

# Changes in Sibling Conflict and Prosocial Behavior: During the “Terrible Twos” Period

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きょうだい間における葛藤場面と向社会的行動の変化  
—第一反抗期前後のきょうだい関係—

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This case study investigated changes in conflict and prosocial behavior between siblings during a 10-month period. The siblings were a 4–5-year-old girl and 1–2-year-old girl. The younger sister was in the so-called “terrible twos” period. Their interaction was videotaped and subsequently their conflict was analyzed using the event sampling method and their prosocial behavior using the time sampling method. Results indicated that conflict between them increased as time passed because of the younger sister’s self-assertion; however, the solutions to their conflict became sophisticated (i.e. involving mutual understanding). Moreover, prosocial behavior (i.e. compromise and sharing) by both sisters was observed during the latter period, while imitation demonstrated by the younger sister occurred from the former period to the end of observation. These findings suggest that the siblings’ socioemotional behavior developed simultaneously as their interactions increased and sibling relationships progressed in terms of their play and verbal intercourse.

## Introduction

Sibling relationships and their effect on child development are overlooked in family psychological research (Sanders, 2004). This may be due to an overemphasis placed on the importance of the mother-child relationship. In Japan, mothers are exclusively responsible for childrearing (Egami, 2005, 2013), yet young siblings spend more time with each other than with their mother (Bank & Kahn, 1975). As a consequence, they interact while playing, fighting, or even sometimes help each other. Sibling relationships contribute to social adaptation and play an important intermediate role in the development of parent-child relationships (Abramovitch, Corter, Pepler, & Stanhope, 1986; Azmitia & Hesser, 1993). In contrast with parent-child relationships and peer relationships, Dunn (1983) suggests that sibling relationships are composed of “complementarity” (i.e. teaching, helping, directing, etc.) and “reciprocity” (i.e. playing, enjoying, joking, etc.). Parents often guess a child’s intentions and emotions; moreover, they accommodate their needs. Siblings, however, don’t always act in this way. Therefore, through sibling interaction, children gain the perspective of others and imagine others’ thought processes; then, they develop their own abilities in terms of both social and cognitive

development. For example, Perner, Ruffman, & Leekam (1994) state that the number of siblings affects children’s “theory of mind (ToM).” Matsunaga & Goshiki (2008) showed that not only siblings but also mixed-age groups accelerate the development of ToM.

In terms of developmental states, all kindergarten siblings are developing simultaneously. Younger siblings often imitate their older siblings’ behavior and words (Barr & Hayne, 2003), and become aware of how they interact with their friends. Older siblings try to guess and interpret their siblings’ thoughts and feelings during everyday interaction (Rabain-Jamin, Maynard, & Greenfield, 2003); moreover, their parents expect them to do so. Particularly during the “terrible twos” period, toddlers gain a sense of agency and express negativism toward their family members (Wenar, 1982). Consequently, at this time, family members experience frequent conflict with toddlers. Because two-year-olds show negativism, younger siblings of this age may attack their older siblings (Kramer, 1996). Through this conflict, the older siblings learn how to resolve their problem, while the “terrible twos” siblings enhance their own language skills and a sense of self. At the same time, two-year-olds can show empathy for their close associates such as their parents or kindergarten

friends with whom the children have close interactions on a daily basis (Zahn-Waxler, Robinson, & Emde, 1992; Kato, Onishi, Kanazawa, Hinobayashi, & Minami, 2012; Ishii & Egami, 2015). Empathy is thought to be a motivation to prosocial behavior (Hoffman, 1975) and we expect two-year-olds to develop sophistication during sibling interactions.

However, the development of sibling relationships has not been examined over long periods of time, especially in Japan. There has been some research overseas, though this investigated sibling development only in one direction, over a short time period, and quantitatively (Lamb, 1978a, 1978b; Abramovitch, Corter, & Lando, 1979; Dunn & Kendrick, 1981). Furthermore, some studies of sibling interaction make a comparison with mother-child interaction (Lowe & Wilson, 1987; Mannle, Barton, & Tomasello, 1991). Sibling relationships have a bidirectional effect; therefore, it is necessary to study their developmental process by using pair data.

This study investigated the process of sibling co-development. In detail, we observed both prosocial behavior and the cause and the solution of their conflict during the “terrible twos” period. From Lamb’s (1978a, 1978b) point of view, we used the natural observation style, and we observed the siblings in their home.

## Method

### Participants

A pair of female siblings were studied. The older sister was four years and seven months old and the younger sister was one year and six months old at the beginning of this study. They were five years and four months old and two years and three months old at the end of this study. On weekdays, the older sister went to kindergarten and the younger sister went to nursery. They spend time together each weekday morning and night, and all day long over the weekends. This family included a father (full-time worker), a mother (full-time worker) and the siblings.

### Procedure

The second author of this study videotaped the siblings’ free playing scenes including both their interaction and individual play for 30 minutes in their room every other week for 10 months. The room had a table, cushions, their books, and many toys. The first two observation sessions were used for siblings to gain familiarity with the author. The total number of observation sessions was 18; these were divided into an early period (nine observations) and a later period (nine observations).

## Analysis

We picked up siblings’ prosocial behavior and the conflict between them. In detail, prosocial behaviors were counted using the time sampling method (10 seconds), and conflicts (especially factors and solutions) were observed using the event sampling method. Prosocial behaviors are “help,” “compromise,” “share,” “comfort,” and “imitate” (Ronald, 1985; Ito et al., 1999; Shuto, 2006). Conflict factors include “possession of things or places,” “negative action,” “violating a rule,” “a gap of image,” “disagreement on playing,” “an accident,” and “unknown” (Kinoshita, et al., 1993). In the same way, the category of conflict solution included “ignoring,” “resistance,” “natural extinction,” “breaking down,” “obedience,” and “mutual understanding.” The observed degree of agreement was 80% and disagreement was discussed between coders (the second author and the graduate-student of psychology).

To further examine the development of the sisters’ prosocial behavior and solutions to their conflicts, a few episodes of sibling interaction have been transcribed in the “Results” section; the older sister is named “O,” and the younger sister is “Y,” and important points are underlined.

## Results

### 1. Prosocial behaviors counted using the time sampling method

We summed up the siblings’ prosocial behavior in each of the two periods. The older sister demonstrated prosocial behavior 44 times in the first period, while the younger sister showed them 72 times. In the second period, the older sister showed them 116 times, and the younger sister 106 times. Every item of prosocial behavior is presented in Figure 1, Figure 2, Figure 3, and Figure 4. “Comfort” behavior was not observed in this study.

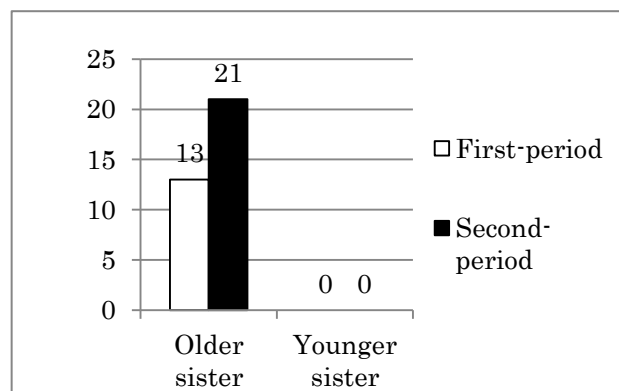


Figure 1. The number of incidents of “help”

**Episode 1. The older sister's "help" in the first period**

*O is pretending to feed a stuffed animal.*

*Y is trying to do the same thing, but has difficulty in grabbing the spoon.*

*O acts as a role model to Y, taking Y's spoon.*

*O says, "Umm, you cannot do it, I think" and returns the spoon to Y.*

**Episode 2. The older sister's "help" in the second period**

*Y is winding a jump rope around her body.*

*O shouts "Don't do this," and unties the rope.*

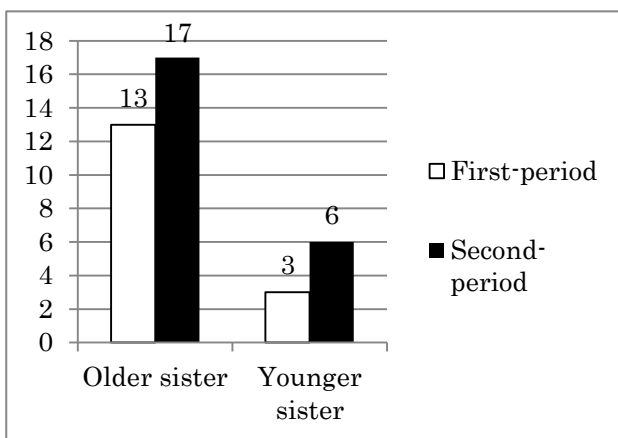


Figure 2. The number of incidents of "compromise"

**Episode 3. The older sister's "compromise" in the first period**

*When O is looking for her doll's clothes and bed, Y approaches and looks at her.*

*O notices her sister, and says "Here", giving her the bed.*

*Y takes it and plays.*

**Episode 4. The older sister's "compromise" in the second period**

*O has some Doraemon items, and finds another big Doraemon on the shelf.*

*Y is interested in the Doraemon, and says "Give me for a little."*

*O gives the little one to Y.*

**Episode 5. The younger sister's "compromise" in the first period**

*O is collecting toys to play with the doll.*

*Y is playing with another toy near her sister and finds the bag that contains doll's clothes and shoes.*

*Y picks it up and gives it to her sister; O says "Thanks," and takes it.*

**Episode 6. The younger sister's "compromise" in the second period**

*Y has a puzzle board.*

*O looks at that, and says "Let's make our castle by using it."*

*Y says "Yes," and gives it to her sister. Then, she takes up another board, and says "Let's make our castle!" while approaching her sister.*

*O says "Sure. Our castle!"*

*Y says "Take this, too" while approaching O, and giving it to O.*

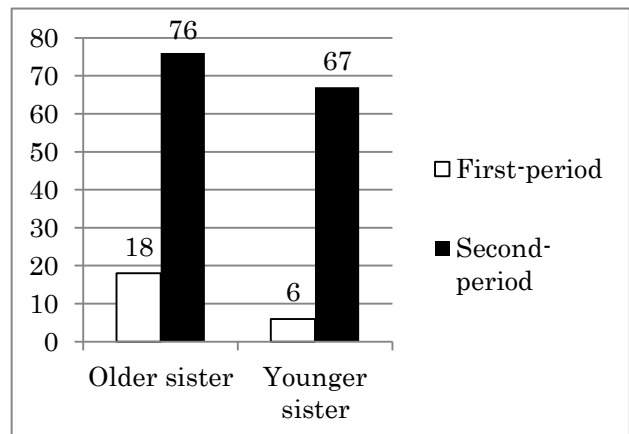


Figure 3. The number of "share" incidents

**Episode 7. The sister's "share" in the first period**

*O says "Shall we play hide and seek?" hiding behind the vinyl pool.*

*Although Y is playing with a ball, she stops playing and goes to O.*

*As Y finds O, they laugh at each other.*

*After O goes out she calls Y's name. Y moves to O's side.*

**Episode 8. The sister's "share" in the second period**

*Y is trying to play with the jump rope.*

*O says, "Don't! It's dangerous," taking the rope from Y.*

*O starts playing with the rope.*

*While Y says "I also want to play" and approaches O. O says "It is dangerous!" and pushes Y. So Y looks sad; O says "Ride this train behind my back."*

*Y says "Got it" and goes behind O, playing with the rope.*

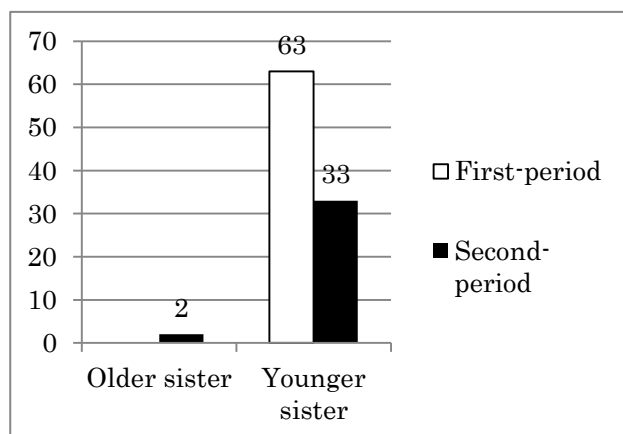


Figure 4. The number of "imitate" incidents

All prosocial behavior with the exception of the younger sister's "help" and "imitate" increased during the second period. The siblings' social behavior developed as the children grew up. The reason why the younger sister's "help" was not counted was due to her age and the difference in developmental stage between the siblings. These results agreed with the findings of Pepler, Abramovitch, and Corter (1981), who reported that second-born children imitated their first-born siblings more than vice versa. However, a decrease in "imitate" incidents may be responsible for the younger sister's agentic development (Hassan and Bar-Yam, 1987). As well as imitating her sister, she could also create new play and interaction with her sister. Accordingly, the period of their interaction may have become longer.

## 2. Factors and solution of conflicts observed using the event sampling method

In total, there were 23 conflict episodes (first period: 7 and second period: 16). Conflict factors are shown in Table 1, and solutions are shown in Table 2.

Table 1. The number of conflict factors

	PTP	NA	VR	GI	DP	A	U
First period	4	3	0	0	0	0	0
Second period	12	0	0	0	4	0	0

Note. PTP: "possession of things or places," NA: "negative action,"

VR: "violating a rule," GI: "a gap of image," DP: "disagreement on playing," A: "an accident," and U: "unknown."

Table 2. The number of conflict solutions

	Ig	Re	NE	BD	Ob	MU
First period	0	0	3	0	2	2
Second period	0	0	6	2	1	7

Note. Ig: "ignoring," Re: "resistance," NE: "natural extinction," BD: "breaking down," Ob: "obedience," and MU: "mutual understanding."

### Episode 9. The younger sister's "obedience" in the first period

*O is pretending to feed a stuffed animal.*

*Y approaches O because Y is interested in the stuffed animal*

*O says "It's mine" to Y.*

*Y is trying to take it from O.*

*O takes back the stuffed animal from Y.*

*Y watches O playing near her.*

### Episode 10. The sister's "mutual understanding" in the second period

*O is writing names of fruits on the magic board.*

*Y says, "Can you write grapes?"*

*O says, "Wait! I'm finishing writing orange."*

*Y says, "I want to join!" and takes the board from O.*

*O says, "Wait! I'm writing now."*

*Y says, "So, the next is me," and waits for O to finish writing.*

Through all observations, sibling interaction was greater during the second period than the first. From the perspective of the younger sister's development, her main playstyle changed from playing alone to parallel play (Parten, 1932). Thus, the incidence of conflict increased in the second period. Conflict factors became advanced in the second period (i.e. an increase of "disagreement on playing," a decrease of "negative action.") Regarding the solution of conflict, "mutual understanding" increased in the second period because of the younger sister's language development (Stark, 1980). Actually, the type of sibling interaction changed from nonverbal to verbal communication.

## Discussion

This study examined the process of socio-cognitive co-development of a toddler and a preschooler through the interaction of one pair of siblings. Their prosocial behavior and the causes and solutions to their conflicts were observed throughout a period of 10 months. We selected these siblings as their relationship would change throughout the 'terrible

twos' period. From the results it can be seen that the younger sister's prosocial behavior developed from the first period to the second period. At the same time, her developing language skills enhanced the length and content of sibling interaction. These two stages of development in a young toddler are described as: (1) agentic autonomy, the ability to assert "a new sense of autonomy and will," and (2) communal ability, the capacity to establish "a new sense of interpersonal connection" (Hassan and Bar-Yam, 1987). In many aspects, toddlers are socially competent agents. They create greater pleasure and excitement through their "share" of space, toys, and their behavior (Dunn & Kendrick, 1982). Furthermore, the younger sister may have become a more interesting play partner for the older sister as time progressed. When it comes to "help" and "compromise," both older and younger siblings show concern at the other's distress and frustration (Dunn & Kendrick, 1982).

On the other hand, incidents of conflict increased from the first period to the second period; this was undoubtedly due to the younger sister's development. Actually, Dunn (1983) stated that younger siblings became more aggressive over time. Sakagami (2003) and Nozawa (2013) implied that two-year-olds reorganized relations with their parents and peers by adjustment of their emotions and behavior. Even before this stage, children become able to fully assert themselves through their interactions with their family and peers. During the first period, there was a large gap in social and cognitive abilities between the siblings. Through the younger sister's development, the siblings' behavior and language moved to a similar level, and their relationship became almost fair; in turn, incidents of conflicts increased and conflict solutions became advanced. Brody (1998) suggests that siblings' conflicted interactions nurture children's social, cognitive, and psychosocial development, not to mention prosocial behavior. Actually, in their study based on later preschool aged children, Dunn et al. (1995) stated that younger siblings' use of reasoned argument in conflicts with their older siblings was related to their emotional understanding.

In the case of the older sister, her socio-cognitive development promoted her prosocial skills and the solution of conflict. A number of studies suggest that children gain ToM (Wimmer & Perner, 1983; Perner, Leekam & Wimmer, 1987) during the period between age four and five. Furthermore, the older sibling develops their ability to understand the younger sibling's intentions and feelings through their daily interactions with each other. This important development in

children's ability is demonstrated by increased instances of prosocial behavior and the use of more sophisticated methods of conflict resolution.

In summary, we suggest that both siblings developed simultaneously through their interactions. As described in Dunn (1983), the sibling relationship has both symmetrical and asymmetrical features. In this regard, the sibling relationship differs from the parent-child or peer relationship. In Japan, the sibling relationship is therefore called "the diagonal relation" in comparison with the parent-child relationship as "the vertical relation" and the peer relationship as "the horizontal relation" (Hayakawa & Yoda, 1983). Kojima (2002) suggests that everyday sibling interaction (especially in young children) enhances socioemotional development among peers in a different way to their interaction with their parents.

There were several limitations to this study. We observed only one pair of siblings for 10 months; so this result cannot be used to generalize development of prosocial behavior and sibling conflict. Our findings need to be confirmed by mass data. In addition, we shed no light on sibling temperament, although this is known to be a crucial factor (Stoneman & Brody, 1993). Further research is needed to study a greater number of siblings, and examine gender and age difference, even if they are deemed to be less important (Dunn, 1983). Furthermore, from a standpoint of the family system (Brody, et al., 1987a; Dunn, et al., 1999), the parent-child relationships and family marital relationships should be included in this type of study.

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#### Note

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