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CHAPTER 5

CHILD'S ATTACHMENT TO MOTHER AS A NEGATIVE PREDICTOR OF MOTHER'S COMMUNICATION EFFECTIVENESS

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Introduction

It has been firmly supported by empirical findings that close relationships between a subject and a model/reinforcer enhance the subject's susceptibility to the latter's social influence and/or social reinforcement. For example, classic studies (e.g., Bandura & Huston, 1961; Bandura, Ross, & Ross, 1963) indicated that children more readily imitated the behavior of a nurturant model than when the model was unnurturant or neutral.

Recent research has gone into particulars on this issue. First, it has been shown that even infants earnestly try to get information from significant attachment figures (Campos & Stenberg, 1981; Feinman, 1982, 1992; Walden & Ogan, 1988), and that by the time they are toddlers, they have acquired the capacity to be compliant to the nurturant mother in the developmental process toward autonomy (Kopp, 1982; Kuczynski & Kochanska, 1990; Minton, Kagan, & Levine, 1971; Sonnenschein, 1988; Vaughn, Kopp, & Krakow, 1984). Secondly, securely attached children are characterized as compliant to, and cooperative with, their mother, whereas noncompliance and/or defiant behaviors toward the mother characterize abused or insecurely attached children (Londerville & Main, 1981; Matas, Arend, & Sroufe, 1978; Oldershaw, Walters, & Hall, 1986). Furthermore, researchers have made clear the nature of effective mothers in socialization: mother's low-key or moderate assertions (Crockenberg & Litman, 1990; Kuczynski, Kochanska, Radke-Yarrow, & Girnius-Brown, 1987; Parpal & Maccoby, 1985), maternal responsiveness (Stayton, Hogan & Ainsworth, 1971), and positive mood of mother–child relations (Lay, Waters, & Park, 1989) tend to induce young children to respond positively to mothers' demands or proposals.

This evidence supports the affect–facilitation assumption of socialization, that is, a

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nurturant person to whom the child is attached, can convey social influences easily. A corollary of this assumption is that a person in whom subjects trust and to whom they attach, can use the warmth of the relationship as a resource in socializing with the subjects, getting them to comply with either general or specific expectations.

However, is the affect–facilitation assumption true across a variety of situations? Are nurturant mothers always effective social reinforcers and are they always willing to use the close relationships as a resource in socialization?

Some recent studies have cast doubts on this generality. Many researchers (Kuczynski, 1984; Lytton, 1980; Maccoby & Martin, 1983; Radke-Yarrow, Zahn-Waxler, & Chapman, 1983) have pointed out that nurturant mothers do not necessarily make children comply in all social contexts. When mothers perceive a given situation to be urgent and want to exert immediate control over children, the nurturant mothers use their affective resources and control their children more effectively than their unnurturant counterparts. However, contrary to the expectations based upon the above assumption, in contexts or situations which they see as merely playful or game-like, the nurturant mothers are reluctant to force their children to obey. They use more pleasant and milder control strategies such as negotiations and suggestions (Kuczynski, 1984), and allow the children not to obey their directives (Matas *et al.*, 1978) more than their unnurturant counterparts, apparently valuing the long-term good mother–child relationship over the desire to fulfill the demands of the task at hand.

Therefore, assuming that nurturant mothers' control strategies vary according to social context, we can hypothesize that only when we place mother–child dyads in task-oriented contexts, such as problem-solving situations used in the classic studies where subjects are pressed to achieve the task and their mothers, though implicitly, are assigned the role of a model or social reinforcer, will mothers use the nurturant relationship as a resource to have the child comply. In those task-oriented situations in which mothers are naturally expected to have so-called instrumental functions, they will concentrate on getting their children to achieve good performances. In other words, because of their affective resource, in those task-oriented situations, mothers to whom their children are attached have an advantage over their unnurturant counterparts.

However, if we put the dyads in playful contexts, such as game-like situations, the mothers who have close relationships with their children may prefer to enact so-called expressive functions, devoting themselves to maintain their close relations. They thereby reveal permissive attitudes toward children's noncompliance or defiance, and are reluctant to control playful behaviors of their children that do not conform to the rules of the game. The closer the relationship, the more inclined the mother is to place importance on the expressive role, because the closeness means that the relationship is a major emotional investment for her, and this may well prevent her from taking the necessary steps to get the child to complete the "task" successfully.

The purpose of the present study was directly to test this "social-context" assumption, i.e., that maternal control strategies vary according to the nature of the social context. It was specifically hypothesized that in a game-like problem-solving situation in which the role of the mother was rather ambiguous, the degree of the child's attachment to her, from which we could assume the close relationships between mother–child dyad, would be negatively related to the mother's effectiveness as a socialization agent as measured by children's performances in the game, because in such a situation the mother would be

content to maintain and enjoy the relationship. Two specific predictions were examined: (a) the child's strength of attachment toward the mother would be negatively correlated to the performance in the game; and (b) the mother's engagement in the maintenance of good relations with the child would negatively affect the child's performance in the task.

Method

In a game-like referential communication situation, the relationship between the child's attachment to the mother and the child's performance of decoding messages sent by the mother was investigated. Moreover, to elucidate the relationship, the attitudes and strategies by the mother during the communication of the message were analyzed.

Subject

Thirty-six mother–child dyads were studied. The children, 16 boys and 20 girls, had been participating in a longitudinal study since childbirth, and this study was administered when the children were 3.0 to 3.2 years old. They were first born of intact nuclear families from the lower-middle class, living in a few middle-sized cities near Tokyo. All the mothers were high school graduates, and full-time, primary care-givers. None of the children attended an institution such as a day care center or kindergarten.

Procedure

The measurement of attachment to the mother

Attachment towards the mother was assessed by the PAT (Picture Attachment Test) constructed by the author (Takahashi, 1978). The PAT consisted of two sets of eight picture cards, one set for girls and one set for boys. Each card illustrated a daily life situation in which attachment behaviors towards other persons would be induced in young children. Example situations included: "When you play out of doors, who would you like to play with?," "Who would you want to take a bath with?," "If you were sick, who would you want to be with?." Being shown each of the PAT cards, the mother was asked by an interviewer to report the name of the person(s), whom she believed her child would select in each daily-life situation. We did not ask the children the questions, because it was assumed that they were not mature enough to respond to some of the PAT cards. The total number of appearances of the mother as the most preferred person was considered as showing the strength of attachment to her (Range = 0–8, $M = 3.94$, $SD = 1.82$).

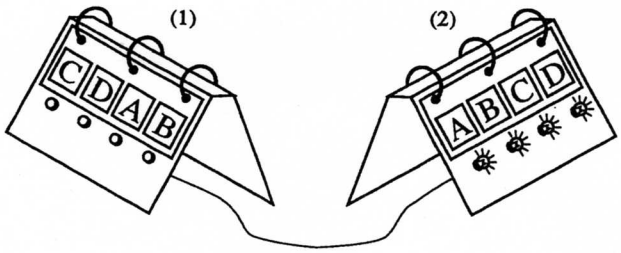
In order to validate this index we correlated it with their patterns of attachment identified by the Strange Situation procedure (Ainsworth, Blehar, Waters, & Wall, 1978). Twenty-seven mother–child pairs out of the 36 dyads were assessed by the

procedure at their 24th month, and except for 2 children of C-type, all of the children were classified into B-type. Since the conventional A–B–C classification was not informative, eight kinds of attachment behaviors towards the mother (touching; being within arm's reach of; following; showing/giving toys to; speaking to; imitating; looking at; smiling at) were counted for each 10 s period during episodes 2, 3, 5 and 8. The total frequency of the eight kinds of attachment behaviors towards the mother was correlated significantly with the present attachment index ($r = .46$, $p < .05$).

The measurement of mother's communication effectiveness

The mother's communication effectiveness was measured by a referential communication game, a slightly modified version of the Picture Book Communication Game constructed by Dickson (Dickson, 1981; Dickson, Hess, Miyake, & Azuma, 1979). As Figure 5.1 indicates, the instrument used in the game involved two notebooks, each with a set of four pictures in different arrangements. Under each picture on the listener's notebook is a button connected by a wire to a light under the corresponding picture on the sender's notebook. This game is similar to conventional referential communication tasks with two innovations for the button–light system. First, by a light under the picture the sender can promptly identify the choice of the listener, and second, the sender can thus know the appropriateness of her prior message and provide feedback or further information if s/he would like to do so.

In the game the mother was instructed to give a message constructed by herself about a target referent in the set of four alternatives, so that the child could choose the referent, which would be located in a different place in the child's notebook. In the present study we used only abstract figures in order to make the situation more game-like, as shown in Figure 5.2. It was supposed that those abstract figures would make the mother perceive the situation as a game. This is because firstly, as there were no designated "correct" messages the mother could send a vague or tricky description if she liked. Secondly, as it was difficult to send appropriate messages to help the child push the correct buttons, the mother might pretend that it was all play, not a cognitive task.



(1) Sender's board with buttons

(2) Listener's board with lights

Figure 5.1. The picture book communication game.

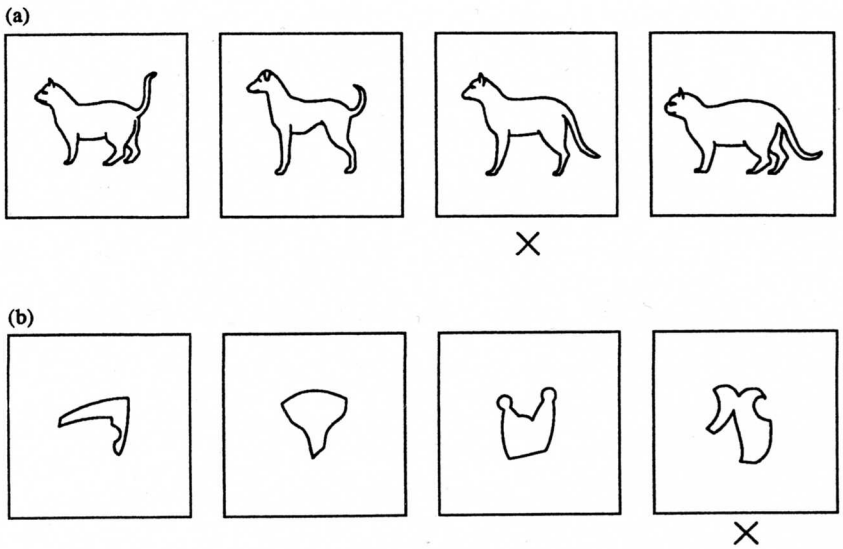


Figure 5.2. The example figures used in the mother-as-sender session.

A maximum of three errors was scored per item, and the total number of errors was counted over 7 items of the mother-as-sender (MAS) communication game. This number was used as a negative indicator of the mother's communicative effectiveness.

To partial out the child's ability in the task, the number of errors over 10 items, all concrete figures, of the experimenter-as-sender (EAS) task, in which the experimenter sent messages following a written scenario, was used as a control variable in the following analysis. The EAS scores were significantly negatively related to Binet-IQ scores at 3 years of age ($-.55$, $p < .01$), but the MAS scores were not significantly related to IQ ($r = -.26$). The *M*s and *SD*s of the EAS (Score range 0–30) and the MAS (0–21) were 10.42 (3.18), and 9.81 (3.52), respectively.

Before proceeding to the MAS session, the mother observed the EAS session to understand how to send a message and to give feedback to the child. The games required about 15–25 min altogether.

Ratings of mother's behavior

To obtain indicators of the mother's attitudes and strategies, all mother–child interactions during the game were transcribed from audio-tapes, and rated on four 4-point rating scales (4 = clearly shows the tendency, to 1 = hardly shows the tendency). Each scale was aimed at assessing the mother's tendency to maintain a close and reciprocal relationship. The scales were: (1) the mother's tendency to refer to the child's personal experiences; (2) the mother's tendency to ignore the child's errors; (3) the mother's tendency to persist in her message; and (4) the mother's tendency not to control the child's irrelevant behaviors.

Ratings were given for each item and then averaged over the 7 items. *M*s and *SD*s

were 1.25 (0.30), 2.15 (0.38), 2.08 (0.48), 1.94 (0.79), respectively. Inter-rater agreements (Cohen's kappa) for the rating were .86 on the average.

Results

Because preliminary analysis of sex differences in each score of MAS, EAS, PAT and each of the four ratings of maternal attitude toward the tasks and child's performances indicated nonsignificance between the sexes, the data were combined.

Relationships Between Attachment to the Mother and Child's Errors in the Game

The correlation between the strength of attachment to the mother and number of errors in MAS was significant when the number of errors in EAS was partialled out (.30, $p < .05$). The result indicated that the more strongly the child attached to the mother, the more errors s/he tended to make in decoding.

Effects of the Maternal Attitudes on Child's Errors in the Game

As Table 5.1 shows, only one out of the four ratings of maternal attitude during the game, the mother's tendency not to control the child's irrelevant behaviors, was correlated significantly with the number of errors in MAS, when the number of errors in EAS was controlled (.51, $p < .01$).

Moreover, the correlation of the child's attachment to the mother with the number of errors in MAS, controlling for that of EAS, became nonsignificant when the mother's reluctance to control the child's irrelevant behaviors was partialled out (.22, $p > .10$). Thus, when the mother was not willing to control child's behavior to channel it toward the goal or toward performing well in the game, the child made errors in decoding.

Table 5.1
Correlations between Number of Errors in Mother-As-Sender Session and Ratings of Maternal Behavior

	Number of errors in MAS ($N = 36$)	
Maternal Ratings	Simple *r*	Number of errors in EAS Partialled
1) Tendency to refer to personal experiences	.24	.22
2) Tendency to ignore child's errors	.06	.03
3) Tendency to persist in her message	.09	.13
4) Tendency not to control irrelevant behaviors	.42*	.51*

*$p < .01$.

In fact, highly attached mothers were generally reluctant to control their children's irrelevant behaviors. Typical interactions were as follows.

Case Ryu

Ryu's scores of MAS and EAS were 12 and 7, respectively. He was identified as a boy strongly attached to the mother. That is, his mother reported that he would name her as an attachment figure in 6 out of the 8 PAT cards. In the following interaction the mother was sending messages as to the target (a) in Figure 5.2.

M: Look here, Ryu. This is . . . ., you see cats and dogs.
C: Yes.
M: Ryu, you love both cats and dogs.
C: Yes.
M: Well, it has standing ears. The ears are standing upright. And it has a tail that hangs down.
C: Yes.
M: It is a dog. Where is the dog which has a hanging down tail?
C: Yes, this one . . . , and this one . . . , and this one . . . , and this one . . . .
M: Stop! There must be only one [target] dog.
C: This one? (He pushes an incorrect button.)
M: Look at the pictures carefully.
C: (He pushes another incorrect button.)
M: A dog which has standing-up ears.
C: (He pushed buttons at random.)
M: Stop! NO!
C: (He continues to push buttons at random.)

Case Kaz

Kaz was a boy with 15 errors in MAS and 10 errors in EAS. His mother reported that he would select her in 5 of the 8 PAT cards. The target figure was (b) in Figure 5.2.

M: Well . . . , What do you see? Hmmm . . . (She thinks) I cannot explain well. I . . .
C: (Pushes three buttons at random.)
M: Kaz, don't touch the buttons.
C: Can't I push the buttons?
M: Hmmm . . . The left side of the figure is smaller.
C: Which figure? (He peeps into the mother's notebook.)
M: OK, look at your own book. Your figures are all the same as mine. Could you see a figure in which the left side is small and the right side is large? It consists of two parts.
C: Two?
M: How do you see the [target] figure?

C: Is this it? (He points to the notebook and pushes an incorrect button.)
M: I cannot explain this. Hmmm . . . (She thinks.)
C: This one? (He pushes an incorrect button.)
M: Then, which is the figure like the ribbon?
C: I don't have a ribbon.
M: I know that you don't have a ribbon. Please find a figure like a ribbon in your board.
C: No. There is none.
M: No?
C: (He lies down on the floor.)
M: Kaz . . .
C: Look! I've got big. (He stands up lifting both his arms. He laughs.)
M: I cannot explain this figure.
C: (He pushes buttons at random.)
M: (She laughs.) No . . . I cannot . . .

Case Kuk

Kuk was a girl who made 10 errors in MAS and 8 errors in EAS. Her mother reported that she would name her (the mother) in all 8 PAT cards. The target was (b) in Figure 5.2.

M: This is a very interesting figure consisting of a little part and a large part, isn't it? Like this. You see?
C: (She smiles.)
M: I suppose that you don't understand by such a description. You see, Kuk, there are many shapes in the figure. Listen, Kuk.
C: Yes.
M: This is the last task. So, listen, Kuk. There are four figures, do you see?
C: Yes.
M: And, among them there is a figure which consists of a small figure, like a moon and a large figure, like a crown. Do you find it?
C: Is it this? (She points to her notebook.)
M: Which one do you mean? Let me know it by pushing the button.
C: (She pushes an incorrect button and she laughs.)
M: (She laughs.) Oh! Sorry. You made a little mistake. Let me try again. A shape like a new moon and a shape like a bottle opener by which we open a soda bottle joined together. Do you find it? Push the button.
C: Is it this? (She pushes another incorrect button.)
M: Oh. Sorry, again. You made a little mistake, again.
C: Is it this? (She points to her notebook.)
M: Unless you push a button, I cannot know which one you are pointing to. Now of course, if you just push all 4 buttons successively, one of them will be correct. (She laughs.)
C: Is it this? (Laughing, she pushes another incorrect button.)
M: No . . . (She laughs.)

C: Is it this? (She finally touches the correct button.)
M: Finally, you found the correct button. You pushed all four buttons one after another, so it was only natural that you would hit the right one! (She laughs.) You are great! You did a fine job! (She says this a little bit sarcastically.)
C: (She laughs.)

The mothers in the first two examples were reluctant to strictly control the child's behavior and the mother in the the last case enjoyed the game and was not so much involved in the child's performance itself, although the daughter finally succeeded by chance. All of them enjoyed interacting with their children and were not so much concerned with the child's performance or the goal of choosing the right picture with a minimal number of errors. Consequently, the children did not perform well at least in the short run.

Discussion

As predicted from the "social context" assumption and the auxiliary assumption that attached mothers are unwilling to control their children's behaviors unduly, the present study revealed that the child's attachment to the mother was negatively correlated with the child's performance in the referential communication game. The mothers who reported strong attachment relationships with their children were characterized as reluctant to control their children's playful behaviors during the game. They were much more concerned with having pleasant interactions with the child than with the child's achieving.

In this section, I will discuss how to interpret the negative correlation, especially in the light of the closeness of Japanese mother–child pairs. I will also examine the nature of "attachment" as assessed in this study.

The Importance of Mother's Interpretations of the Situation: Is it a Game or a Task?

The negative correlation between children's attachment toward the mother and their performances in the game corroborated the findings of the previous research, which emphasized the importance of the mother's perception of the situation as a determinant of her effectiveness (Kuczynski, 1984; Lytton, 1980; Maccoby & Martin, 1983; Radke-Yarrow, Zahn-Waxler, & Chapman, 1983). That is, if the target situation is perceived by the mother not to be critical nor urgent, the child's attachment toward her is not used as a resource to make the child perform well, but serves as an elicitor for the mother to reinforce their close and reciprocal relationship. In fact, the mother–child pairs with higher scores of attachment no doubt seemed to enjoy their interaction during the game.

Needless to say, the present results should never be taken to mean that Japanese mothers are not able to use the child's attachment as a resource in socialization in general. In fact, from daily observations, there are many successful examples of socialization by mothers through utilizing their close relations with their child. As a result, for example, even preschoolers can read and spell their name, and

also can count. We don't need any "Head Start"-type project before entrance to elementary school because Japanese mothers are so competent as "tutors." These informal observations are consistent with the empirical findings by Bus (this issue) which suggest securely attached children's superiority in emergent literacy over their insecurely-attached peers.

Their failure to enable their children to perform well in this experiment only means that in a game-like situation they tend to prefer to enjoy their close relations with the child at the expense of trying to achieve a goal. We expect that when a situation has one or more strong or clear cues pushing the mother to use the child's attachment as a resource for achieving good results, she can and will do that. In fact, a cross-cultural study between Japan and the U.S.A. revealed that, in intellectual achievement situations, Japanese children showed less task resistance to the mother than their American counterparts (Azuma, Kashiwagi, & Hess, 1981).

Effects of Children's Attachment May Vary According to the Level of Closeness to the Mother

Being influenced by the Japanese child-centered culture, the Japanese have long favored child-rearing customs in which the mother is to be near and have close relationships with the child (Befu, 1971; Caudill & Weinstein; 1969; Mii, 1988). In fact, repeated studies failed to find any A-type (avoidant-type) attachment children among Japanese subjects (Takahashi, 1986; 1990a; 1990b). Because the Japanese mother–child relationships tend to be closer than their Western counterparts (e.g., Befu, 1971), it could reasonably be assumed that even the present Japanese mother–child pairs wherein the child was reported as being not so much attached to the mother, nevertheless had close relationships.

This may explain why the "affect–facilitation" assumption was not supported while the "social-context" assumption proved to be tenable in this study. For adult model–child pairs whose nurturance is below a certain level, differences in the extent of child's attachment may make no difference in mother's effectiveness as a socializing agent. Only the dyads with enough love may be able to afford to enjoy their interactions in a game-like context, yet behave effectively in a serious and/or urgent context, in short, may reveal clear effects of social context. Further studies among subjects of other countries, such as those of Western countries among which some A-type attachment patterns are identified, would be helpful to advance our understanding about this issue.

The Issue of Attachment Assessment

Some people, who are familiar with attachment assessment based on the Bowlby–Ainsworth paradigm and also with those the findings which have suggested advantages of B-type children in the general development, may wonder if the present results would be reliable. They may claim that the negative function of attachment should be taken with some reservation until the validity of attachment assessment used in this study is proven.

In fact, in this study attachment toward the mother was assessed by the PAT. Based on a theory of social relationships which is described elsewhere (Takahashi, 1990c), the PAT assesses a relative importance of the mother as an attachment figure at the present, because each child is developing and reconstructing a framework of social relationships which consists of multiple figures. The attachment assessment of the present study differs from the conventional attachment measurement in three ways. Firstly, we measured attachment at the moment of the observation, i.e., at 3 years of age, whereas traditional attachment studies usually use types of attachment at 12–18 months of age as a stable index of quality of attachment. Secondly, we measured relative strength of attachment toward the mother, whereas the conventional attachment assessment only and separately focuses on relationships with the mother. Finally, we used the mother as an informant of attachment figures because she was assumed to have had enough observations of the child's everyday life, whereas in the traditional research attachment is usually observed and assessed in a laboratory setting. In this sense, the PAT is similar to the Attachment Q-sort method by Waters and Deane (1985).

In spite of these differences, it is supposed that there is close correspondence between the results of the PAT and the strange situation procedure that guarantees the relevance of the present results to the attachment theory. In addition to the above-mentioned correlations of the frequency of responses to the mother in the PAT with the frequencies of attachment behaviors toward the mother which appeared in the Strange Situation procedure one year before, another longitudinal study of ours indicated that B-type infants, identified as such by the Strange Situation procedure at their 12th month, significantly more frequently chose the mother as an attachment figure in the PAT at 3 years of age, according to their mothers, than their C-type counterparts.

Although both the attachment assessment procedure and cultural backgrounds of mother–child dyads were different to those in the Western mainstream studies, none of this makes the present study too exceptional. We believe that the present study adds knowledge and casts new light on the growing interest in the relationship between attachment and socialization.

Biography

Keiko Takahashi (Ph.D. 1972, Tokyo University) is professor of developmental psychology at the University of the Sacred Heart in Tokyo. She is the editor of *The Japanese Journal of Educational Psychology*. Her theoretical and research interests are focused on life-span development of attachment, role of attachment relationships in development, and cross-cultural studies of social relationships. Her publications include "Affective relationships and their lifelong development" (see References), and "The role of personal framework of social relationships in socialization studies" in H. Azuma, H. Stevenson, and K. Hakuta (Eds.), *Child Development and Education in Japan*. New York: Freeman (1986).

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