THE FORMATION OF TRIADIC INTERPERSONAL RELATIONSHIP AND NARRATIVE PRODUCTION: RELATIONSHIP TO THE DEVELOPMENTAL PROCESS OF MEANINGS

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ABSTRACT
Triad relationship model of the development of meanings can explain the development of general meanings, but can’t explain that of personal meanings or self-narrative. Thus, the present study introduced a new hypothetical model of the development of meanings: the triadic interpersonal relationship (TIR) model, and examined the relation between the formation of the TIR and narrative production. The TIR represents the relationship among me, you and third party: one can perceive simultaneously the viewpoints of two or more persons. In order to examine this relationship, we conducted two experiments for 34 children (43-74 months). The first experiment was designed to determine the period required for the development of the TIR. The second experiment investigated the child’s ability of narrative production by using the picture arrangement task of WISC-III. And both results of experiments, we examined the relation between the TIR and narrative production.

As a result of these experiments, we understood the following. 1) The TIR is formed at about 70 month of age (the second half of 5 years of age), which confirmed the conclusion of our previous study. 2) The ability of narrative production is also activated after 70 month, i.e., after the TIR is formed. From such results, we considered that there is a relationship between the TIR and narrative production.

Key words. meanings, triadic interpersonal relationship, narrative production, triad relationship model.

PROBLEM AND PURPOSE
1. The traditional model of development of meaning and its problem
Our life is filled with various meanings (Politzer, 1928/1994). There are meanings that everyone can understand, and others that only a particular person can understand. For example, there is a cup on my desk. At least, it has two meanings for me. One is a coffee cup literally. Another is my favorite because it was a gift given to me by my friends. That is, the former is a general meaning and the latter is a personal meaning. Thus, every events and things in our life have various meanings at the same time, and these meanings affect our behavior and consciousness. Therefore, the development of meaning is considered an important research topic.

Generally, prior psychological studies (Tomasello, 1993; Hamada, 1999) used the triad
relationship model to understand the development and acquisition of meanings (see Figure 1): When a child sees a car for the first time, it is not experienced as a "car" by him. Rather, it is a mass of mere steel for him. However, through interactions with others, the child starts to acquire the general meanings of a car, and shares them with adults. For example, when he sees a car and his mother says that "be careful, that's dangerous!", he interprets this as "a car is dangerous". Thus, it is considered that the adult's meaning of the car is shared with the child. In short, children can relate to objects through others [adults], and the general meanings given about the object by adults can be transmitted to children.

While this triad relationship model can explain the development of general meanings, it can not explain the development of personal meanings and the generation of new meanings in which the society and adults have not given to an object. That is, the model can explain the process of how a child acquires general and social meanings developed by the adults and society, but cannot account for the process in which a child produces a new and his own meaning. Therefore, we should establish a new model that can also explain the development of personal meaning.

2. An alternative model for development of meanings

How does a model explain the emergence of new and personal meanings? Referring to the concepts of Engeström (Engeström, 1987) and Bateson (Bateson, 1972) on the emergence of new learning forms, we proposed the triad interpersonal relationship model (Kato, 2003). This model contains two adults or more who give a different meanings about the same object (Figure 2). When the child matures and can perceive simultaneously the viewpoints of two or more persons, he will feel a contradiction and conflict by receiving two or more different meanings. For instance, if we use the same example of the car, on one hand, the mother might say, "the car is dangerous" (in other words, her statement
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Figure 2. The triadic interpersonal relationship model

generates a sense of unpleasantness). On the other hand, the father might say, "it is a pretty car" (in other words, his statement generates a sense of pleasantness). At that stage, the child has two conflicting descriptions of the car; i.e., the car is bad and good at the same time. When the child can comprehend the viewpoints of two or more individuals simultaneously, the car might have another new meaning, for example, "attractive", that does equate with the meaning of pleasant or unpleasant, and the new meaning affect his behavior and attitude.

In kindergarten, children frequently face similar contradicting situations. For instance, when you are praised by the teacher in front of your friends, it is considered the praise relates to the relation between three people: "teacher-you (yourself)-friend". For the relation between you and teacher, the praise would have a positive meaning; simply, "I'm glad". However, with regard to the relation between you and a friend, the praise does not necessarily have a positive meaning, but rather often has a negative meaning, "I might be viewed as an unpleasant fellow by friends because I am patronized by the teacher". Based on this analysis, by being able to take the viewpoints of two or more persons, the same event could have two or more contradicting meanings for the child concerned. Under such a contradicting situation, the child does not receive the meanings passively from others but is rather forced to actively select a new meaning among the various meanings provided to him by others or create a new meaning. For example, one child chooses a meaning for the relation between himself and the teacher; he is glad and may incur pique from his friends. Another child chooses a meaning for the relation between himself and the friend, and although he is glad, he might take a cold attitude towards the teacher. Moreover, another child might solve this contradictory situation by taking new choice of joking about it. In a group living, like the kindergarten, it is considered that children meet various contradicting situations and they are not only learning meanings but also creating and acquiring their own new meanings.

To summarize the above, when two or more adults convey their views that describe different meanings of one event/object to the same child, they actually help the child to build new personal meanings. Furthermore, if the adult provides a viewpoint different
from that of the child, he should be able to perceive the viewpoints of two or more other individuals; the third party’s viewpoint. We call this relationship the triadic interpersonal relationship (Hereafter, it is abbreviated as TIR) model, and define it abstractly as a relationship among me, you, and the third party. Various situations begin to appear to the child as contradictory based on the formation of this TIR in the child, and this contradiction acts as a drive for the emergence and development of new or personal meanings.

Figure 3 and 4 illustrate the development of meaning based on this model.

Figure 3 shows a unit of analysis that describes the emergence of personal meanings: the child starts to perceive the viewpoints of two or more individuals that give different meaning to the same object/event, then the object/event has a contradictory meaning for the child, leading to the creation of a conflict. Under such situation, new and personal meanings emerge based on the child’s active reactions (select, create and narrate). Figure 4 also illustrates the developmental process of meaning of the situation shown in Figure 3.

Our TIR model can adequately account for the developmental process of meaning; because it can explain both aspects of that process: the acquisition of general meaning and

![Figure 3. A model for analysis of creation of personal meaning](image)

![Figure 4. The developmental process of meaning](image)
3. Purpose

The first part of the present study was designed to determine the period required for the development of the TIR by using a double-check protocol. A previous study (Kato, 2003) indicated that the TIR is formed within about 70 months (5 years and 8 months). Subsequently, to confirm the approval period of the TIR, the number of participants is increased and the time required for the development of the TIR in the child is reexamined.

The second part of the study was to determine the relation between TIR and narrative production. When two persons provide a different or contradictory meaning about the same object/event, the child is placed in two separate relations. However, the child does not experience these relations separately, but rather experiences them as a single scene. For example, when the child is praised by the teacher in front of his friends, in fact, he is placed in two relations: teacher and himself, friend and himself. At a certain stage, the child becomes capable of integrating these relations, experience as a single scene (for example, shameful scene). Similarly, the ability to integrate two or more meanings and relations is termed narrative production in psychology. Therefore, we think that the formation of the TIR is related to narrative production, and thus we examined the relation between TIR and narrative production.

METHODS

Participants: The study subjects were 34 children. Using 70 months as a cutoff value, we divided the children into the young group (n=10, age; 43–69 months, 5 boys) and old group (n=24, 70–79 months, 12 boys).

Procedure: This study was composed of two experiments and all children participated in both experiments. The first experiment was designed to investigate the formation of the TIR. In this experiment, children were shown two pictures; one was a scene of a child praised by the teacher (Figure 5), the other was a picture of a child scolded by the teacher (Figure 6). Each picture had two versions; with and without friends. After presenting the picture one by one, the child was asked by the experimenter, “If you are the child in the pictures, what would be your feelings?”. The response to the question was selected from six types of expression cards (Figure 7). And each type had five pieces. Before starting the actual test, each child underwent a training session with the experimenter.

The second experiment investigated the child’s ability of narrative production. In this experiment, we used the picture arrangement task of WISC-III, the 5th, 6th, and 9th pictures were presented. Each child underwent a training session with the experimenter and was trained on how to select his/her own response. If children made mistakes on two questions, the experiment was stopped. The protocol used in conducting these tests was based on that of WISC-III.

RESULTS

Experiment 1: Age of emergence of TIR (triadic interpersonal relationship)

We investigated the formation of TIR by examining whether the child changed or not the expression cards used to express his feelings in the presence or absence of friends in the
Figure 5. A scene that child is praised by the teacher.

Figure 6. A scene that child is scolded by the teacher.

Figure 7. Expression cards

pictures. The development of TIR was judged by the following two criteria. 1) The type and number of pieces of expression cards changed based on the presence or absence of friends in the pictures (Figure 8). 2) When the cards were changed, the experimenter asked the child for the reason of such change, and child's answer to the question included references to the presence of a third party (friends); for example, “Because my friends look at us”. We considered the TIR was formed when the child fulfilled these two criteria and even when passed one picture among the two. On the other hand, when the child failed in both pictures, we considered that the TIR has not yet emerged. Similarly, when the child did not pass any of the above tasks, we judged that child as still unable to produce narratives, but can do that when she/he performed one task successfully.

We have previously reported that the TIR is formed at about 70 months of age (Kato,
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No friends in the picture  Picture of a child scolded by teacher

Figure 8. Response indicative of emergence of TIR in a 71-month-old child

Table 1. Number and percentages of children who successfully achieved the TIR tasks

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<th></th>
<th>Pass</th>
<th>Failed both</th>
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<tbody>
<tr>
<td>Young group</td>
<td>5 (50%)</td>
<td>5 (50%)</td>
</tr>
<tr>
<td>Old group</td>
<td>24 (100%)</td>
<td>0 (0%)</td>
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To confirm this finding, we divided children into two groups: the young group (mean age, 57.4 months; range, 48-69 months) and old group (73.8 months, 70-79 months).

The results showed only five of the ten young children passed this task, while all children of the old group passed this task. Furthermore, children with formation of the TIR increased with age. Statistical analysis using the exact test indicated that the number of children who have passed this task was significantly higher in the old group than the young group (p=0.0009). These results indicate that the formation of the TIR is complete by 70 months of age, which confirm the results of our previous study (Kato, 2003).

Experiment 2: Emergence of narrative production

When does the child become capable of producing narrative and does this relate to the ability of perceiving the viewpoint of a third party; i.e., the formation of the TIR? In order to examine these issues, we divided children into two groups in a manner similar to that used in Experiment 1, and compared the results of picture arrangement tasks in both groups.

The results showed that only five of ten children of the young group passed the task whereas 22 out of the 24 children of the old group did, indicating that the percentage of children who can produce narratives increases with age. Statistical analysis using the exact test showed that the difference between the groups was significant (p=0.0138).

Table 2. Frequencies and percentages of success of picture arrangement task by age

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<tr>
<th></th>
<th>Pass</th>
<th>Fail all tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young group</td>
<td>5 (50%)</td>
<td>5 (50%)</td>
</tr>
<tr>
<td>Old group</td>
<td>22 (92%)</td>
<td>2 (8%)</td>
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These results indicate that narrative production occurs in childhood at about 70 months of age and that the ability for narrative production occurs almost at the same time of TIR formation.

DISCUSSION
In this study, we introduce a new hypothetical model to account for the development of meanings, with a special focus on the aspect of personal and new meanings. We also examined the relationship between the TIR and the ability of narrative production since it is thought that the ability of narrative production is related to the generation of personal and new meaning. Thus we double-checked about the time of TIR formation and examined whether there is a difference in the child’s ability of narrative production before and after the TIR formation and examined whether the formation of the TIR is related to the ability of narrative production by conducting two experiments.

The major findings of the present study were the following. 1) The TIR is formed at about 70 months of age (the second half of 5 years of age), which confirmed our previous conclusion (Kato, 2003). 2) The ability of narrative production is also activated after 70 months, i.e., after the TIR is formed. These results suggest of a relationship between the TIR and narrative production. Interestingly, the age of 70 months also corresponds to the period of formation of autobiographical memory, which is based on narrative structure (Nelson & Fivush, 2004), suggesting that various functions related to self development occur at this age.

In conclusion, we have demonstrated in the present study that the formation of the TIR and activation of narrative production occurs at almost the same time in children at the age of 70 months. However, our results do not allow any conclusion regarding the causal relationship between the TIR and the narrative production; i.e., whether the TIR is involved in the activation of narrative production during childhood, or whether the two processes are unrelated. Further studies are needed to explore these issues in child development.

REFERENCES