

# The Role of Imitation in Early Sharing of Meaning

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We investigated how imitation contributes to the acquisition of sharing of non-literal meaning in the emergence and in the early development of social pretend play.

Children develop their competence through interaction with their socio-cultural surroundings. Social environment consists of the system of meaning, with symbolic or non-literal meaning in its central part. The acquisition of a system of meaning is accomplished by the transmission of the knowledge from their previous generation as well as from their peers. The first step in this life-long process is the acquisition of symbolic function.

The first sign of the acquisition of symbolic or non-literal meaning emerges in children at the beginning of the second year as deferred imitation of daily life behavior of others or of themselves (McCune-Nicolich, 1981; Hoshi et al., 1989). The typical one is shown in individual symbolic play. For example, a child enacts in a play as if he/she were sleeping, knowing that it is not the time to go to bed and that he/she is not sleepy. This pretend action of sleeping is the display of his/her representation. However, children at this age don't communicate with peers in fictive world, though they interact vividly with one another in dealing with objects and actions of here and now. It is in the latter half of the second year of life that they begin to engage in interactions with peers where non-literal meanings are shared (Brenner & Mueller, 1982). This is typically shown in social pretend play, as Howes (1992) described. At the very first stage of this sharing of symbolic meanings, how do children become capable to understand pretense of other children, react to it and exchange this behavior with others?

One of the major factors which contribute to sharing of meaning in interaction is imitation.

Imitation is known to be one of the first means of peer communication. Eckerman (1993) argued that imitation was "an excellent all-purpose strategy for responding in a coordinated way", and the first coordination between two children was elicited by reciprocal imitation. Brenner & Mueller (1982), who made a "dictionary" of first activities of sharing of meaning among 12-16 months-old and 17-22 months-old children, found that the frequency of imitation increased greatly during this period. Musatti (1983) observed interaction of children of 18-26 months old, and revealed that interaction began with a proposal by a child to another, followed by an imitative exchange, and often elicited emotional empathy to continue the play.

These researches lead us to the following question: how does imitation function in the processes of sharing non-literal meaning in early social pretend play?

To clarify this problem, we tried to analyse episodes of interaction in which sharing of pretense

was done successfully as well as otherwise.

## METHOD

### 1. Subjects

Children of one year-old class in a day-care center were longitudinally observed for 10 months. At the start of the observation, there were eight children between eight and twelve months old (five boys and three girls) in the class. As some children left and some others entered the class during the observation period, the class consisted of twelve children (eight boys and four girls) from 18 to 28 months old at the end of the observation.

As will be explained later, we selected among observed episodes five episodes for analysis. In each episode a pair of children were observed. Only children of less than 21 months old were chosen as subjects for analysis. Children older than 21 months old were treated as partners.

### 2. Method of observation

Observation was carried out once a week, three hours in the morning, in completely natural settings in the subjects' classroom or in the garden. We followed the subjects with video and filmed from the moment when two children came near each other until they separated. When a pretense was observed, its situation and context were noted. We asked teachers, after the observation time, if children had experienced similar models like it previously. We also asked teachers' interpretation of the pretense.

### 3. Method of analysis

Five episodes for analysis were chosen with following criteria. (a) Episodes consist of two children and either of them is less than 21 months old. (b) There is an interaction on the basis of pretend behavior. (c) Behavior of each child was clearly interpreted by observers through films. Episodes chosen began with a pretend behavior of one child, followed by another child's response and interaction between them, and ended with their separation. For each episode, vocalizations, verbalizations, gestures, facial expressions, gazes, motor activities and manipulative activities of each participants, as well as their relationships and situations, were transcribed.

We analyzed the process of interaction in each selected episode. Each behavior of a child was interpreted in relation to that of his partner, his own previous and later behaviors, the flow of the episode and the situation. We also analyzed the process of interaction between the players to see how the first pretense is communicated to another child, how it is shared or failed to be shared, how the sharing changes in the course of the interaction, and how the interaction ends. These interpretations were checked by another observer through videotapes.

## RESULTS OF ANALYSIS

### 1. Analysis of episodes that children failed to share non-literal meaning

The first two examples are the ones in which one child's pretend actions attracted another child but did not reach an interactive pretense. We tried to analyze such cases of failure, by finding for the necessary conditions of sharing.

(1) Showing interest by imitation : Episode 1

Subject: Ren (m, 15 months old)

Partner: Taka (m, 27 months old)

Episode 1. Ren and Taka are seated face to face on the floor. A picturebook is between them.

REN	TAKA
	1 He pretends to pick up a food in the book, pretends to eat it, repeats three times.
2 He looks at Taka, <u>smiles, puts his hand on the next page, moves his fingers over the page, smiles at Taka.</u> (imitation)	
	3 He looks at Ren, points to one picture on the page he touches.
4 He looks at Taka, <u>touches the picture that Taka pointed, opens and closes his hand on it.</u> (imitation)	
	5 He pretends to pick up a food from the page and pretends to eat it, repeats three times.
6 He looks at Taka, laughs at him, <u>touches his own lips with his hand, then strokes them.</u> (imitation)	
	7 He repeats the pretend action of taking and eating five times.
8 He doesn't see Taka, turns pages.	

At the beginning of this episode, Taka showed two pretend actions; taking food in a picturebook and eating it (1). Ren imitated one of these actions incompletely. His behavior revealed that he imitated Taka's action and not his pretended meaning. His gestures of touching the picture and moving his fingers on it did not look like picking up something (2,4). Reacting to Taka's repeated pretend actions, he imitated Taka's eating gesture by touching his lips with his hand and then passed his palm over the lips (6). It was a gesture around the lips, but was different from the action of eating.

We suppose that in a series of interaction, imitative actions of Ren might elicit Taka's repeated gestures of fictive eating, which led both players to focus on actions of picking and eating. It may be interesting to ask why Ren chose to imitate these pretend actions. One possible explanation may be that non-literal gestures that were out of context in real life were strange for Ren and attracted his attention. It means that Ren was somewhat aware of the distinction between what

was real and what was out of real context. Other possibilities are that Taka's actions were perceptually impressive enough to attract attention, and that because Taka's actions were accompanied with eye contact and laughs, Ren shared similar emotion and responded to them.

This example suggests that an imitation that is elicited by interest in a partner's pretend action can be one of the first steps to understanding of other's intended meanings.

(2) Imitation without communicative situation ; Episode 2

Subjects: Taka (m,15 months old), Waka (f,15 months old)

Episode 2 They are at a table, sitting face to face. A teacher gives them bowls, cups and small blocks. She pretends to eat, then leaves for a while.

TAKA	WAKA
1 He takes the empty bowl, pretends to drink from it. Repeats twice.	
3 He looks Waka, <u>pretends to drink from a bowl</u> . (reciprocal imitation)	2 She looks at Taka. <u>She pretends to drink from her cup.</u> (imitation)
4 He takes a block, and pretends to eat it.	
6 He points to her with his finger.	5 She looks at Taka, puts her cup on her mouth, covers it. Then the cup dropps.
8 <u>He pretends to eat the block.</u> (repeat)	7 She does not see Taka. <u>She pretends to drink from the cup.</u> (repeat and imitation)
Then both begin to manipulate the toys separately.	

In this episode, Waka and Taka played in parallel way. After a model had been given by an adult, Waka imitated Taka's pretend action (2). They looked at each other. Exchanges of gazes allowed each of them to get information from his/her partner and to construct his/her behavior. Imitation is a means of assimilating the other's behavior. By imitating the other, each player had the topic of pretending to eat and drink. However, they didn't share the play. Their behaviors were not socially directed. They did not send messages intentionally to each other.

If one defines 'sharing of meaning' as "engaging in interactions with discernible and mutually acknowledged themes" (Brenner & Mueller, 1982), this is a case of transmission of meaning by imitation but not a sharing of pretended meaning.

This example demonstrates that solitary and parallel pretend plays precede social pretend play. The desire to communicate with peers is necessary to share a meaning by imitation.

## 2. Analysis of examples of successful shared pretense

### (1) Episode3

Subject: Taka (m, 15 months old)

Partner: Waka (f,15 months old)

Episode 3. At the end of snack time, in the classroom. Waka is only one left at table and a teacher is beside her. Taka, already finished eating, plays near by.

TAKA	WAKA
2 He looks into Waka's cup, <u>makes a noise with his lips.</u> (imitation)	1 She <u>drinks up a cup of milk</u> , says "all gone" sighes, <u>makes a noise with her lips.</u>
5 He <u>laughs at her.</u> (imitation)	3 She looks at him and <u>makes a noise with her lips.</u> (reciprocal imitation and repetition) 4 She vocalizes, <u>laughs at him.</u>
8 He holds out his hand to receive ti.	6 <u>She pretends to drink from the cup, bending upward.</u> (exaggerated gesture), laughs. 7 She offers the cup to him.
11 He <u>vocalizes "ah-ih"</u> to her. (imitation)	9 She denies to hand it, pretends to drink from <u>the cup, makes a noise with her lips,</u> repeated once more. 10 She <u>vocalizes "ah-tah"</u> to him.
13 He stretches his month to the cup, <u>pretends to drink.</u> He holds the cup, <u>pretends to drink.</u> (imitation)	12 She offers him the cup to his mouth.
16 He refuses to give it to her, <u>pretends to drink.</u> 17 He turns the cup upside down to pretend to spill (milk) from the cup and wipes the floor with his hand.	15 She stretches her hands to take the cup.

We will follow the process in which Taka succeeded in imitating Waka's pretense.

The episode began with a real situation in which Waka drank milk from a cup (1). Then Waka and Taka imitated reciprocally an action of making noise with lips, which led them to share a common topic (2,3). Taka imitated her laughing (5). The exchange of laughter made them share emotion and reinforce their sharing of the topic.

Once sharing of topic and emotion were established, Waka showed a pretended drinking gesture exaggerated by bending upward in drinking (6). This action was clearly distinguished from her previous ones of real drinking, and was effective to inform that it was different from a literal action. As Taka didn't react to her pretense (8), Waka repeated it for stress (9) and offered her cup (12). Taka imitated Waka's pretense (13). He seemed to understand her meaning. He

repeated this behavior. Then he developed his pretense to pretending to spill water from a cup and wipe water with his hand (17).

It is assumed that there are four elements that led these children to share meaning in this example. Imitation plays an important role in two of them.

- (a) Reciprocal imitation of action in reality (making noise with lips) facilitated establishing of common topic .
- (b) Exchange of laughing and vocalization by imitation led the partners to sharing of emotion.
- (c) A pretend behavior (pretending to drink) can be distinguished by contrast from a behavior in reality (drink milk). Transition from real to fiction by distinct difference of action made it easy to understand the pretense.
- (d) Pretense of familiar or conventional acts are easiest to be shared. As the act of drinking is familiar to both players, it was easy for them to understand its pretended meaning.

(2)Coordination of pretense: Episode 4.

Subjects : Taka(m,17 months old), Waka (f, 17 months old)

Episode 4. Free play time in the morning. In the classroom., children move around.  
An empty mat for sleep is on the floor.

WAKA	TAKA
1 She goes to the mat, <u>lies down on it.</u>	2 He follows her and <u>lies down on the mat</u> face to face with her. (imitation)
3 She <u>closes her eyes, pretends to sleep.</u>	4 He <u>pretends to sleep</u> , (imitation) then says “good night” to a teacher.
5 She looks at him and <u>laughs</u> .	6 Lying, he <u>laughs at her</u> . (response/imitation)
8 She <u>points to him, saying “Nenne!”</u> (sleep), <u>falls down on the mat, closes her eyes and doesn’t move.</u> (pretense with an exaggerated gesture)	7 He turns over, moves.
10 She raises her head and looks at him.	9 He raises his head, looks at her and vocalizes to her.
12 She <u>laughs, falls down and pretends to sleep, without any movement.</u> (reciprocal imitation/ repetition)	11 He <u>falls down on the mat, pretends to sleep without movement</u> , looks at her and vocalizes at her. (imitation)
	13 He gets up and goes out.

Once shared pretense is established, players collaborated to elaborate, modify or regulate their intentions to continue a sequence of pretend play. We'll see in this episode how children regulated their meanings with each other.

At first Taka imitated Waka's action (2), which followed reciprocal imitation of sleeping. Waka pretended to sleep (3). Taka imitated it immediately, showing that he understood the meaning of her pretense (4). They laughed together and shared their emotion(5,6).

In pretense, Taka turned over and moved (7). Waka pointed to him, saying "go to bed", pretended to fall down on the mat and didn't move (8). It is a demonstration of her way of elaboration. One can estimate that her image of pretending to sleep is not only lying down and closing her eyes but also keeping immobile. As she was not satisfied with Taka turning over, she asked for him to modify his pretense "correctly".

Taka called her and imitated her action (11). With this imitative act he informed her that he accepted her proposal and modified his behavior. Waka laughed at him and repeated her action or imitated reciprocally (12), which means a response as well as an agreement to him.

Four elements that we found in episode 3 are also present in this example; (a)reciprocal imitation which led both players to share a common topic, (b)sharing of emotion by laughing, (c)distinction of pretend action from literal action by exaggeration and (d)familiarity of pretend behavior to children.

What is new in this episode is that imitation is used in regulation of sharing. The difference between an imitative behavior and the imitated behavior gives evident of non-sharing of meanings that each player has in mind, leading both to regulate each other's action/response. When their intentions are regulated, they showed the shared behavior to the other by imitation.

### (3)Imitation in exchange of complementary roles : Episode 5

Subject: Nana (f, 20 months old)

Partner: Sono (f, 21 months old)

At first, Sono and Nana played complementary roles. Sono pretended to pick up something from the floor and offer it to Nana. Nana received it (1-4). Their exchanges were repeated several times.

Then, after a while, Nana imitated Sono and pretended to pick up something and to give it to her. But she confused her role. In enacting an action of offering, she verbalized as a receiver in saying "give me" (5). Sono did not react to Nana's change of role. She repeated her previous role (6). She continued being a giver and Nana continue to be a receiver (7).

Nana tried again to imitate Sono. She pretended to pick up something and to give it to Sono(11). To continue their relation, their roles should have been changed. But Sono did not adapt to it. She repeated her action of offering (12). That is, each player gave something to the other and there was no recipient of the action. They could no more play complementary roles. Sono's actions became ambiguous and she was bored of the play.

Episode 5. Play time in the morning. Children are playing in their classroom and on the terrace.

NANA	SONO
2 She pretends to take it by touching Sono's fists. (receive)  4 She pretends to grasp something out from Sono's hands. (repetition/receive)	1 She pretends to pick up something on the floor with both hands and runs to Nana to give her. (offer)  3 She pretends to scoop again and stretches her hand to Nana. (repetition/offer)
They repeat this interaction several times. Then Sono leaves. A few minutes later, Sono comes back.	
5 She <u>pretends to pick up something on the floor.</u> (imitation/offer) <u>then shows her fists to Sono.</u> saying " <u>Chohdai</u> (give me)".(receive)  7 She pretends to receive what Sono gives her. (receive)  9 She pretends to take something from Sono. (receive)  11 <u>She pretends to take something from the railing with her hands and stretches them to Sono.</u> (imitation/repetition/offer)  13 She pretends to pick up and give something to Sono. (imitation/repetition/offer)	6 <u>She pretends to pick up something from a railing of terrace with her fingers and give it to Nana.</u> saying " <u>Hai</u> (here you are)", then pretends to sweep her hands. (repetition/offer)  8 She pretends to take something from the railing and give it to Nana, saying " <u>Dohzo</u> (please)". (offer)  10 She laughs, touches Nana's hand, say " <u>Dohzo</u> ". (offer)  12 <u>She stretches her hands to Nana, touches her, says "<u>Dohzo</u>", and laughs.</u> (repetition/offer)  17 A teacher comes and she goes with her.

Pretend play of giving and receiving is seen early in social pretend play. In relation to giving and receiving, the coordination between two players is relatively easy to be established, because one asks his partner for his response, and the complementary roles are easily shared by children. Imitation, on the other hand, demands two players to take the same role. Imitation requires the imitatee to change of his/her role, if the play is to continue. Therefore, imitation, when involved in a complementary relation, causes confusion of roles when the imitee does not adapt to this change. In other words, even if an imitation is generally effective to share a meaning in early social pretend play, it demands a child more elaborated competence of coordinating himself to his partner when it is combined with complementary roles.



## DISCUSSION

When child A plays a pretend act, in what conditions is his partner B aware that it is a pretense? In other words, what kind of interaction can convey the intended meaning of pretense from one child to another?

The following conditions are needed for such interaction.

- (a) As a basis for sharing meaning, two players share playful emotion and have joint attention on a common topic.
- (b) A's pretend act is familiar and conventional to the partner.
- (c) A's pretend act contains marked signs of non-literalness.
- (d) Partner B has a certain level of competence of sensitivity to the signs of non-literalness, and understanding or expressing pretense.

When B is sufficiently competent to understand a familiar pretend behavior and to produce it, condition (c) is not always necessary. But when he is at the beginning of understanding it, marked signs of differences from a daily life action (c) is effective to facilitate the understanding of pretense. Imitation is concerned with all these conditions.

The function of imitation observed can be summerized as follows.

- (i-a) to convey knowledge of one child to others
- (i-b) to focus on some topics and help to share a common topic and emotion
- (i-c) to make clear differences of meanings among players
- (i-d) to express agreement to a partner
- (i-e) to modify or correct others' pretense

We should not forget the extent which imitation contribute to a child's acquisition of pretending competence before he/she begins social pretend play. First pretend behaviors, which appear among children before twelve months old, are deferred imitations of familiar actions of others or of himself/herself, such as eating and drinking. In second year of life he/she often imitates others' impressive actions such as tapping hands or making noises, allowing him/her to share emotions (Maisonnet, et. al. 1983). He/She sometimes imitates strange pretend actions without understanding their non-literalness. These imitations prepare for acquisition of competence of symbolic function.

Reciprocal imitation also plays an important role. Veneziano (1989) found, in early vocal exchange between mother and child, that reciprocal imitation leads partners to focus their attention to a common element in their interaction and establish a ground for sharing.

In our observation we also found that repeating one's own act also functioned to convey, reinforce or regulate pretense. It would be useful to discuss on functions of imitation combined with repetition at this point.

We observed several functions of repetition of one's own behavior.

- (r-a) It serves to stress an act and attract attention to it.
- (r-b) It serves to elaborate or modify one's own behavior.
- (r-c) It serves to make a clear distinction of a pretend act from previous ones.

(r-d) It serves to ritualize or formalize a behavior.

(r-e) It serves to put an act in a playful context and reinforce its playfulness.

Function (r-a) and (r-e) are effective to elicit partner's imitative reaction. Functions (r-b) and (r-c) can lead partner to become aware of the differences between real and fiction. When function (i-c) of imitation (that is, making clear differences of meanings among players) is accompanied with functions (r-b) or (r-c), it is possible for players to regulate their meanings and to succeed in a common pretend meaning.

Imitation and repetition have the same function; the reproduction of behavior. Our analysis of several episodes revealed that the reproduction of behavior has various functions in the learning processes and in communication among peers. In studies of development of sharing of meaning, more attention should be paid on the function of reproduction of one's own behavior and of others' behavior.

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