



Title	A theory of Dekigoto : Reconsideration of Developmental Origin of Triad Interactions and Understanding Pretence in Others
Author(s)	NAKANO, Shigeru
Citation	乳幼児発達臨床センター年報, 26, 79-93
Issue Date	2004-02
Doc URL	http://hdl.handle.net/2115/25363
Type	bulletin (article)
File Information	26_P79-93.pdf



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A theory of *Dekigoto*: Reconsideration of Developmental Origin of Triad Interactions and Understanding Pretence in Others

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Abstract

In this essay, the function of event, happening, and incident (*dekigoto* in Japanese) in interpersonal interactions is considered. First, *dekigoto* are classified into two types, *dekigoto* led by natural or accidental causes, and those that are designed deliberately. The latter are further divided into *dekigoto* designed by malign or benign intention. One is *dekigoto* designed to give damage to the victim, and the other is one to elicit laughter and share playfulness with the interactive partner. Playful teasing is a typical example of this benign *dekigoto* intention. Because in playful teasing, mothers engage in pretence teasing, the key task is to establish whether infants can read their mother's playful intentions underlying her teasing acts. Two aspects of social development in infancy are examined. One is that dyad (person-person) interactions may be reconsidered as a person-*dekigoto*-person triad structure. In particular, the developmental transition from primary to secondary intersubjectivity may be better explained from a viewpoint of *dekigoto*. It is also proposed that the origin of understanding mother's teasing actions to be pretence, may be found in infancy, because studies have demonstrated that infants laugh at their mother's teasing behaviour.

Key words: *Dekigoto* (event, happening, incident), Playful teasing, Intersubjectivity, Pretense, Infant

Introduction: What is *Dekigoto* and what is its function?

1. General features of *Dekigoto*.

Phenomena described by terms including: event, happening, incident, occurrence, or affair, commonly mean something that happens suddenly, something that is not planned, or something that occurs beyond our anticipation. These phenomena imply any discrepancy, incongruence, discordance or any change between the present and the *immediate future*. Here, to refer to the general name of these phenomena, I use the Japanese word, *dekigoto*. *Dekigoto* may be classified into two types: One type are unexpected natural phenomena, the other are accidents by human errors or events planned by someone to surprise the target person (Nakano, 1997). *Dekigoto* caused naturally and those caused by humans can bring us both pleasant and unpleasant results. Naturally caused *dekigoto*, for example, like typhoons or earthquakes can create chaos and despair, but they can also leave behind an indescribably beautiful reddish-golden afterglow. Similarly, there are many unpleasant *dekigoto* caused by human acts, for example, traffic accidents, having one's purse stolen by a thief, or being the victim of bullying. Of course,

there are many good experiences that can be brought about by chance such as meeting an old good friend on the street, or winning the lottery. Some *dekgoto* happen beyond our anticipation, but there is another type of *dekgoto* that are created intentionally. In this type of *dekgoto*, behaviours are designed to make the target person surprised or to make them laugh. Furthermore, even the person who planned the trick may occasionally experience *dekgoto* if the victim reacts differently from his/her expectation. For example, shouting "Fire!" in a theatre to play a trick on a friend may result in a chaotic situation beyond the anticipation of the mischievous person.

Dekigoto can provoke a wide variety of surprised reactions, from low level to completely stunning, for the people involved in it. In a moment, surprise can shift into either negative emotion (e.g. fear, anger or shame) or positive emotion (e.g. interest, enjoyment or happiness), depending on the person's appraisal of the consequences. This shift in emotion from surprise to negative or positive may occur identically among people involved in the *dekgoto*, though the intensity of their emotional experience may be different for each person. Thus, one might say that people involved in a *dekgoto* can share both the mutually experienced emotion and their inner state. In other words, in such a situation, the people who are involved believe that others who were involved must have the same feelings and experience as them. In short, they are likely to regard the others as "companions in *dekgoto*". A good example of this companionship was exhibited just after the 9/11 terrorist attack on the World Trade Centre in New York. It was reported that many American people took to the streets in a show of solidarity and strong nationalism.

2. *Dekigoto* deliberately introduced in a playful context.

When *dekgoto* "designed" by someone has occurred as the person expects, feelings experienced by the person and their victim are different. Feelings can range from fun to surprise or shock. This is especially the case, when someone plans a malicious *dekgoto*, and it happens successfully, causing damage to the target person, it may be true that the more shocking the damage to the victim is, the stronger the satisfaction that the malicious person feels. In such cases, both people will not usually try to communicate or share their feelings with the other.

On the other hand, *dekgoto* created deliberately are sometimes used to initiate an interaction with others or to make others laugh. They often take a playful form such as a joke or a prank. In our everyday interpersonal interactions, in our close relationships, many examples of jokey and playful behaviours such as teasing, mocking, or clowning can be observed. This is especially true in parent-child interactions. It has been reported that mothers often introduce playful teasing games into interactions with their infant to make the baby laugh (Nakano, 1997; Nakano & Kanaya, 1993; Reddy, 1991, 2001; Trevarthen 1993b). Peek-a-boo games are another example of playful *dekgoto*. As we will consider closely later, these interactions often include unconventional or odd acts that may surprise infants. It takes effort to communicate so that infants can understand that these actions are based on a playful intention. In General, even though the *dekgoto* is designed from benign intention to share fun with familiar companions, as far as it evokes any degree of surprise from the companions, benign provocateurs must somehow try to

shift the surprise into laughter or amusement. Otherwise, this kind of interpersonal interaction will simply end in an unpleasant or unsatisfied reaction. In fact, it is observed that maternal playful teasing to her baby sometimes fails, causing the baby to cry. However, according to studies that observed interactions with playful teasing games in infancy (Nakano, 1997; Nakano & Kanaya, 1993; Reddy, 1991), it was found that mothers and their infants can share playfulness in a situation where *dekigoto* has been deliberately introduced. This suggests that perception of an other's intention underlining mischievous actions may begin during infancy.

Therefore, one of the basic questions here is how deliberate *dekigoto* in a playful context can be shared among interacting people as a joyful experience, and promote the interaction making it more enjoyable. This is an important issue in "Theories of Intersubjectivity" and can be also be a problem in the "theory of mind".

3. Stability, change, and *dekigoto*.

Generally speaking, all of the phenomena that we encounter in our everyday lives have two latent possibilities, which compete each other; to keep stability or to bring about change. As ever-lasting stability can be monotonous, endless change can also make us anxious and stressed. It goes without saying that we must try to achieve a balance between the two of these possibilities to allow us to function at the optimal level.

However, as one proverb says, "there is nothing permanent except change". We cannot escape from change. Piaget may have realized the fact that we are living in an endlessly changing world, because he proposed that an essential developmental task for children is to cognitively construct invariant features of objects such as "object permanence" or "conservation." Attachment theory also postulated that infants must establish an identified attachment figure(s) as their secure base to support them to explore the endlessly changing and ambiguous world. It is clear that newborn babies have to identify who is their caretaker as soon as they can. They must also learn quickly what and how they can actualise their motivations to elicit their caretaker's nurturance.

Thus, it appears that one of the essential tasks for developing infants and children is to increase stability and reduce ambiguity in their environment by means of finding the invariant features of stability. To complete the task, it may be that even infants have to have latent capability, as their development needs to be able to deal with an eventful world. The ability to cope with instability in the world may vary depending on the interaction between the infant's developmental level and the magnitude of environmental instability. Similarly, coping capacity with *dekigoto* may result in different reactions from agony to fun depending on the interaction between its nature, the developmental level of the coping skill and interpersonal relationships of the people who are involved. For example, when a mother suddenly wears a false moustache and beard, and looks at her child, the child may start to either cry or laugh depending on the intensity of the mother's intrusiveness, the infant's developmental level of coping with such change, and the quality of their mother-child relationship. In this sense, we can say that playful interactions with deliberate *dekigoto* underlie companionship (Bråten, 1998) and intersubjective relationships between interactive partners in a playful collaboration.

These discussions lead us into a further consideration. It may be that developing

children need cultural learning to establish invariance or stability in their world. As all things are inevitably changing along passing time, seeing things as being stable is only a conceptual construct formed with products created by a cultural sense. This means that children have to learn from adults how to overcome instability and ambiguity in this world so that they can learn to achieve a balance.

Therefore, when something disturbs this learned coping ability, it is perceived that *dekgoto* have happened, but living securely in this world means being able to cope with *dekgoto* or having coped with it. Thinking from a different angle, when a mother attempts to evoke *dekgoto* deliberately in order to promote more playful interactions with her child, this may mean that she not only believes in this partly established but still developing ability, but also challenges it. In other words, it implies that the mother knows, at least *can predict*, that her infant can cope with the sudden changes in the ongoing interaction somehow, when she introduces sudden startling actions to her baby as playful teasing.

As we have considered, it can be concluded that the capacity to cope with the inevitable instability or ambiguity in this world must develop in the early stage of our life at some level. In playful interactions with deliberate *dekgoto*, to perceive or understand playful intentions underlining the mother's startling actions, infants have to detect invisible cues that communicate her intentions. However, we can assume safely that infants can read their mother's playful intention using the invisible cues if they enjoy such interactions with their caretaker. As we will see in the next section, dyad interactions are better understood in the context of person-*dekgoto*-person triad interactions.

Dyad interactions consist of triad elements including *dekgoto*: Reconsideration of the developmental process from primary to secondary intersubjectivity.

1. Infant development from dyad to triad interactions.

From the 1970s to the 1980s, many developmental psychologists demonstrated that infants and their parents communicate inter-subjectively and mutually regulate each other. Trevarthen (1978, 1979, 1980) was a pioneer who insisted that newborn infants come to life with the innate ability to share their subjective experiences with others. His theory of primary intersubjectivity or primary sense of shared experience and Stern's theory of affective attunement (Stern, 1985) have led researchers' attention towards emotional co-regulation that include subtle turn taking and co-constructive dialogues between infants and caretakers. As a result of their contribution, today we have rich knowledge about the early development of social competence. This includes findings that show that infants prefer motherese speech from the first month (Fernald, 1992; Pegg, et al., 1992). Three-week-old infants can distinguish their mother's voice by means of its rhythm and intonation, and it seems that these features of structure, rhythm, melody and tempo in infant directed voice and song are similar across different cultures (Kitamura and Burnham, 1998; Cooper and Aslin, 1990; Papousek, Papousek and Symmes, 1991; Thanavisnuth and Luksaneeyanawin, 1998). 'Musicality' of their mother's voice makes the infant's emotional attunement easier (Custodero et al., 2002; Kitamura and Burnham, 1998; Trevarthen and Malloch, 2002). In early caretaker-infant interactions, known as "proto-conversations" (Bateson, 1979), it was observed that infants display remarkable abilities to regulate their

actions to be synchronized and reciprocal with the adult partners' actions. In this sense, infants can be regarded as having the innate ability to direct and influence the pace, intensity, and variety of their mothers' actions. They let their mother know what movements, expressions, and sounds they prefer, through their positive and negative reactions. Then, the caretaker and the infant subtly adjust rhythmically-patterned and dynamically-varied visual, vocal, and gestural behaviours, and share them mutually. In the latter half of the first year, these co-regulated synchronized interactions develop into joint object-oriented exchanges with the caregiver and infant constructing increasingly symmetrical and reciprocal triadic interactions (Fogel and Lyra, 1997).

In these studies, milestones of social development in infancy have been explained as follows. Around 3 months of age, infants become able to show intense interest in face-to-face interaction with their parent. Around seven or eight months of age, from this dyad interaction with primary intersubjectivity, infants transit to the triad interaction with secondary intersubjectivity. This consists of sharing objects with others (Fig. 1: Trevarthen and Hubery, 1978; Trevarthen, 1979). Then, at around 9 months, infants show the ability to understand communicative gestures (Bates, Benigni, Bretherton, Camaioni & Volterra, 1979), and they begin to use their mother's emotional display as a social reference to disambiguate novel situations in the environment (Campos and Stenberg, 1980). These new abilities have been considered as indicating that infants begin to view their mother as someone who shares the same views as them. They understand and anticipate her behaviour. Thus, it is suggested that these abilities allow infants to understand others as intentional agents, that is, they begin to develop a "theory of

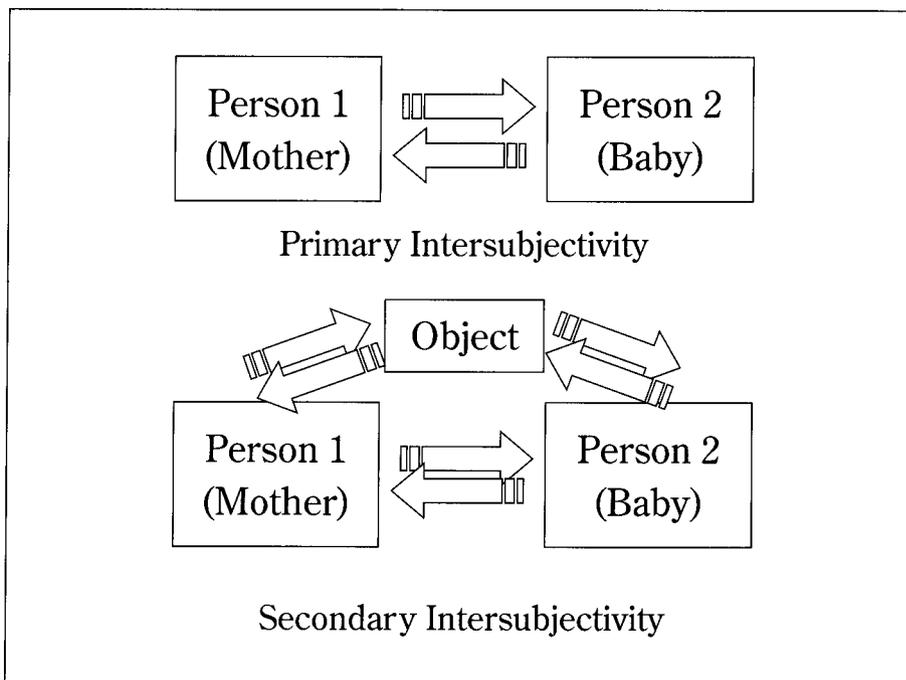


Fig. 1: Primary Intersubjectivity and Secondary Intersubjectivity (Trevarthen & Hubery, 1978)

mind" (Carpenter, Nagell & Tomasello, 1998; Tomasello, 1995).

2. Reconsideration of the development of interpersonal relationships from a viewpoint of "dekgoto."

While, as we have seen, social development in infancy has been depicted as lively and exact, little attention has been given to the function of *dekgoto* in the development of interpersonal relationships. As a result, many questions are still unanswered. For example, what arouses or evokes our emotions? What evokes laughter or smiles in humans? In what situation does the infant use caretakers' emotional display to disambiguate novel situations? After achievement of co-regulation and synchronization, what happens in interactions between a mother and her infant? A possible answer to these questions is *dekgoto*.

Dekigoto is a sudden gap appearing between the previous and present state of things, makes us startled and intensifies our emotional reactions. *Dekigoto*, whether it happens by natural phenomenon or someone's intentions, interrupts the expectation that we have based on social custom or common sense. When an infant encounters a novel object or an ambiguous situation, that is, when the infant has experienced *dekgoto*, he/she will refer to the caretakers' emotional display to make sense of what has happened. As we will see later, mothers and infants may also introduce playful *dekgoto* deliberately to de-synchronize the ongoing interaction when they achieve a certain level of co-regulation and synchronization.

In mother-infant interactions with playful teasing, it is observed that mothers often to employ unconventional, exaggerated, and odd facial, verbal, or postural expressions and actions to be humorous, jokey, mocking, comical, or clowning. They also accompany these exaggerated expressions with positive emotional expressions such as smiling and laughing that is directed towards the baby. At the same time, they combine interactive teasing with violating the infants' expectation (Nakano, 1997, 2001; Nakano & Kanaya, 1993). However, these interactions are used to make their child laugh, and to share playfulness with the child, and to make the ongoing interaction more funny. To do this, mothers deceive (e.g. show off a toy, then hide it and suddenly shout "it's disappeared!"), mock (e.g. lure the baby's attention with an attractive toy, then when the baby reaches for the toy, holding it out of reach), or carry out a sudden unexpected movement (e.g. just after a rhythmical hand movement towards the baby, suddenly changing the movement to be out of the rhythm). Reddy, Williams, and Vaughan (2001) observed teasing by parents including the playful offer and withdrawal of objects, making deliberate mistakes, blocking or obstructing the child's acts, and jumping out at the child. These actions were constructed by clear or subtle discrepancy, discontinuity, or by a shift from the previous context in order to emotionally arouse babies. These studies found that the maternal attempts were a successful way to share enjoyment with the baby and develop their interactions to be more playful.

Based on the observation of mothers' playful teasing to their babies, Nakano coined the term "incident affinity" to refer the human natural inclination to accept or create, amusing *dekgoto* (Nakano, 1997). We are likely to accept or create amusing *dekgoto* by means of introducing humour, a joke or a prank in interpersonal interactions, because we have incident affinity. In short, we attempt to create micro and/or macro *dekgoto* to

share enjoyment with familiar companions.

As pointed out before, there is little research on this human faculty in interpersonal interaction. Thus, it remains unknown how *dekigoto* is accepted and what kind of role it plays in developing interpersonal relationships, and further how functions of *dekigoto* contribute to enrich interpersonal interactions that take place during a child's development. However, there are some researches who have indirectly studied functions of *dekigoto*. Several studies used the still face technique (Mayes & Carter, 1990; Muir & Hains, 1993; Toda & Fogel, 1993; Tronick et al., 1978). During face-to-face interaction, infants reacted to the still face of their mother or a social partner with a significant increase in negative affect expressions, and reduced smiling with increased self-comforting that implies social stress. The infant's reaction to the still face is interpreted as an expression of social expectation by the infant, and the outcome is disruption of positive co-regulation (Hains and Muir, 1996; Tronick, 1989). The "Double video" experiment by Murray and Trevarthen (1985, 1986) also adopted a similar research paradigm to the still face technique. In the experiment, a baby was shown a "non-contingent mother" on a replayed tape directly following the live ongoing interaction on the monitor. The two-month-old babies who participated showed perplexed facial expressions at first, then body movements with eye-aversion during their interaction with the mother on the replayed tape. Finally the infants became distressed as if complaining about the mother's misattunement to his/her actions (Murray and Trevarthen, 1985, 1986). This experiment strikingly demonstrated that by two months of age, a baby could detect whether his/her partner is acting contingently or not. This observation was confirmed as valid by other researchers (Bigelow, MacLean & MacDonald, 1996; Muir & Hains, 1993, Nadel, 1996). In these experiments, infants were not given a chance to regulate the situation to allow them to share with the mother. They were forced to experience the negative affects caused by the violation of their anticipation. These infants' reactions reflected the result of mothers' unpredictable behavior. Thus, methodologies used in those experiments unintentionally gave us examples of *dekigoto* that are created from the malign intention. These results also suggest that caretaker's emotional expressions are indispensable for infants to make sense of *dekigoto*.

The study of infants' social referencing (Campos and Stenberg, 1980) can be regarded as providing another example of *dekigoto*. In this study, infants at around 9 months of age referred to their mother's emotional display as if they were appraising a novel situation and wanted to decrease ambiguity. The results demonstrated that the mother's positive or negative emotional expressions are an essential determinant for infants' appraisal of novel situations. In other words, when *dekigoto* happens and an infant is faced with an ambiguous situation, the mother's positive or negative expression regulates the direction of the infant's behavioural reaction to the situation. This finding also suggests that, in such a situation, the inclination to share an emotional state together is active in both mother and infant. Considered from a different angle therefore, it may be quite possible that we intend to raise *dekigoto* deliberately expecting infants to react with enjoyment and showing playful expressions so that we can communicate our intention to them relying on their social reference skill. Although Campos and Stenberg (1980) observed rather older infants in a context of the person-object-person relationship or secondary intersub-

jectivity (Trevarthen and Hubery, 1978), it has been discussed that young infants already have remarkable abilities to attune their affect, to synchronise their movement, or to co-regulate with their adult partner () in dyadic interactions characterised by primary intersubjectivity (; Stern, 1985; Trevarthen, 1979). Research using the still face and the “double video” techniques has demonstrated that younger infants have social expectations of positive co-regulation with the partner, they appear to be able to refer to their adult partner’s expressions as a cue as to how they should react to sudden *dekigoto* that occurs during their interactions. Therefore, if plotting the infant abilities of affective attunement and social referencing on the same continuum of socio-emotional development, it can be hypothesized that both faculties are commonly required and activated when *dekigoto* has arisen.

More than twenty years ago, there was a dispute between McGhee (1980) and Pien and Rothbart (1980) about what can be considered as a developmental facilitator of laughter. McGhee (1980) argued, from the viewpoint of the Piaget theory of reality assimilation, that the prerequisite condition for laughter is attainment of cognitive congruity. Then, he insisted that, first of all, children should pre-acquire a notion of how “things should be in nature,” to find the discrepant aspect of things. In other words, he claimed that infants cannot show laughter when they look at things with incongruity unless they have developed the formal/conventional notion of them. On the contrary, Pien and Rothbart (1980) showed that even young infants laugh when they see an odd object, and insisted that laughter occurs as a result of the emotional shift from excitement aroused by a broken expectation or surprise, to induce relaxation indicating secure feelings. They disagreed with McGhee (1980) that the required condition for laughter is not the infant s’ attainment of cognitive schema, believing instead that it is a homeostatic condition to relieve their excitement and relax them. They insist that even a four-month-old infant will laugh when shown an odd object. However, their interpretation should be re-considered from the viewpoint of *dekigoto* and intersubjective relations between interacting persons, not from the theory of physiological homeostasis in an individual.

Sroufe and Wunsch (1972) also investigated empirically what type of stimulus (auditory stimulation, intrusive tactile stimulus, social games, and socio-visual events) can elicit laughter from infants aged 4 to 12 months old. In their experiment, a series of *dekigoto* was inserted; for example, socially inappropriate or incongruous acts such as mother waddling like a duck or sucking from the baby bottle. The results demonstrated a developmental shift in the effective elicitors of laughter from provocative physical stimulus to cognitive incongruity. Older infants, especially at 10 to 12 months of age, laughed in response to socio-cognitive stimuli, while younger infants laughed in response to physical stimuli. From these results, they concluded that laughing at more complex events as development progresses may demonstrate the development of positive coping skill to challenge infants on the edge of newly developing capacities (Sroufe & Wunsch, 1972). Thus, their argument suggests that while laughter is regulated by sharp tension and deduction as Pien and Rothbart (1980) insisted, displays or inhibition of laughter depend on developmental sophistication of cognitive ability to assimilate novel experiences as McGhee (1980) believed. Although this interpretation seems to be informative, it is based on the experimental situation in which each condition was presented to each infant

personally, not on natural observations of mother-infant interactions in an everyday context. Thus, their conclusion ignored the fact that laughter is a social emotion.

Therefore, these arguments are an old bottle that needs new wine. McGhee (1980) and Sroufe and Wunsch (1972) it seems, have neglected the clear fact that young infants in the first six months of life show laughter in reaction to their caretaker's laugh-provoking actions. Emotional expressions are not isolated personal activities, but intersubjective events. Caretakers' emotional expressions are indispensable for infants to make sense of *dekigoto* as shown in still face experiments (Mayes & Carter, 1990; Muir & Hains, 1993; Toda & Fogel, 1993; Tronick et al., 1978) and double video experiments (Murray and Trevarthen, 1985, 1986). The physiological theory of laughter proposed by Pien and Rothbart (1980) also seems to disregard the basic fact that both infant and mother have, express and share emotions mutually. As discussed above, in a *dekigoto* situation, mothers express emotions in the same way as their infants, and even infants of a few months of age can attune their affect to the mother's expressed emotions (Stern, 1985). In this sense, infants are not only "affectionate beings" (Sroufe, 1979), but also "intersubjective beings" from birth.

From discussions in this section, we may conclude that many researchers on socio-emotional development in infancy have unintentionally contained *dekigoto* in their study methodologies. However, they have not attended to the function of *dekigoto* in interpersonal interactions. Nevertheless, if we start to explore what makes interaction between a caretaker and an infant to be more developed and enjoyable, what supports the development of intersubjective interactions with synchronized and de-synchronized actions in infancy, or how caretakers promote them, the significance of *dekigoto* will be more recognizable. In fact, from this viewpoint, dyad interactions can be reconsidered as not simply "*dyad*," but "*triad*" relationship consisting of a person-*dekigoto*-person system. In the same way, primary intersubjectivity (Trevarthen, 1979) may also need to be reconsidered from the context of this triad inter-relationship as Fig. 2 shows. It is suggested that the developmental transition from primary to secondary intersubjectivity is achieved by the time infants gradually and directly start to show interest in sharing purpose and interest with familiar companions, that is, engage in joint attention with companions during the second and third quarter of the first year of life (Trevarthen, 1990, 1993a, 1993b; Trevarthen, Aitken, Papoudi, and Robarts, 1998). In short, achievement at secondary intersubjectivity is considered to be complete when infants actively co-ordinate their visual attention to person and object in a system of triadic interactions. However, as shown in Fig. 2, if primary intersubjectivity is assumed to be a triadic interaction system co-ordinating interpersonal interactions and interpolated *dekigoto*, the transition to secondary intersubjectivity will be sketched as a shift in infants' interest in maternal deliberate *dekigoto* to *dekigoto* outside their dyad relationship. Further, this assumption also leads us to an understanding of the origin of pretence considered in the next section.

3. Reconsideration of the developmental origin of understanding other's pretend acts.

As mentioned before, in daily life, we can often observe playful teasing in close relationships between familiar companions. Dunn (1988) observed sibling relationships between toddlers and described many examples of teasing directed at the older sibling.

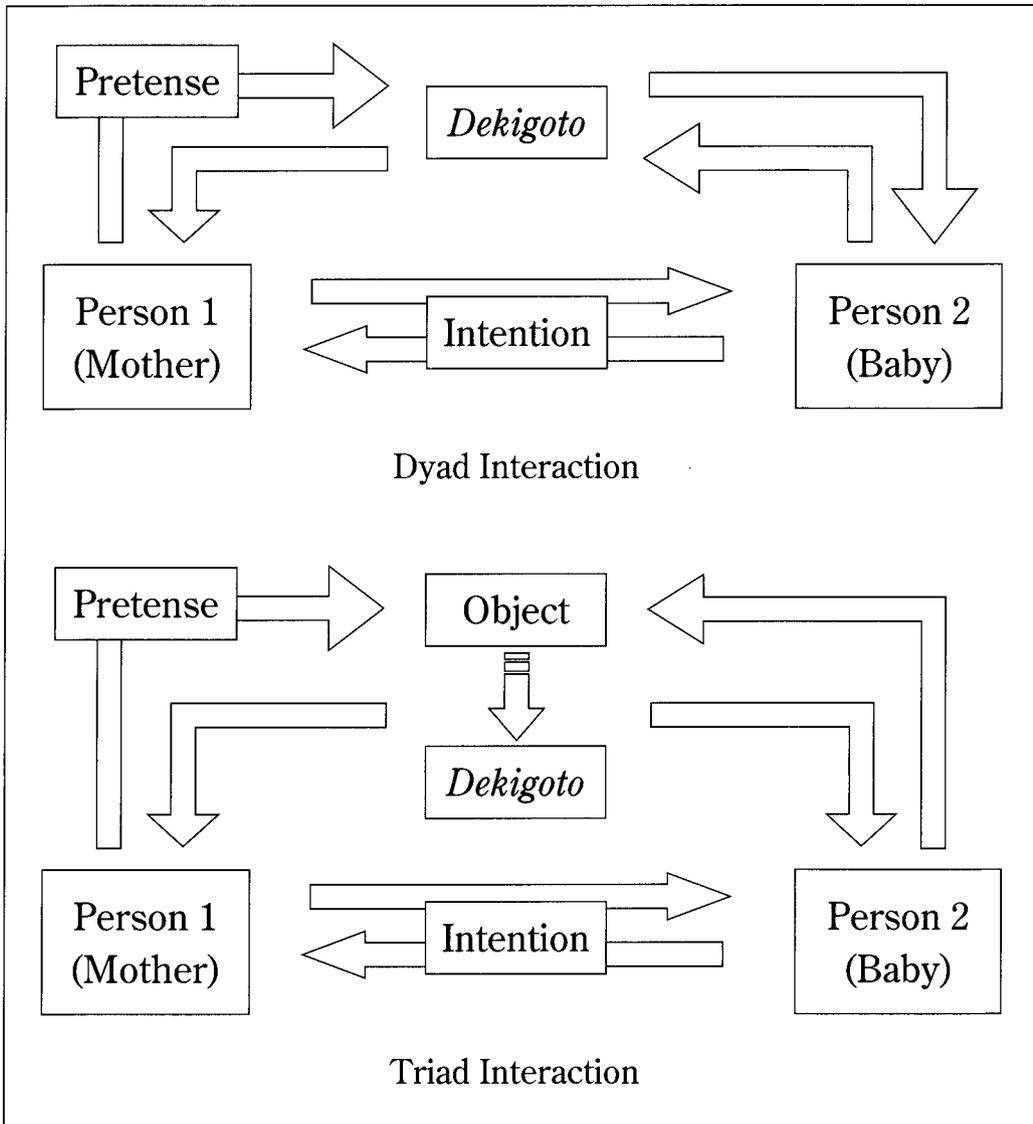


Fig. 2: Dekigoto Interaction.

She concluded that teasing employed by toddlers provided evidence that they could understand their sibling's inner state, and how they could tease the sibling effectively. In maternal playful teasing, on the other hand, unconventional and odd acts with facial, verbal, or postural expressions are often taken as intended to make the child laugh and to share playfulness with the child (Nakano, 1997, 2001; Nakano and Kanaya, 1993). In addition, in such an interaction, it is also often observed in that mothers comically exaggerate their facial and vocal expressions and body movements and repeat them in order to attract the infant's attention and make the infant laugh. Teasing requires a shared knowledge of social meanings, conventions, and agreements that may be playfully violat-

ed (Reddy et al., 2001). Thus, it is an essential task for infants to detect their mother's good, humorous, and jokey intention underlining her mischievous actions, in order for them to keep their social expectations of a positive relationship with the mother. Moreover, such teasing behaviour is carried out through pretence. In playful teasing, mothers pretend to tease their child and try to amuse him/her. To understand this infants have to have the ability both to perceive those behaviours as pretence and to detect the caretaker's invisible play-intention underlining their pretence actions. If infants can react with laughter to such maternal attempts, this would suggest that they can perceive their mother's behaviour as not literal but pretence, and in addition can also read her latent intention.

Dyssanayake (2002) characterised parent-infant interactions as a "multimedia duet" that incorporates synchrony and alternation of their actions. This duet sequence was considered to reflect the infant's innate sensitivity to temporal sequence and pattern in interactions with the mother, and to show dynamically varied, temporally patterned processes. In such duet sequences, pretence may be first experienced by infants through subtle "unnatural" caretaker's actions in or just after their completion of action synchrony. Then, Dyssanayake argued that the sequences develop into the shape of a nonverbal "emotional narrative" which unfolds in time with imaginary representations -eventually leading to fiction, poetry, and related arts. Following her view, interpersonal interactions are regarded as the duet sequence intermittently incorporated with synchrony and de-synchrony. Subtle "unnatural" caretaker's actions, as mentioned in the former chapter, may be perceived as *dekigoto*. Thus, *dekigoto* may orientate and facilitate ongoing interactions towards de-synchrony after completion of action synchrony. At the same time, this contrasting sequence may help infants to develop primary understanding of pretence (Fig. 2).

However, the developing ability to understand imaginary representations may not arise in infants themselves, but the active participation of an adult partner makes the ongoing interaction more fun. As we have already discussed, maternal playful teasing includes pretend violation of infants' interpersonal expectations by unconventional and odd acts, though it is intended to share playfulness with the infant. Then, infants need to perceive these behaviours as pretence and detect the caretaker's invisible play-intention underlining pretend actions. In this sense, maternal playful teasing seems to offer infants a good opportunity to develop and to share imaginary representations from the early stage of life. This means that the developmental origin of understanding of pretence in others can be found in far earlier stages of infancy than researchers had previously believed, i.e., two years old (Harris, and Kavanaugh, 1993).

Furthermore, *dekigoto* taking the shape of maternal playful teasing does not only elicit positive emotional reactions from infants, but also follows emotional communication so that mother and infant can share enjoyment together. In this sense, playful teasing, i.e., pretend teasing actions may have an emotional tone, provoke laughter and create fun. It may take the shape of a joyful game and a nonverbal "emotional narrative" in time (Dyssanayake, 2002). A few decades ago, Sroufe (1979) reported that at 9 months, infants go through a developmental transition and become "affectionate beings". They evaluate events affectionately by applying cognitive incongruity between anticipation and

consequence. As such cognitive incongruity is perceived as an event, or *dekgoto*, *dekgoto* may be assimilated into a good or bad affective tone. In playful teasing interactions, as *dekgoto* is presented by pretend acts or pretend teasing, such acts may be understood in a context of emotional colour. Especially, in this kind of interaction, infants may develop understanding of others' pretence in relation to fun and playfulness, i.e. "incident affinity" (Nakano, 1997, 2001).

Conclusion.

Social development in infancy has been depicted as lively and precise in many studies, however, researchers have merely explained the development of interpersonal relations between child, caretaker and object, and given little attention to the other invisible factor, *dekgoto* and its function. They have postulated that infants show an interest in face-to-face dyad interactions with their caretaker around three months of age, then directly transit to triad interaction with sharing objects with a caretaker around seven or eight months of age. However, if we recognise that, deliberate *dekgoto* brought about by either caretaker or infant, this promotes the role of a healthy dyad interaction, and the transition from primary to secondary intersubjectivity (Trevvarthen and Hubery, 1978; Trevvarthen, 1979) may be easier to understand, because dyad interactions are rediscovered in a triad relation of person-*dekgoto*-person. This means that the transition may not shift from the two to three component relation system, but interpolate joint attention to objects of common interest in the ready-made interaction system. Considered more generally, all interpersonal interactions are assumed to essentially consist of three components, two persons and something that is to be shared by them.

Further, once we pay attention to the function of *dekgoto*, as Dyssanayake (2002) explained, we can regard parent-infant interactions as being composed of the duet sequence intermittently incorporated with synchrony and de-synchrony. Considering what precedes such duet sequences and how they are produced, we may find the function of *dekgoto* that develops ongoing interactions towards de-synchrony after completion of action synchrony. Furthermore, as subtle "unnatural" caretaker's actions seem to make sense of pretence, or *dekgoto*. Then pretence and *dekgoto* are assumed to be two sides of the same coin. If we accept the fact that dyadic interpersonal interactions are filled with *dekgoto*, we have to assume that essentially dyad interpersonal interactions contain pretence.

Finally, if we understand the function of *dekgoto* in interpersonal interactions more precisely, we will be more able to clearly depict how play/joke, emotional communication and pretence interplay during the development of intersubjective relationships.

References

- Bates, E., Benigni, L., Bretherton, I., Camaioni, L. & Volterra, V. (1979). *The emergence of symbols: Cognition and communication in infancy*. New York: Academic Press.
- Bateson, M., C. (1979). The epigenesis of conversational interaction: A personal account of research development. In M. Bullowa (Ed.), *Before speech: The beginning of human communication*, 63-78. London: Cambridge University Press.
- Bigelow, A.E., MacLean, B.K. & MacDonald, D. (1996). Infants' response to live and replay interactions

- with self and mother. *Merrill-Parlmer Quarterly*, **42**, 596-611.
- Bråten, S. (1999). Intersubjective Communication and Understanding: Development and Perturbation. S. Bråten (Ed.), *Intersubjective Communication and Emotion in Early Ontogeny*, 372-382. Cambridge University Press.
- Burnham, D. (1998). Special speech registers: Talking to Austrarrian and Thai infants, and to pets. In R. Mandell & J. Robert-Ribes (Eds.), *Proceedings of the Fifth International Conference on Spoken Language Processing, Sydney, 2*, 457-458.
- Campos, J. J. and Stenberg, C.R. (1980). Perception, appraisal and emotion. In M. Lamb and L. Sherrod (Eds.) *Infant Social Cognition*. Hillsdale, NJ: Erlbaum.
- Carpenter, M., Nagell, K., & Tomasello, M. (1998). Social cognition, joint attention, and communicative competence from 9 to 15 months of age. *Monographs of the Society for Research in Child Development, Volume 255*.
- Cooper, R. P. and R. N. Aslin. (1990). Preference for infant-directed speech in the first month after birth. *Child Development*, **61**, 1584-95.
- Custodero, L. and Fenichel, E. (2002). The Musical Lives of Babies and Families. *Zero to Three*, **23**, **1**, 2002.
- Dunn, J. (1988). *The Beginnings of Social Understanding*. Blackwell Publishers
- Diyssanayake, E. (1999). Becoming Homo Aestheticus: Sources of Aesthetic Imagination in Mother-Infant Interactions. *Paper presented at Imagination and the Adapted Mind: The Prehistory and Future of Poetry, Fiction, and Related Arts*, August 26-29, 1999, UC, Santa Barbara.
- Dissanayake, E. (2000). *Art and Intimacy: How the Arts Began*. Seattle and London: University of Washington Press.
- Fernald, A. (1992). Human maternal vocalizations to infants as biologically relevant signals: An evolutionary perspective. Jerome H. Barkow, Leda Cosmides, and John Tooby (Eds.), *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*. New York: Oxford University Press, 391-428.
- Fogel, A., & Lyra, M. (1997). Dynamics of development in relationships. In I. Masterpasqua & P. Perna (Eds.), *The psychological meaning of chaos*. Washington DC: APA Press.
- Hains, S.M.J. and Muir, D.W. (1996). Effects of stimulus contingency in infant-adult interactions. *Infant Behavior and Development*, **19**, 49-61.
- Harris, P. L. & Kavanaugh, R. D. (1993). Young children's understanding of pretense. *Monographs of the Society for Research in Child Development*, **58**, No. 1.
- Kitamura, C., & Burnham, D. (1998). The infant's response to vocal affect in maternal speech. In C. Rovee-Collier (Ed), *Advances in Infancy Research*, **12**, 221-236
- Mayes, L. & Carter, A. (1990). Emerging social regulatory capacities as seen in the still-face situation. *Child Development*, **61**, 754-763.
- McGhee, P. E. (1980). Development of the creative aspects of humor. In P.E. McGhee & A.J. Chapman (Eds.), *Children's humor*, 119-140. New York: Wiley.
- Muir, D. & Hains, S. M. (1993). Infant sensitivity to perturbations in adult facial, vocal, tactile, and contingent stimulation during face to face interactions. In B. de Boysson-Bardies (Ed.), *Developmental neurocognition: Speech and face processing in the first year of life*, 171-183. Amsterdam: Elsevier.
- Murray, L., and Trevarthen, C. (1985). Emotional regulation of interactions between two-month-olds and their mothers. In F. M. Field & N. Fox (Eds.), *Social perception in infancy* 156-177. Norwood, NJ: Ablex.
- Murray, L., and Trevarthen, C. (1986). The infant's role in mother-infant communications. *Journal of Child Language*, **13**, 15-29.
- Nadel, J. (1996). "Early interpersonal timing and the perception of social contingencies." *Infant Behavior and Development* **19**, 202.
- Nakano, S. (1997). Heart-to-heart (Inter-Jo) resonance: A Japanese approach to intersubjectivity. *Annual*

- Report of Research and Clinical Center for Child Development*, 19, 81-91.
- Nakano, S. (2001). The basic structure of metacommunication in intersubjective fun-interactions between mothers and infants. *Annual Report of Research and Clinical Center for Child Development*, 23, 39-49.
- Papousek, M., Papousek, H. and Symmes, D. (1991). The meanings and melodies in motherese in tone and stress languages. *Infant Behavior and Development*, 14, 415-440.
- Pegg, J. E., Werker, J. F. and McLeod, P.J. (1992). Preference for infant-directed over adult-directed speech: Evidence from 7-week-old infants. *Infant Behavior and Development*, 15, 325-345.
- Pien, D., and Rothbart, M. (1980). Incongruity, humor, play and self-regulation of arousal in young children. In P. E. McGhee & A. J. Chapman (Eds.), *Children's humor*, 1-26. New York: Wiley.
- Reddy, V. (1991). Playing with others' expectations: teasing and mucking about in the first year. In A. Whiten (Ed.), *Natural Theories of Mind*, Blackwell, Oxford.
- Reddy, V. (2001). Infant clowning: the interpersonal creation of humour in infancy. *Enfance*, 3, 247-256.
- Reddy V., Williams E., and Vaughan A.. (2001). Sharing laughter: The humour of pre-school children with Down syndrome. *Down Syndrome Research and Practice*, 7(3), 125-128.
- Sroufe, L.A. (1979). Socioemotional development. In J. D. Osofsky (Ed.), *Handbook of infant development*, 462-518. New York: Wiley.
- Sroufe, L.A., and Wunsch, J.P. (1972). The development of laughter in the first year of life. *Child Development*, 43, 1326-1344.
- Stern, D.N. (1985). *The interpersonal world of the infant: A view from psychoanalysis and developmental psychology*. New York: Basic Books.
- Thanavisnuth, C. and Luksaneeyanawin, S. (1998). Acoustic Qualities if IDS and ADS in Thai. In R. Mandell and J. Robert-Ribes (Eds.), *Proceedings of the Fifth International Conference on Spoken Language Processing (ISCLP'98) Sydney*, 2, 445-448. Australian Speech Science and Technology Association Incorporated.
- Trevarthen, C. (1979). Communication and cooperation in early infancy: A description of primary intersubjectivity. In M. Bullowa (Ed.), *Before speech: The beginning of human communication*, 321-347. London: Cambridge University Press.
- Trevarthen, C. (1980). The foundations of intersubjectivity: development of interpersonal and cooperative understanding of infants, In D. Olson (Ed.), *The Social Foundations of Language and Thought: Essays in Honor of J.S. Bruner*, 316-342. New York: W.W. Norton.
- Trevarthen, C. (1977). Descriptive analyses of infant communication behavior. In H. R. Schaffer (Ed.), *Studies in mother-infant interaction: The Loch Lomond Symposium*, 227-270. London: Academic Press.
- Trevarthen, C. (1982). The primary motives for cooperative understanding. In G. Butterworth & P. Light (Eds.), *Social cognition: Studies of the development of understanding*, 77-109. Brighton, UK: Harvester Press.
- Trevarthen, C. (1984). Emotion in infancy: Regulation of contacts and relationships with persons. In K. Scherer & P. Ekman (Eds.), *Approaches to emotion*, 129-157. Hillsdale, NJ: Erlbaum.
- Trevarthen, C. (1990). Signs before speech. In T. A. Sebeok & J. Uniker-Sebeok (Eds.), *The semiotic web*, 689-755. Amsterdam: Mouton de Gruyter.
- Trevarthen, C. (1993a). The self born in intersubjectivity: The psychology of an infant communicating. In U. Neisser (Ed.), *The perceived self: Ecological and interpersonal sources of the self Knowledge*, 121-173. New York: Cambridge University Press.
- Trevarthen, C. (1993b). The function of emotion in early infant communication and development. In J. Nadel & L. Camaioni (Eds.), *New perspectives in early communicative development*, 48-81. London: Routledge.
- Trevarthen, C., Aitken, K., Papoudi, D., & Robarts, J. (1998). *Children with autism: Diagnosis and interventions to meet their needs*. London: Jessica Kinsley Publishers.

- Trevarthen, C. & Hubery, P. (1978). Secondary intersubjectivity: Confidence, confiding and acts of meaning in the first year. In A. Loch (Ed.), *Action, gesture and symbol*, 183-229). London: Academic Press.
- Trevarthen, C. and Malloch, S. (2002). Musicality and music before three: Human vitality and invention shared with pride. *Zero to Three, September 2002, 23, (1)*, 10-18.
- Toda, S. & Fogel, A. (1993). Infant response to the still-face situation at 3 and 6 months. *Developmental Psychology, 29*, 532-538.
- Tomasello, M. (1995). Joint attention as social cognition. In C. Moore & P. J. Dunham (Eds.), *Joint attention: Its origins and role in development*, 103-130. Hillsdale, NJ: Lawrence Erlbaum.
- Tronick, E.Z. (1989). Emotions and emotional communication in infants. *American Psychologist, 44*, 112-126.
- Tronick, E. Z., Als, H., Adamson, L., Wise, S. & Brazelton, T. B. (1978). The infant's response to entrapment between contradictory message in face-to-face interaction. *Journal of the American Academy of Child Psychiatry, 17*, 1-13.

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乳幼児発達臨床センター年報

(2002-2003) 第 26 号

平成16年2月25日印刷

2月27日発行

編集者 陳 省 仁
室 橋 春 光
藤 野 友 紀

印刷所 株式会社アイワード

発行者 北海道大学大学院教育学研究科
附属乳幼児発達臨床センター
〒060-0811 札幌市北区北11条西7丁目
☎(011) 706-3106

RESEARCH AND CLINICAL CENTER
FOR CHILD DEVELOPMENT

ANNUAL REPORT

(2002-2003) No. 26

Date of Printing: February 25, 2004

Date of Publication: February 27, 2004

Editors: Shing-Jen Chen

Harumitsu Murohashi

Yuki Fujino

Printer: iword Co., Sapporo

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Child Development, Graduate School
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