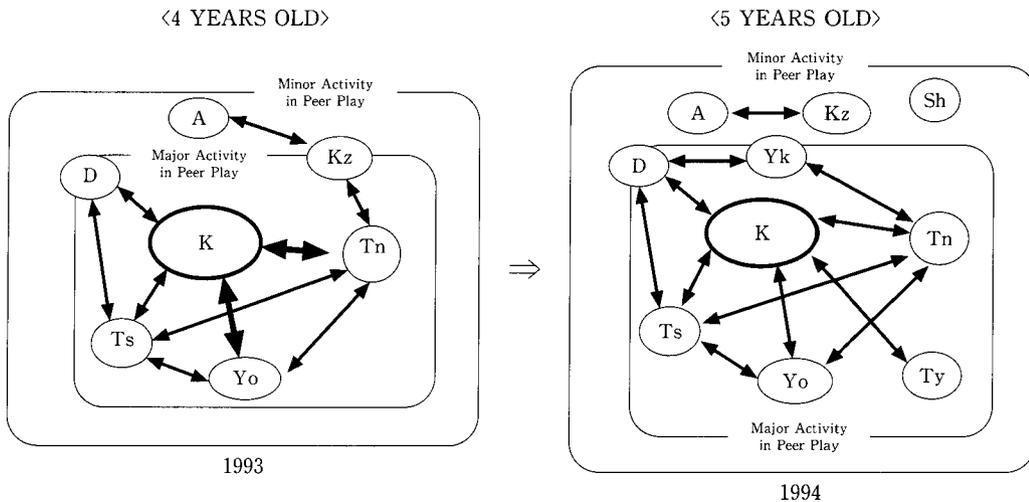


Figure 6-2. Structures of Relationship among Peers (4 years old at 1993 and 1994)

Figure 7 shows the number of play episode of 3 age groups when they were 5 years old. Five years old age group showed in fact the high percentage of Type 4 play more than other two age groups. Their peer plays were constructed with more shared play rules and with collaborative manner.

It was considered that such highly organized structure of peer group characterized children's effective interactive activities in their collaborative play.

Two schematic figures of 1993 and 1994 (Fig. 6-2) are the structures of relationship among peers who were subjects as 4 years old at the initiation of this project. Data of 1994 is the result of children when they were in the 5 years old age group.

K was a boss in this peer group, and he often controlled the group play. However, he could not so effectively organized the peer group because of some failure in his

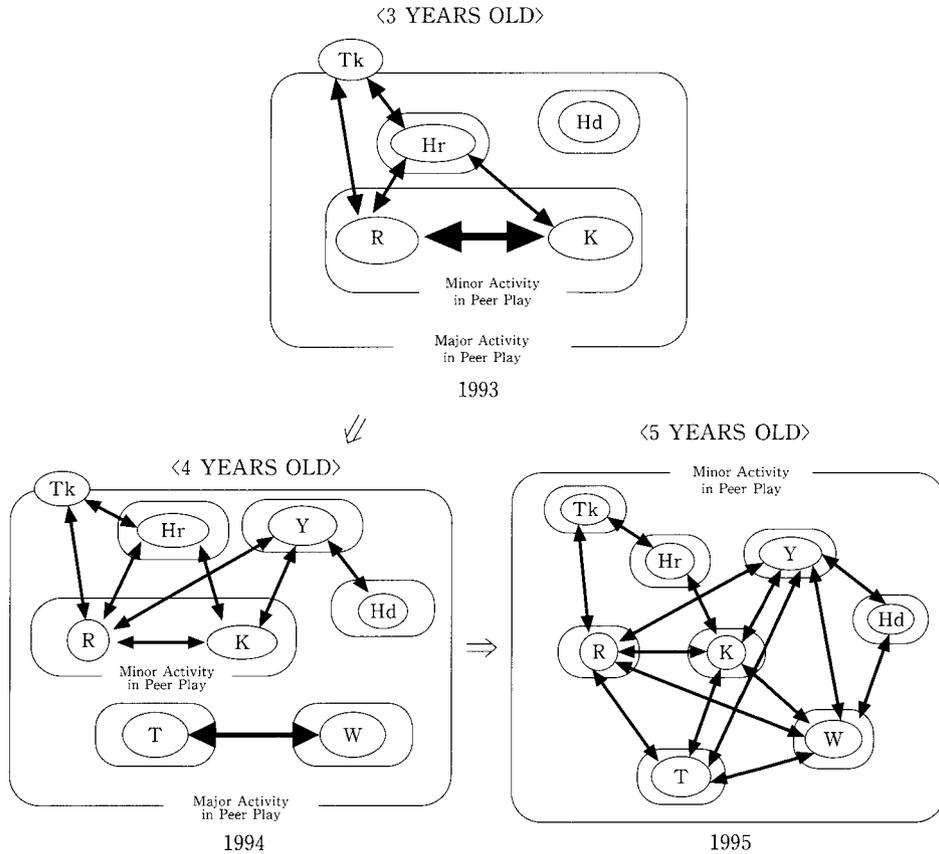


Figure 6-3. Structure of Relationship among Peers (3 years old at 1993 to 1995)

leadership and the absence of a sub-leader who would assist him as his co-worker. The proposal and instructions from K for the group play activity were not shared with other peer members frequently, and from this reason their ineffective constructive interaction were existed in their group play more than the interactive activities of 5 years male group at 1993 (Fig. 6-1). The connectiveness of this peer group became loose, and the structure of group was also diffused at 1994 (Fig. 7). The basic characteristics of the structure of their peer relationship was relatively constant during the two years periods from 1993 to 1994.

Figure 6-3 shows the result of the structure of peer group which was 3 years old subject at initiating the project during three years from 1993 to 1995. In 1993 the shared activities between R and K were occurred in their peer play, and other members also often participated with this collaborative play, for example, block construction play. Their peer group, however, was not highly organized and connected by R and K. As 4 years old group at 1994, their peer activities were also going on by R and K, however, the interactive activities among peers were not closely linked each other as the same results of 1993. The tendency of the structure of peer relationship in this male group was continued at 1995. Highly constructed collaborative group play was

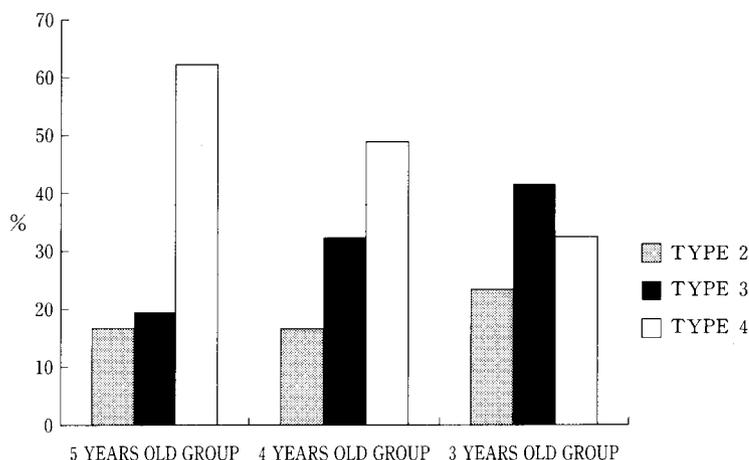


Figure 7. Number of Play Episodes at each Play Type during 5-age Period

not main activity in their peer play (Fig. 7). The lack of the well-organized peer interaction in this group is seemed to be caused by the characteristics of their peer relationship.

It was resulted that the difference and uniqueness of the structure of peer relationship among three 5 years male group was existed through comparing with from Figure 6-1 to Figure 6-3.

CONCLUDING REMARKS

In this study, we aimed at the following points.

1. To describe the nature of the social interactive activity and to clarify the age changes of these social interactive behaviors during the group play activities of the nursery school children from 3 to 5 years old.
2. To find out the correlations or interrelationships between the peer interactive activities and the structures of the friendship, so called the social networks among peers.

For the first objective, we discussed the developmental change of the collaborative play among three age groups by observing the peer interactive episodes of their group play and classifying the children's social play under four categories. We obtained the developmental change among three age groups, that is, 4 and 5 years old children utilized the effective procedures to sustain and continue the collaborative play. It was cleared that two older age groups have used wide variety of effective strategies for maintaining and sharing the role play activities and the script in the episode.

We described the peer group profiles or the social networks of each three age groups and examined the relationships between the structure of children's peer relationships and patterns of the interactional activities in their group play for discussing the above second problem. The social network of five years old age group was highly organized and more interconnected with each other, and such highly organized structure seemed to sustain children's effective peer play. On the contrary, the structures of the

interpersonal relationships of two younger age groups were not so highly organized as compared with the oldest one, and for such reason effective co-constructive or collaborative interaction did not occurred in those groups.

It suggests that the structure of peer play group characterizes the children's interactive activities in their peer play.

REFERENCES

- Asher, S. R. & Coie, J. D. (Eds.) (1990). *Peer rejection in childhood*. Cambridge, MA : Cambridge University Press.
- Corsaro, W. (1985). *Friendship and peer culture in the early years*. Norwood, NJ : Ablex.
- Corsaro, W. (1992). Interpretive reproduction in children's peer cultures. *Social Psychology Quarterly*, 55(2), 160-177.
- Kindermann, T. A. (1995). Distinguishing "Buddies" from "Bystanders": The study of children's development within natural peer contexts. In T. A. Kindermann & J. Valsiner (Eds.) *Development of person-context relations*. Hilldale, NJ : LEA.
- Meckley, A. M. (1995). Studying children's social play through a child cultural approach: Roles, rules, and shared knowledge. *Advances in Early Education and Day Care*, 7, 179-211.
- Montagner, H., Restoin, A., Rodriguez, D., Ullman, V., Viala, M., Laurent, D. & Godard, D. (1988). Social interactions of young children with peers and their modifications in relation to environmental factors. In M. R. A. Michael (Ed.) *Social fabrics of the mind*. Hove, East Sussex : LEA.
- Perret-Clermont, A.-N., Perret, J.-F. & Bell, N. (1991). The social construction of meaning and cognitive activity in elementary school children. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.) *Perspectives on socially shared cognition*. Washington, D. C. : American Psychological Association.
- Piaget, J. (1965). *The moral judgement of the child*. New York : Free Press.