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CHAPTER 7

ATTACHMENT AND THE BIRTH OF A SIBLING: AN ETHNOGRAPHIC APPROACH¹

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ABSTRACT

In a qualitative study on the effects of the birth of a second child, five families were observed weekly for a period of about eight months. Before and after the birth, the quality of the attachment relationship between firstborn child and both its parents was assessed in a modified Strange Situation procedure. A network of secure attachments proved not to guarantee a flexible adjustment to the changed family system. A more intensive participation of the father in the care of the child appeared compatible with an improvement of the attachment quality. Three years later, the five families participated in a follow-up study. The adjustment of the anxiously attached child to the changing family system seems - also for a longer period of time - more adequate than that of the securely attached child. On the level of the socio-emotional adaptation, however, the securely attached child has an advantage over the anxiously attached child. This is also the case with respect to intelligence.

INTRODUCTION

The birth of a second child creates a complex network of relationships in which parents and siblings have to find their place. The parents will often try to compensate for the increased "workload" by changing the established division of household and caregiving tasks. The father, for example, might participate more actively in childrearing than before (Krepp-

ner, 1983). The firstborn child, in its turn, has to get accustomed to sharing the available time and energy of the parents with the baby. This usually happens at a time when the child has established a firm and stable relationship with its parents; changes in such a relationship will not pass by unnoticed. Feelings of envy and aggressive behavior towards the baby indicate that the child considers itself threatened by the "intruder" (Dunn & Kendrick, 1982).

In this qualitative study we want to gain more insight into the effects of the birth of a second child on the firstborn's attachments. From the attachment theory formulated by Bowlby (1971; 1973; 1980) and Ainsworth (Ainsworth, Blehar, Waters, & Wall, 1978) we derive the hypotheses for our study. The most important questions are: 1) which changes in the network of attachments are taking place in a period of adjustment to the birth of a sibling, and 2) how are these changes connected with the frequency and quality of the interactions with the parents. In addition to these broad questions, we formulate two concrete hypotheses:

- 1) A network of secure attachments before the birth of a sibling leads to a more adequate adjustment to the changed family system than a network with one or more anxious attachments.
- 2) Under certain conditions concerning the quality of the interactions, a more active role of the father in child-rearing is beneficial to the quality of the attachments of the firstborn child (Van IJzendoorn, Tavecchio, Goossens, & Vergeer, 1982).

In this study, we explore the plausibility of these expectations and suppositions. We do not intend to *test* these hypotheses in a definitive way. We need and use hypotheses for the description of negative evidence. Besides this description, new suppositions and hypotheses are generated, based upon the qualitative data (heuristics). In our view, more controlled and larger-scale studies will have to be utilized to test such discoveries.

The research design reflects our goal of "falsification" and heuristics. We chose an interrupted time series design with five replications. The data were collected by the method of semi-structured participant observation. The data were analysed by means of a new version of content analysis, based upon the work of the ethnographer Spradley (1979; 1980).

METHODS

The sample

Midwives recruited the subjects for this study, asking clients (those who were 6 months pregnant and who had one child, about 18 months old) if they were willing to participate in our research. Five families from different socio-economic backgrounds took part in our project, requiring some 35 weekly observations of the family interactions around suppertime.

A brief description of each family follows.

Family 1. The father, who was 35 years old at the beginning of the observations, works as a technician. The 32 year old mother was a student, during our study she was a housewife. The division of tasks in this family is arranged traditionally: the father earns the household living, the mother takes care of the children. However, during our study the father had a leave of absence of 3 months, a period that fell partly before and partly after the birth of the second child. In those 3 months, the father took over the care of the eldest child. Generally, the parents get about with each other quietly and unobtrusively. They are friendly to one another, listen to each other, and sometimes the father advises the mother. Nevertheless, they are not on the most intimate terms and neither seem satisfied with the present state of affairs.

The firstborn child is a boy, 71 weeks old at the beginning of the observations; sex of the baby is female.

Family 2. The father, who was 35 years old at the beginning of the observations, works as an employee. The 25 year-old mother was a group-leader, now she is a housewife. The father regularly helps the mother with household tasks when he is at home. The traditional division of tasks hardly ever gives occasion to conflicts, both parents seem satisfied with this arrangement. The parents interact in a spontaneous, cheerful and relaxed way. However, the mother is occasionally bad-tempered, she is grumpy and easily irritated, and this has repercussions for the atmosphere in the family. Sometimes there are conflicts between the parents, for example with respect to which strategy has to be followed when the baby is crying. The mother comforts the baby when it cries, whereas the father wants the mother to let the baby cry now and then.

The firstborn child is a boy, 99 weeks old at the start of the observations; sex of the baby is female.

Family 3. The father, who was 29 years old at the beginning of the observations, works as a teacher. The 29 year-old mother

was also a teacher in the past, now she is a housewife. In this family, too, the division of tasks is arranged traditionally: the father earns the money, the mother looks after the children. During our study, the family had several dwelling-places. The parents had sold their old home and bought a new one. The latter, however, is not yet ready so they stay at the homes of members of the family, where the father does not know his way about. Consequently, many household tasks are the responsibility of the mother. She is not particularly fond of this increase in tasks. The parents interact in a very quiet way. They are distant with each other and their feelings show frictions. For example, the mother is very interested in the work of the father. She misses her job, but the father ignores this kind of feelings in the mother. However, real conflicts hardly ever occur.

The firstborn child is a boy, 59 weeks old at the start of the observations; sex of the baby is female.

Family 4. The father, who was 30 years old at the beginning of the observations, is a student. The 30 year-old mother was once a dancer, now she is a housewife. There is neither a traditional nor a clear-cut division of tasks. The father is often at home, the mother is frequently out. There is no regular pattern to the performance of household tasks; the father often attends to these tasks and engages in the care of the children. Since the birth of the eldest child the parents try to share child-rearing, a condition the mother stipulated for starting a family in the first place. The father never thought about these things, he had some hazy notions but not concerning the division of tasks. In any case, a full-time job for one of the partners is not acceptable. The state of affairs seems satisfactory for both parents, they never quarrel about this matter. The parents are on good terms; they communicate well and seem to understand each other's feelings. The only difference of opinion, which is an important one, concerns the handling of the baby. The mother wants to pay attention to the baby when she cries, whereas the father thinks it is not necessary to comfort the baby every time. Sometimes the parents quarrel about this subject.

The firstborn child is a boy, 73 weeks old at the start of the observations; sex of the baby is female.

Family 5. The father, who was 28 years old at the beginning of the observations, works as a docker. The 27 year-old mother was a home help formerly, now she is a housewife. The division of tasks is arranged traditionally: the father earns the money, the mother looks after the children and the household. The father is often engaged in household tasks and in the care

of the children. However, the parents meddle in the pursuits of one another, and they both dislike their mutual interferences. Generally, the atmosphere in the family is even, cheerful and relaxed. Although the parents do not interact very emotionally, they do care for each other. The interaction between the parents crystallizes more in activities than in words. In spite of the harmony within the family, the parents dispute their respective rights to have a say in financial matters or in the performing of household tasks. Real conflicts do not occur in this family, but the opinions differ with respect to the handling of the baby. As in the other families, the mother is more inclined to comfort the crying baby and to keep it company than the father.

The firstborn child is a girl, 94 weeks old at the start of the observations; sex of the baby is female.

The research design

We used a so-called "interrupted time series design" (Cook & Campbell, 1979) with five replications, in which the "interventions" (the birth of a sibling) took place at different points in time in 1982. A control group without the birth of a second child is absent. Strictly causal conclusions cannot be drawn, for the effects of maturation and of the birth of the baby cannot be separated. Three observers paid 1½ hour visits a week to the same one or two families, and collected data through participant observation. The number of visits before delivery varied from 12 to 15 and after the birth of the baby from 14 to 29 (see chapter 8, this volume).

Participant observation is characterized by permission to have a look into the daily life of the subjects. The observer collects his data through participation in the subjects' life, functioning not only as watcher, but as perceiver as well (Plooiij, 1978). The participant observer studies his subjects for the purpose of knowing which situations are customary for these subjects and how they behave in those situations. By entering into conversations, the participant observer tries to gain insight into the subjects' interpretations of events.

The participant as observer can mix with his subjects in different ways. Analysis of the interactions between observers and parents in our study showed that the observers played four roles: a) student; b) friend of the mother; c) expert; d) friend of the father.

The role of a student and the role of an expert are obvious. The parents know that the observer is a student or a graduate, and as a result of that information they push the observers into the corresponding roles. Only in the course of time can

these roles develop into the role of a friend. It would be best if *both* parents considered the participant as a friend. Not until then can the danger be avoided that the observer obtains different information from the parents, merely on account of their view of his role in the family. Roles, once accepted, are exceedingly durable. Changing a once established relationship (from a friend of the father to a friend of both parents, for example) appeared to be practically impossible in our project, implicating a limitation of the validity of this study.

The data collected through observation were supplemented by information from spontaneous communications with the subjects, and from semi-structured interviews. The participant observation, including the conversations and interviews, was focused on a few topics guiding the observational reports. These topics were derived from our research questions and concerned:

- interactions between parents, child and baby
- interactions between observer and the family
- interactions of parents and child with visitors
- parental perceptions of the child's behavior and development
- parental perceptions of the role of the observer
- specific developmental problems such as slow language development, sleeping problems, etc.
- the parents' goals and intentions with respect to the upbringing of their children
- the family's history
- divisions of tasks
- parental ideas about the future of the child

During the visits, these topics were only present in the minds of the participant observers. When visiting the families, the participant observers did not make use of paper and pencil to record their observations. Immediately after the visit, they wrote the observational reports with the aid of the topics to guide the division into paragraphs. Consequently, the reports of the different observers had the same structure. Furthermore, in each report one part was reserved for the description of situations not included in the list of topics, but which seemed important enough to be mentioned. Using a list of topics only as an aid to observe relevant situations, and as a means of producing reports of the same form constitutes the *semi*-structured character of our approach. Thus, collection of the qualitative data was not carried out in a strictly standardized way.

PROCEDURE

Content analysis

The data in our study were collected in a semi-structured fashion. Consequently, data analysis took place *after* data collection. Four topics, chosen on theoretical grounds, guided the data collection, and functioned as main categories in the analysis:

- 1) attachment;
- 2) reactions to the birth of the baby;
- 3) interactions between parents and child;
- 4) interactions between family and observer.

The choice of the first 3 main categories is obvious in view of the object of the study: the influence of the birth of a second child (category 2) on the attachments (category 1) and interactions (category 3) between parents and firstborn child. The fourth main category, interactions between family and observer, is important for determining the influence of the observer's role in the family on the quality of the data (see previous paragraph).

On the basis of the observational reports, these four main categories were differentiated into subcategories. The main category attachment included, for example, the subcategories:

- a) anxiety in strange situations
- b) affection of the father for the child
- c) attachment behavior at home
- d) history of attachment

After completion of the category system, and after defining the categories, the observational reports were coded. The letter representing the relevant subcategory was placed near every sentence or paragraph including an event or interaction of that kind (definitions of categories can be obtained from the authors).

Intercoder agreement

The intercoder agreement for the categorization was determined by a random sample of 16 reports (=9% of all reports). A second coder categorized independently the observational reports according to the coding system. The intercoder agreement was 76%. For the main category attachment, this agreement was 83%, for reactions to the birth of the baby 91%, for interactions between family members 89%, and for interactions between observer and family 93%.

In this study, only the intercoder agreement was determined. Neither in the next phase of the study (taxonomic and componential analyses) nor in the previous phase of data collection, were reliability-tests carried out. With respect to the interobserver agreement, however, the variation in number of observations between families appeared to be larger than between observers. This could be taken as an indication of the objectivity of the data collection, for the family instead of the observer caused the variation in number of observations.

Taxonomic and componential analysis

After the domain analyses, in which all the bits belonging to particular subcategories were catalogued, taxonomic and componential analyses (Spradley, 1979; 1980) were carried out. The dimensions of the taxonomies, giving structure to the global domain, were used to count the frequencies of behavior in each family before and after the birth of the baby (the taxonomies can be obtained from the authors). In the componential analysis, the families were then compared on the basis of these frequencies. A question of the componential analysis in the domain "affection of the father for the child", for example, is: Does the father cuddle his child seldom or often, compared to the other fathers in the study. In the componential analysis, the frequencies on the taxonomic dimensions were interpreted. These interpretations - infrequent or frequent occurrence of behavior - were used to compare the 5 families, and to contrast the periods before and after the birth of the sibling within each family. In the next step, profiles of each family were constructed, based upon the comparisons in the componential analyses.

The Strange Situation

Apart from the qualitative study, the firstborn child and both its parents were seen in a modified Strange Situation procedure, two months before and two months after the birth of the sibling. In the first episode, father, mother and child are in the playroom. In the second episode the father leaves the room; in the third episode the father returns to mother and child; in the fourth episode the mother leaves, returning in the fifth episode. In the sixth episode both parents leave, returning together in the last (7th) episode. Each episode lasts about 3 minutes; behavior is recorded on videotape, and analyzed with the interactive scales of Ainsworth and collea-

gues: proximity seeking, contact maintaining, avoidance, and resistance (Ainsworth et al., 1978). Intercoder agreement for these interactive scales ranged from .88 to .99 for the fathers, and from .82 to .97 for the mothers.

In accordance with Waters, Wippman, & Sroufe (1979) the quality of affective sharing between parents and child in the pre-separation episodes was also coded. Intercoder agreement was 93% for the fathers, and 80% for the mothers. On the basis of the scores on the interactive scales and on affective sharing, the children were classified into four attachment categories: anxious-avoidant (A), secure (B), anxious-dependent (B4), and anxious-resistant (C). There was 100% agreement between two coders on this classification in 15 cases. For details regarding the modified Strange Situation procedure see Vergeer (1986).

After the construction of the profiles, the results of this Strange Situation procedure (unknown to the qualitative researcher until then) were related to the outcomes of the qualitative study. Instead of looking for cultural themes, as Spradley advises in a last step, our study ends with the relating of outcomes from a study in the natural setting to results of a standardized laboratory procedure.

RESULTS

Profiles

Family 1. The child often seeks physical contact with and proximity to the parents. Before the birth of the baby, this contact seeking occurs in a clinging and whining manner from time to time, especially when the father is on a business trip. After the birth of the sibling, this clinging behavior decreases. Anxiety with strangers is apparent during both periods of observation. The child clings to the father or the mother when someone is visiting the family. For a long time he is afraid of the observer as well. Although the child, compared to the other children, infrequently interacts with the observer, the number of interactions increases after the birth of the baby.

The mother thinks her eldest child is drawn more towards the father after the birth of the sibling. During his leave of absence the father indeed takes full responsibility for the care of the firstborn child. To the father's mind, the child requires a lot of attention. He thinks the child is more troublesome and moody than before the birth of the baby, and he attributes this behavior to jealousy. In general, common

interactions between parents and child, such as verbal interactions, play, etc., do not occur very frequently. After the sibling's birth, however, parents and child play a lot more than before.

The pedagogical style is more directive after the delivery. The parents stimulate and punish the child more and allow less. The mother is worried about the slow language development of the child, and after the sibling's birth she tries to stimulate his speech. Regularly, the child has to point out and mention the names of animals depicted on a placemat.

Although the mother did try to prepare the child for the baby's birth by telling about the baby and by letting him feel her belly, she thinks he did not understand much of it. Now, after the delivery, the child is very sensitive to interactions between parents and baby. He immediately crawls to the caregiving parent. After some time, the reactions become more forceful and aggressive. For example, the child hurts himself intentionally, and starts crying to attract attention of the mother, who is feeding the baby. Or he hits the mother as soon as she gives attention to the baby. Three months after the birth of the baby, his aggression is directed toward the baby. Sometimes he is crude to the baby: he slaps her, tries to jab her in the eyes, pushes her head. Therefore, the mother puts off feeding and bathing the baby as much as possible until the firstborn child is asleep. Interactions between child and baby do not take place frequently. Compared to the other children, he shows little interest in the baby. He rarely takes the initiative in interacting with the baby.

Family 2. The child seeks physical contact infrequently but positively, for example, talking with the parents while sitting on their lap. After the birth of the sibling, proximity seeking increases; the child sits near the parents more often than before the birth of the baby. The child is neither afraid of strangers (he offers toys to visitors) nor of the observer. After the birth of the baby the number of interactions between child and observer increases. For the child the observer is, above all, someone to play with. After the birth of the baby the father often cuddles the child. Sometimes the child rejects these caresses. The father adequately comforts the child when the latter is upset or hurts himself.

Before the sibling's birth, the child was called "a normal little fellow", although he was often naughty and did have bad moods. After the delivery, however, the mother only mentions negative aspects: the child has sleeping problems, he protests a lot and is getting naughtier every day. The parents, who have a directive pedagogical style, try to regulate this behavior and demand more independent behavior of the child. He

has to learn to handle cutlery, and he is expected to be toilet-trained within one week. The child, therefore, does have a heavy "workload", and perhaps this is the reason why the number of flagging interactions increases.

The paternal participation in the care of the firstborn child does not increase after the birth of the baby, but the father's share was already large. Compared to the other families, parents and child interact very frequently. Especially after the birth of the baby parents and child talk a lot. Noteworthy is the high frequency of playful interactions. Furthermore, the child likes to be mother's helper.

During the last two months of the pregnancy, the parents talk a lot about the baby. The mother tells the child about bathing and feeding the baby. The first weeks after the delivery, the child interferes playfully in the interactions between parents and baby. For example, the child comes to play "having tea" with mother and baby when the mother is feeding the baby.

About two months after the baby's birth, the child wants to get more attention from the mother. For example, he asks her questions or does naughty things when she feeds the baby. The child sometimes behaves aggressively toward the baby: he tries to sit on top of the baby, he pushes the baby with his feet. The parents play down this behavior, the mother repeatedly tells the observer that "he means no harm". Nevertheless, the parents do punish the child for this kind of behavior. The child interacts frequently with the baby. He likes playing with her. In his play with the baby, the child pretends to give her a bottle, for example. Other interactions are generated by the parents by putting the baby on the child's lap. In such situations, the child cuddles the baby: he kisses her, caresses her and talks to her.

Family 3. The number of times the child seeks physical contact and proximity increases after the birth of the sibling. This contact seeking frequently occurs in a whining way; the child begins to cry when father or mother leave the room, for instance. Compared to the other fathers, this father infrequently cuddles the child, but he does play rough-and-tumble games (play with bodily contact). After the birth of the baby, the child itself initiates this kind of games with the father.

Before the birth of the sibling, the child sometimes began to cry when picked up by visitors. After the birth of the baby, however, he is no longer afraid when confronted with strangers. Neither before nor after the birth of the baby is the child afraid of the observer. Compared to the other children, he often seeks physical contact with and proximity to the observer, especially after the birth of the baby. In spite

of the fact that common interactions between observer and child do not take place frequently, the child does direct attachment behavior toward the observer.

The mother has high expectations of the child's development, but she is rather insecure about caregiving. The father feels more secure. Although they both try to be responsible for the firstborn child, in practice the father is more engaged in the care of the elder child, while the mother mainly cares for the baby. The parents think their child easy-going and obedient. The parents tend to interact only superficially with the child, perhaps because of his inconspicuous behavior. For example, they comment on his behavior without involving him in their interaction. Especially after the birth of the baby, such indirect interactions occur frequently. The parents also play very infrequently with the child, and they do not actively stimulate his language development. With respect to talking, the parents have adopted an attitude of wait-and-see.

The low frequency of common interactions, and the superficial way of interacting, do not imply a permissive pedagogical style. On the contrary, frequent punishment is quite characteristic of this family. Before the delivery, the child was usually punished verbally. However, after the delivery the parents more often punish him physically, for instance, by rapping his fingers or by shaking him.

The parents try to prepare the child for the sibling's birth as in the other families, but the child does not seem to understand much of what is being said. After the delivery, the child very often interferes in the interactions between parents and baby. In the beginning, the parents tend to ignore the child in these situations. For instance, they push the child away, when occupied with the baby. After some time, the mother realizes that she is not giving the eldest child enough attention when handling the baby. From that moment, the parents involve the child more in their interactions with the baby, and the number of times the child draws attention decreases. The child's interaction with the baby is not influenced by these developments. Especially in the first few months, the child regularly interacts with the baby in a tender way. He is the only one out of the five children who comforts the baby more than once when she is crying. At three months after the delivery, the child sometimes shows some aggression and jealousy. Once, for example, the child threw a heavy block into the baby's playpen.

Family 4. Physical contact and proximity seeking increase after the birth of the baby, and from time to time this occurs in a clinging and whining way. The father infrequently shows affection for the child. Before the birth of the baby, the

child is not afraid of strangers, but just after the sibling's birth, he is troublesome when friends pay visits to the family. Two months after the baby's birth, the child reacts positively again to visitors, smiling and talking to them. The child is not afraid of the observer. Although common interactions between observer and child increase after the birth of the baby, the child does not interact frequently with the observer.

Before the birth of the baby the parents described the child positively. He liked to play with other children, was goodnatured and was active and delighted in exploring his environment. After the sibling's birth, the child is out of balance; developing sleeping problems, being moody and disturbed in the presence of visitors and seemingly resisting the mother. The mother is aware of this resistance. She feels insecure about the caregiving and guilty about the problems the child is facing because of the arrival of the baby. The child is attracted to the father, who wants to show that the child is as important as before the baby's birth. Before the delivery, he also felt very attached to and responsible for the child, but after the birth of the baby his share in the care of the child seems to increase somewhat. Neither before nor after the sibling's birth do parents and child interact frequently. Insofar as common interactions take place, they are characteristically very playful, although there is a decrease in playing after the baby's birth.

The parents display a permissive pedagogical style, but after the birth of the baby punishment is applied more strictly. The father in particular starts disciplining the child's behavior. In general, however, the pedagogical style remains permissive.

In the first weeks after the delivery the child interferes playfully with the interactions between parents and baby, but he does not often attract attention when the parents are busy with the baby. In the beginning, the child interacts with the baby in a loving way, sometimes caressing her and kissing her. Little by little the child transfers the blame for the existence of the baby from the mother to the baby. In the first months after the delivery, the child rejects the mother, but when the baby is about 4 months old, the child begins to direct aggression toward the baby. For example, he tries to jab her in the eyes, or tries to pull her through the bars of the playpen.

Family 5. Both before and after the birth of the sibling the child frequently seeks physical contact with and proximity to the parents. The child likes kissing her parents when playing. The father in his turn cuddles the child often, but she does

not always appreciate these caresses. Only during play does the child react positively. The first month after the sibling's birth, the child clings to the father. After that month, however, physical contact seeking with the father ceases.

Before the birth of the baby, the child is sometimes afraid of visitors who pick her up. After the siblings's birth, this anxiety is no longer apparent. Neither before nor after the birth of the baby is the child afraid of the observer. The child frequently interacts with the observer and also seeks physical contact with and proximity to the observer. Compared to the other children, common interactions, in particular, take place very often.

Both parents are involved in the care of their children. The father feels he has to interact not only with the first-born child, but with the baby as well. Therefore, father and child do not interact more frequently after the delivery than before. The mother likes father's participation in the caregiving because it decreases her workload. However, the parents often comment upon each other's behavior toward the children, and they sometimes seem to be rivals in this respect.

The parents describe the child in positive words, before as well as after the sibling's arrival. The child is happy, easy-going and active. Toward the end of the observation period, the child becomes somewhat obstinate, but the parents do not really care, except for eating problems which provoke rather strong physical punishments. For example, the father forces the child to eat, pushing food into the child's mouth, and slapping her on the cheeks when she spits the food out.

Contrary to the other families, the parents do not demand more of the child's behavior after the birth of the baby. Their pedagogical style is less directive; toilet-training is finished before the sibling's birth, for example. Before as well as after the birth of the baby, the parents often interact with the child, but after the delivery the playful interactions almost disappear.

The parents did tell the child about the baby, although they doubt if the child really understood what was going on. After the birth of the sibling the child is not troubled very much. She tries to get the attention of the parents after they have taken care of the baby, needing to be cuddled then. To get the same attention, she sometimes imitates the baby as well. The interaction with the baby is ambivalent. Sometimes the child tries to understand the feelings of the baby, and casts about for explanations for her crying ("hunger"), and sometimes the child interacts in an unkind way. For example, child and observer are looking after the crying baby. The child makes a wry face at the observer and says: "Crying".

After some time she adds: "Puking, bah" (the baby has indeed brought up some milk). When the baby starts crying again, the child says: "Crying? Sleep!" (go to sleep!). She makes a wry face again and walks out of the room. Compared to the other children, the child frequently ignores the baby. For example, when the mother is feeding the baby, the child does not react at all, she keeps on playing.

Quality of attachment

Two months before and two months after the birth of the sibling, the firstborn child and both his parents were seen in a modified Strange Situation procedure. The results of this procedure are represented in Table 1.

Table 1
Quality of child's attachment to mother and father, before and after the birth of the sibling

Attachment ¹	Fam 1	Fam 2	Fam 3	Fam 4	Fam 5
- father before ²	A	B	A	B	B
- father after	B	B	B4	B	A
- mother before	B	B	C	B	B
- mother after	B	B	C	A	B

Note. ¹ A = anxious-avoidant B4 = anxious-dependent
 B = secure C = anxious-resistant
² before = before the birth of the second child
 after = after the birth of the second child

The measurements carried out two months after the delivery show a great deal of variance with the results four months earlier. In family 1, 4 and 5, shifts from A to B and vice versa can be observed. Only family 2 has a complete secure network, and family 3 a complete anxious network. The relationship with the mother appears to be more stable than with the father.

DISCUSSION

In the following, the results of the Strange Situation procedure combined with the profiles of the families are used to

test the hypotheses of our study and to generate some new hypotheses.

Our first hypothesis, mentioned in the introduction, was: a network of secure attachments before the birth of a sibling will lead to a more adequate adjustment to the changed family system than a network with one or more anxious attachments.

From the analyses, we may conclude that a secure network is definitely no guarantee against the presence of envy toward the baby. Regardless of the quality of attachment, all children seem out of balance when having to share their parents with a sibling. Furthermore, almost all children take out their negative emotions on the sibling only after a few months. Prior to that time, the parents are their target. This is in agreement with the notion of Kreppner and his colleagues (1982) that the firstborn child feels the necessity to strike a profile as soon as the baby gets more active and manifests itself more clearly.

Thus, a secure relationship apparently does not provide the child with sufficient confidence to accommodate easily to the shock of the arrival of a sibling. Although vehement reactions are absent in families 2 and 5, in which a secure network existed before the delivery, this is also the case in family 3 with the anxious network. This anxiously attached child even interacts more tenderly with the baby than the other 4 children. We may conclude that even a trustful affective bond is severely tried by the birth of a baby, but we may also conclude that even an anxious attachment network is not necessarily an impediment to a relatively harmonious adjustment to the changed family system. Perhaps due to the absence of a secure bond with the parents (Dunn & Kendrick, 1982), the anxiously attached child compensates by interacting tenderly with the sibling. Or as Kreppner (pers. comm.) from a systemic viewpoint remarks: the anxiously attached child is in search of a partner in an isolated situation. A new sibling-subsystem has been established, enhancing the chance of finding a new equilibrium within the enlarged family system.

Our second hypothesis was: under certain conditions concerning the quality of the interactions, a more active role on the part of the father in childrearing is beneficial to the quality of the attachment of the firstborn child.

In the 5 families of our study, a relation between paternal participation in the care of the firstborn child and the development of attachment does exist. If the participation is more intensive, the quality of attachment improves. The father in family 1 participates actively after the birth of the second child. The anxious-avoidant relationship turns into a secure attachment. To a lesser extent, the same is true for family 3, if we accept the conclusion that B4-children have a

better prognosis than the other anxiously attached children (see Van IJzendoorn et al., 1984). In family 4, the father participates more actively too, but the child is already securely attached to the father. In family 2, the father did participate intensively, not only after the birth of the baby but before as well. The child remains securely attached to his father. In family 5, both parents try to share the caregiving tasks for both children. The father does not invest more of his time in the care of the firstborn child. The child, who was securely attached before the sibling's arrival, has an anxious-avoidant attachment to the father after the birth of the baby.

In addition to these answers to hypotheses formulated prior to the data collection, our study generated the following new hypotheses:

1) A secure attachment is not a necessary and sufficient condition for a smooth pattern of family interactions. In family 2, the child is securely attached to his father and mother at both times of measurement, but the mother thinks the child is difficult to handle. To her mind, the child is moody, naughty and obstinate. After the birth of the sibling, the child develops sleeping problems and shows much protest behavior. The child in family 1 is perceived more or less in the same way. This child is securely attached to both parents after the arrival of the sibling. Nevertheless, the father perceives him as jealous, troublesome and moody. In contrast to these two securely attached children, the anxiously attached child from family 3 is characterized as calm, easy-going and obedient. The parents are satisfied with his behavior: he can amuse himself very well, he does not cry much, and is satisfied under all circumstances. The parents do not consider their bond with the child problematical. Perhaps the parents fail to notice the anxious attachment because they lack the sensitivity to perceive the emotional problems of their child. This same insensitivity may have caused or contributed to the development of an anxious relationship. With respect to the securely attached children we suggest that the existence of behavioral problems may be an indication of the resiliency of a secure network. The securely attached child knows it can work out its conflicts and problems without risking the secure relationship. These speculations have to be investigated in large-scale studies; the same holds for the finding that anxious attachments are not always considered problematical.

Characterizing a securely attached child as troublesome and an anxiously attached child as easy-going seems to be contradictory. However, the parental perception of the bond with

the firstborn child agrees very well with the outcomes of the Strange Situation. The mother in family 1, for example, remarks that her child is strongly attracted to the father after the sibling's birth. Precisely in this case, the relationship between father and child improves from A to B. In family 3, the father thinks the firstborn child is more attracted to him after the delivery, and this is in agreement with the relative improvement of the quality of attachment from A to B₄. In family 4, the parents think the firstborn child feels drawn to the father after the birth of the baby, while showing indifference to the mother. These perceptions correspond well with the change in attachment classifications: after the sibling's arrival, the child is securely attached to the father but anxiously attached to the mother.

2) A comparison of the attachment qualifications with the attachment behavior of the child at home results in the following hypothesis: it is not the frequency of physical contact and proximity seeking but the nature of such behavior that is of greatest importance. If a child shows attachment behavior in a positive way (for example, playing on a parent's lap) this seems to be an indication of a secure attachment relationship. If a child shows negative attachment behavior (for example, clinging to the legs of the mother, or crying when mother leaves the room), this may be an indication of an anxious attachment.

Before the birth of the sibling the child in family 1 seeks physical contact and proximity to the parents in a clinging and whining fashion. After the birth of the baby the child is securely attached to both parents, and clinging and whining decrease. The child in family 2, who is securely attached both before and after the birth of the baby, hardly ever shows clinging or whining behavior. When he seeks physical contact this happens in a positive way: talking with the parents while sitting on their lap. This pattern - whining and/or clinging in a period of anxious attachment - is also apparent in the behavior of the other three children.

3) From the analyses we may derive a hypothesis about the relationship between attachment and the amount of playful interactions in the family. The child is usually securely attached when parents and child play a lot. On the other hand, when parents and child play very little, the attachment relationship appears to be more anxious.

In family 1, playful interactions increase after the delivery, and in the same family the quality of attachment with the father improves considerably. In family 2, with the secure network, the parents play a lot during the whole observation period. In family 3, play occurs only rarely, and here the most insecure attachments exist. After the delivery, a slight

increase in playful activities is mirrored by a slight improvement of the quality of attachment with the father. In families 4 and 5 the amount of play decreases after the sibling's birth, and this corresponds with a deterioration of the attachment quality; in family 4 with the mother, and in family 5 with the father.

Since frequent interacting and frequent talking do not seem decisive with respect to the quality of attachment, it is probably not sheer *quantity* of playful interactions that counts. The specific nature of playing, contrasting with other interactions, might be more important: only in playing is the child the center of interest. In other interactions adults rule the roost. Or it might be, as Volling (pers. comm.) suggests, that playful interactions arouse a more positive affect or a more pleasing social exchange which in turn foster secure attachment relationships. The crucial role of playful interactions for the development of attachment has also been mentioned by Dunn and Kendrick (1982), and by Lamb et al. (1982).

4) A last hypothesis concerns the correlation of pedagogical style with the quality of attachment. After the delivery, the pedagogical style in family 1 turns from permissive to directive. In this period the child has a better attachment relationship with the father. The directive style in family 5 changes to a mixture of a directive and a permissive approach. During this period, the child is anxiously attached to the father. The children from families 1 and 5, therefore, are both securely attached when their parents have a directive style, and are both anxiously attached to the father when the parents have a more or less permissive style. The permissive style in family 4 is mainly practiced by the mother, to whom the child is anxiously attached after the delivery. The father, to whom the child is securely attached, has a more directive approach; he tries to regulate the child's behavior more strictly. Of course, a directive style is not a sufficient condition for a secure attachment, for in family 3 a directive style dominates, and in this same family there is an anxious network. Perhaps only the combination of playful interactions and a directive style is such a condition.

Furthermore, one should not simply assume a causal relation between the birth of a sibling and a change in pedagogical style. It might be that parents make higher demands upon the growing child, irrespective of the arrival of a sibling. Generally, parents have higher expectations of their child with respect to discipline and self-reliance after the first year (Kreppner, pers. comm.).

CONCLUSIONS

In a qualitative study, five families were observed weekly during the three months before the birth of a second child, and for about five months after the arrival of the sibling. Using participant observation and semi-structured interviews, the behaviors, the intentions and feelings of the subjects were described. Through systematic content analysis, based upon the work of Spradley, profiles of family interactions were constructed. The quality of the firstborn child's attachment with his father and mother was measured in a modified Strange Situation, two months before and after the delivery.

The results show that all children have problems with the arrival of a sibling, expressing it, for example, by aggressive reactions to the intruder. A secure network does not guarantee a smooth adjustment to a tetradic family system. The most harmonious sibling relationship exists between an anxiously attached child and his little sister. Generally, a secure network does not exclude behavioral problems; on the other hand, anxious attachments are not necessarily perceived by the parents as a pedagogical problem. Yet parents are capable of perceiving changes in attachment, as measured in the Strange Situation, in their daily life.

The results also show that an intensive participation of the father in family life can be compatible with an improvement of the quality of the firstborn's attachments. This quality seems to be determined, among other things, by the frequency of playful interactions; the frequency of other interactions seems to matter less. Pedagogical measures do not show much correspondence with the quality of the attachment network. A permissive style certainly does not guarantee the development of secure attachments; however, a directive style does not seem to be decisive either. The results show that strict rules and the consequent stimulation of behavioral and cognitive competence do not exclude an improvement of the attachment quality.

THREE YEARS LATER

Introduction

Three years after the birth of the second child, the five children and their parents participated in a follow-up study. The most important question of this follow up study was: what

effects do the different attachment relationships have on the functioning of the children when they are about five years old.

To answer this question, we firstly investigated the socio-emotional adjustment of the children. This adjustment is expressed in the degree of ego-resiliency and ego-control. Block and Block (1980) define ego-resiliency as "the resourceful adaptation to changing circumstances and environmental contingencies" and ego-control as "the threshold or operating characteristic of an individual with regard to the expression or containment of impulses, feelings and desires". Securely attached children are assumed to make a better socio-emotional adjustment (i.e., a high degree of ego-resiliency and a moderate ego-control) than anxiously attached children at the age of 5 (see chapter 5, this volume).

Secondly, the quality of the interactions between mother and child, and father and child during problem-solving has been investigated. The affective and cognitive "tuning in" of the parent to the child was determined by making parents and child perform a few tasks. We assume that interactions within a secure attachment network run more smoothly than in an anxiously attachment network (see chapter 5, this volume).

Thirdly, the children were tested with respect to their cognitive development. The assumption is that the cognition of securely attached children is on a higher level than that of anxiously attached children.

Fourthly, we had an interview with each mother about the past 3 years, discussing the reactions of the eldest child to the sibling as well as other important events.

Methods and procedure

To determine the ego-resiliency and ego-control of the children, a Q-sort was used: the Nijmegen California Kinder Sorteertechniek (Van Lieshout et al., 1982). Both parents and nursery school teacher sorted the 100 personality-relevant items in order to provide a picture of the child. These judgments were correlated with two ideal-type cases, derived from the research of Block and Block: a profile of a child with a high ego-resilience, and a profile of a child with a weak ego-control. The correlation coefficient is the score on resiliency and control, and takes on values between -1.00 and +1.00. These scores were then compared with the means of the subjects of the study described in chapter 5 of this volume. Thus, the subjects of that study serve as a standard for the description of the 5 children.

In order to determine the quality of the interactions, mother and child performed 4 tasks:

a) copying a Duplo-construction from a photograph (Duplo)

- b) ranking 5 pictures in a logical story (Logic)
- c) stacking 10 little tubs in order to get 1 tub (Butterdish)
- d) putting together 9 corrugated blocks in order to get 1 big rectangular block (Wiggly)

Father and child performed 3 tasks:

- a) copying a mosaic (Mosaic)
- b) putting abstract figures in the right places in a framework (Inlay)
- c) putting pawns of different size in the right places in a standard (Pawns).

The parents were instructed to help the child as they are accustomed to. The activities during problem-solving were registered on video. Observation scales (mostly 7-point scales) were developed to measure the contribution of the parent to the affective climate, the instruction behavior of the parent, the interaction between parent and child and the competence of the child.

The interrater agreement with respect to the mother-child interaction was good (for Duplo $r=.83$; Logic $r=.82$; Butterdish $r=.84$; Wiggly, $r=.85$). Because the same scales (as for Duplo, Logic and Butterdish) were used for measuring the father-child interaction, and the same rater as well, determination of the interrater agreement with respect to the tasks performed by father and child, was deemed unnecessary.

In a next step, the scales were summarized with the help of factor analysis (see chapter 5, this volume).

To determine the level of the cognitive development of the children, 5 subtests of the "Leiden Diagnostic Test" were used. The selection consisted of: "Block design", "Word span", "Picture indication", "Repeating sentences", "Comprehension". This combination covers the greatest range of functions with the least number of tests, and can also be used as a foundation for the calculation of IQ. We used the LDT manual to score the answers of the children (Schroots & Van Alphen de Veer, 1976).

Apart from determining the IQ of the children in this manner, the tests were registered on video with the purpose of judging the behavior of the children toward the experimenter and the test situation. Thus, the LDT was not only used to determine the cognitive competence of the children, but also as a means to describe the behavior of the children in a stressful situation. Rating scales were constructed to measure if the child was at ease, the degree of obedience, interaction with the experimenter, self-reliance, pleasure/energy, reaction to failure and concentration. Two raters independently scored the tape of one of the 5 children. The interrater agreement was good: 82%. With the aid of these scales, qualitative

descriptions of the 5 children were constructed (Lambermon, 1986).

Results

In the following, the results of the follow up study will be reported upon within a description of each of the 5 families. In table 2 the numerical results of the different methods will be presented.

Family 1. The composition of the family has remained unchanged: father, mother, and two children. Meanwhile, the mother has got a job for 24 hours a week as a laboratory worker. She did not aspire to working outside the home; the job was simply offered to her. As an advantage of working outside the home the mother mentions "being away from the house", but as a disadvantage she mentions "a feeling of constraint". Just as three years before the mother does not seem satisfied with the current state of affairs. The elder child, who was about 2½ years old when the mother became employed, had to get accustomed to the baby-sitter. He was troublesome when the mother left the home, but after some time separation was easier. Furthermore, the mother remarks during the interview that the elder child likes his little sister. They play together a lot, although there is rivalry between them too.

One of the most striking results of the follow up study concerns the low intelligence of the eldest child, as measured with the LDT. During the qualitative study three years ago the mother already thought to perceive a slow development of the child. She thought the child spoke badly, and therefore she tried to stimulate his speech. Regularly, the child had to point out and mention the names of animals depicted on a placemat. This idea of the mother concerning a slow cognitive development is mirrored in the low scores on all subtests of the LDT.

During the test, the child is curious and cheerful. He enjoys the activities and does his best. In the beginning of the test he is a bit uncertain and tense, but in the course of the test his self-reliance increases: he is satisfied with his performance, admits mistakes in a laconic way. When he fails, because the tasks are too difficult, he seeks the support of the experimenter, who motivates him again. His concentration is not optimal, sometimes he is distracted. However, this distractedness, caused by a playful and curious attitude, does not seem to be detrimental to the test results.

The tasks performed by parent and child show that both father and mother give the child many instructions. As the tasks become more difficult (Butterdish and Wiggly) the mother

Table 2
 Display of attachment classifications at the age of 2; ego-resiliency and ego-control, IQ according to the LDT, and parental instruction behavior at the age of 5

	Fam 1	Fam 2	Fam 3	Fam 4	Fam 5	Standard-group (n=65)
Attachment						
M before ¹	B	B	C	B	B	
M after	B	B	C	A	B	
F before	A	B	A	B	B	
F after	B	B	B4	B	A	
Ego-resiliency						
Parents	.41	.63	.58	.73 ²	.42	.49
Teacher	.79	.68	.43	.66	-.50	.46
Ego-control						
Parents	-.15	.11	-.19	.16 ²	-.16	.12
Teacher	-.16	-.21	-.19	-.11	-.29	.01
Agreement						
Mother-Father	.55	.71	.57		.45	.54
Mother-Teacher	.67	.54	.54		.20	.42
Father-Teacher	.46	.42	.61	.55	.00	.41
IQ according to LDT	78	123	108	127	102	111
Instruction mother:						
affective climate	9	17	21	21	10	
Wiggly climate	14	13	17	17	7	
instruction Duplo	11	8	18	12	11	
Logic	12	8	15	8	14	
Butterdish	13	7	10	7	12	
concrete actions	9	7	9	9	9	
instruction Wiggly	15	13	17	14	8	
Instruction father:						
affective climate	5	13	9	4	10	
instruction Mosaic	16	14	21	17	14	
Inlay	11	7	8	4	8	
Pawns	16	20	15	12	17	

Note. ¹ M = mother; before = before birth of second child

² F = father; after = two months after birth of second child

Resiliency and control as perceived by the father (the Q-sort of the mother was received too late)

gives the child more instructions. The fact that the child also receives many instructions when performing easy tasks could be connected with the low intelligence of the child. Generally, neither the father nor the mother create a "warm" atmosphere, with the important exception of the most difficult task.

The ego-resiliency of the child is, in the opinion of the parents, lower than the mean of the standard group. The nursery school teacher, however, notices a high degree of ego-resiliency. Parents and teacher are in agreement as to ego-control: control is lower than the mean of the standard group, meaning that the child's ego-control is too strong.

Family 2. The family still consists of 4 members: father, mother and the two children. During the interview, the mother relates that a half year of observation was too short, for the "trouble began" when the baby was about 6 months old. The baby did not like sitting in the playpen, and therefore was "all about the place" when she was very young. The elder child did not like the baby moving around in the room, he would try to sit down on her, for example. However, this period of "trouble" did not last long. Now the children are on good terms with each other, often playing in a nice way. Sometimes they quarrel, "but it's all in a day's work", as the mother says.

The results of the cognitive test show a high intelligence. In the beginning of the test the child is inhibited, but subsequently he relaxes (laughing, joking). The child seems to have a considerable dose of self-reliance. He does not need much support; only when the block designs are difficult does he seek support. He does his best, and after the first subtest he also enjoys the activities. Furthermore, the child is pliable and obedient. In the course of the test he becomes tired and his concentration decreases.

The tasks performed by parent and child show that the mother gives few instructions, whereas the father gives a moderate number of instructions. The most difficult task (Wiggly) draws a large number of instructions from the mother. She adjusts the instructions to the level of difficulty of the tasks. The mother creates a moderately warm atmosphere when the child performs the tasks. The father creates a climate full of warmth.

Both parents and nursery school teacher think the child has a high ego-resilience. The opinions concerning ego-control differ, however: in the opinion of the parents, the degree of ego-control agrees with that of the standard group, whereas the teacher notes a strong control. The threshold of the containment of impulses, feelings, and desires seems to be higher at school than at home.

Family 3. In the meantime the family has been expanded to 5 members; another baby was born two years ago. It was planned that the eldest child and his little sister should stay with family for a week when the mother had the third child. However, the eldest child held out only for two days. During those two days he did not want to eat or drink so the father fetched the child. The mother thinks that the child's reaction had been caused by a former separation. Three years ago, the family moved to their new home. During the removal, the mother left both children with the grandparents, where the children were to stay for a week. The mother did not say goodbye to the eldest child when she left the grandparents, expecting the child to cry if she did. Afterwards the grandmother related that the child repeatedly asked for his mother. The grandmother would then show the child a photograph of the mother, regularly saying "Mummy will come and fetch you". After this stay every time he had to sleep elsewhere, the child asked his mother: "You will stay here mummy, you won't go away, will you?" Also when the child is allowed to have dinner elsewhere, he still asks: "But I'll come back to sleep here, won't I mummy?" The mother says: "That first experience stuck, and he could not even talk then!"

Until the moment the baby was beginning to be mobile the eldest child was fond of his sister, but he did not like her crawling and her manipulating his toys. He snatched everything away from her, but his sister took everything away once again. The eldest child was very surprised by this behavior, but he never reacted aggressively toward his protesting sister. Once the eldest child had accepted that all things also belonged to his sister, the boy and the girl were just like twins: they did everything together and they still play together a lot.

The mother relates that the eldest child has always been easy-going. A moment later she says: "Actually: one *thinks* sometimes he is easy-going, but he falls short of one's expectations now and then". When his little sister had her birthday, many children came to the party, organized by the parents. A few months later the eldest child said to the neighbor: "My little sister had her birthday and there were a lot of children; when I had my birthday there weren't any children". Mother thought this a sad story when she heard it. The eldest child had never said this to his parents, but he did to the neighbor. Mother: "Yes, and you think he's easy, and yet that stuck in his mind".

According to the LDT, the child has a moderate intelligence. During the test he is inhibited, in the beginning somewhat more than in the subsequent subtests. This inhibition is expressed by soft muttering, sometimes his hands in front of his mouth, a tense facial expression and little eye con-

tact. During some subtests he seeks support with a very uncertain attitude; however, he tends to take the support as criticism. At the outset he makes an uncertain impression, later on he gets more self-reliant. He does not enjoy the activities, sometimes showing resistance to the tasks; he asks, for example, if he is allowed to do something else. He does his best, with the exception of "block designs". In the course of the test his concentration decreases.

The tasks performed by parents and child show that the mother creates a very warm atmosphere (she smiles often, she does not hold back at all), whereas the father creates a moderately warm atmosphere. Both parents, but especially the mother, give many instructions. Notable is that the mother also gives many instructions when the child performs easy tasks (Duplo and Logic).

In the opinion of the parents, the child's ego-resiliency is higher than the mean of the standard group, whereas the nursery school teacher judges the resiliency somewhat lower than the mean. The parents and teacher are in agreement as regards ego-control: the child has a strong ego-control.

Family 4. In the meantime, the family has been expanded to 5 members; a year ago another baby was born. With respect to the period after the qualitative observations, the mother relates that the eldest child was annoying to the second child when the latter was about 1½ years old. When his little sister was playing, the eldest child would upset her playing. He would then not play with her, but sat down elsewhere and was bored. He once more interfered when his sister found something new to play with. This happened in the period preceding nursery school. The mother relates that the eldest child was horribly bored before he went to school, and he was in a bad temper. Once at school, these troubles ended. Now the eldest often plays with his sister, but they quarrel about little things too. Furthermore, the mother relates that the eldest child looks sulky and kicks at the mother when he sees her again after the parents have been away for a night, and the child has been under the care of a babysitter.

According to the LDT, the child has a high intelligence, the highest IQ of the 5 children in the study. During the test he is not inhibited. Sometimes he is frank, which goes together with provocative behavior, trying to take control. He creates a self-confident impression. He does his best and his concentration is good. During "block designs", he shows resistance to the task; for example, by walking away from the table, or by making designs which he wants the experimenter to copy. Here he tries to invert the authority relationship. During the other subtests, the child is more pliable and

obedient. Only in performing "block designs", does the child seek support, but at the same time he has difficulty in accepting that support (and criticism). The child does not enjoy the activities; he is pent-up in his manner.

The tasks performed by parent and child show that the mother gives a moderate number of instructions. Notable is that she gives many instructions when the child performs the easiest task (Duplo). The father gives few instructions. Another difference between father and mother is that the mother creates a very warm affectionate climate, the father not at all.

Both father and nursery school teacher consider the ego-resiliency of the child high (unfortunately, the Q-sort of the mother was received too late). In the opinion of the father, ego-control is near the mean of the standard group, whereas the teacher notes a strong ego-control. The threshold of the containment of impulses, feelings and desires seems to be higher at school than at home.

Family 5. The family still consists of 4 members: father, mother and the two children. During the interview the mother relates that the eldest child began to get jealous when the baby was able to crawl about. The eldest child then tried to put the baby back in the play-pen, or in bed. In the beginning, the eldest child did not like the mobility of the baby. She soon got accustomed to it, however, and accepted this new situation rapidly. Now both children play a lot with each other. The eldest child likes playing "nursery school teacher", imitating school situations, in which her little sister is pushed into the role of "child". Also, during the visit to the university, the child puts her father, mother and the two investigators in a circle, and tries to lead a conversation (just as at school).

According to the LDT the child has a moderate intelligence. Just before the test starts, the father says to the child that she has to do her utmost. This might be the reason that the child is inhibited at the beginning of the tests. Later on she is more relaxed, making spontaneous remarks and jokes. The child is a good girl, doing what the experimenter requests. However, she tries to withdraw from "block designs". She has difficulty in accepting her failure and the criticism of her mistakes when performing this subtest, although she is motivated by support. As soon as she reaches her limits, she does not ask for help, but for permission to stop the subtest. Self-reliance varies with the subtests. The child is uncertain and tense in performing the first two subtests, but more self-confident during the last two tasks. Apart from "block designs", she does her best and her concentration is good. She

enjoys only the first subtest, disliking the other tasks. As soon as the child thinks the tasks difficult, she loses courage and gets moody.

The tasks performed by parents and child show that the mother, as well as the father, give a moderate amount of instructions. Notable is that the mother gives few instructions when the child has to perform the most difficult task. The mother is not sufficiently skilful to solve the Wiggly-problem, and the child stops trying. The father creates a warm atmosphere during the performance, the mother not at all.

In the opinion of the parents, the ego-resiliency of the child is somewhat below the mean of the standard group. Striking is the judgment of the nursery school teacher: she notes a very low ego-resiliency. The parents notice a strong ego-control, the teacher to an even greater extent.

Conclusion

All 5 children had difficulty with the mobility of the baby. From the stories told by the mothers, child 2 (the completely securely attached child) seems to have reacted most aggressively to this mobility, and child 3 (the completely anxiously attached child) the least. The conclusion of three years ago, that a secure attachment network is not a guarantee for a smooth adjustment to changing family situations (whereas in an anxious attachment network such adjustments may take place in a smooth way) seems also applicable over a longer period of time.

In spite of differences between the 5 children, the parents think their children resilient. However, the nursery school teachers of children 1, 3 and especially 5 do not agree with the parents. According to the teacher, child 1 has a high ego-resiliency, whereas the teacher of child 3 rates the child's resiliency much lower than the parents. The most striking deviation concerns child 5: according to the teacher, the child has a very low ego-resiliency (she shows ego-brittleness). Child 5 deviates strongly from the other 4 children in this respect. Child 5's imitation of the teacher and school situations in her play at home probably serves as a means of working out problems at school.

With respect to ego-control, all children show (too) strong control at school. In the opinion of the parents, however, the degree of ego-control of child 2 agrees with that of the standard group. This is also the case in the eyes of father 4. The other 3 children show a strong ego-control not only at school but at home as well.

The judgments of the 10 parents differ remarkably in one respect: the parents of the securely attached child 2 have a

much higher consensus in their perception of their child than the other parents. The judgments of parents 5 show the least consensus, and neither parent agrees with the judgment of the teacher. With respect to the socio-emotional adjustment, child 2 from the secure attachment network appears, as expected, to have made the best adjustment. This child has an optimal ego-resiliency and ego-control in the opinion of the parents, although this control is too strong at school.

The intelligence of the securely attached child 2 is high, and that of the anxiously attached child 3 is moderate. Striking is the low intelligence of child 1, which at the same time, however, confirms the supposition of slow development remarked by the mother three years earlier. The efforts of the parents to stimulate the language development of the child at that time are mirrored in the many instructions they give the child during problem solving three years later. The securely attached child 2, and child 4 from the mixed attachment network, who both have a high intelligence, receive few instructions. Child 5 with a moderate intelligence receives a moderate number of instructions. Therefore, it is striking that child 3, who has a moderate intelligence, gets so many instructions, especially from the mother, not only during the performance of difficult tasks but also during the easy ones. The mother gives the child little opportunity to show his competence. The father is apt to behave similarly, but to a lesser degree. Also striking, however, is the positive climate created by the mother when the child performs the tasks. Mother 4, to whom the child is anxiously attached after the birth of the second child, creates a warm atmosphere too. The mothers 1, 2 and 5, to whom the children are securely attached, are more reserved. Mother 5 even holds back, which seems to be related to the sex of the child (child 5 is a girl). In the standard group, the atmosphere between mothers and daughters was also worse than the climate between mothers and sons. The atmosphere created by the 5 fathers during the performance of the tasks is in agreement with the degree of affection shown three years earlier. At that time, fathers 2 and 5 showed more affection than the other fathers, just as three years later.

Comparing the secure attachment network (family 2) to the anxious attachment network (family 3), the adjustment of the anxiously attached child to the changing family system seems, also over a longer period of time, more adequate than the adjustment of the securely attached child.

On the level of the socio-emotional adjustment, the securely attached child has an advantage over the anxiously attached child: the degree of ego-resiliency and ego-control of child 2

is more optimal, although he - just as child 3 - shows too strong an ego-control at school. Another advantage concerns the cognitive level: the intelligence of child 2 is higher than that of child 3, which of course does not mean that type of attachment relationship results in a particular IQ. In a large-scale study on the relation between attachment and intelligence, the securely attached children did show the highest intelligence; however, the C-children performed very well on the intelligence test too (see Van IJzendoorn & Van Vliet, 1986).

Furthermore, the securely attached child shows more self-reliance during the performance of the subtests of the LDT, and he also enjoys doing these tasks much more than the anxiously attached child. Child 3 is uncertain, shows less self-reliance, and does not enjoy performing the tasks. The quality of the interactions within the secure attachment network during problem-solving is positively distinguished from the quality of the interactions within the anxious attachment network: the parents of child 2 give less instructions to the child than the parents of the anxiously attached child 3. The difference between mother 2 and mother 3 is particularly clear: mother 2 gives her child much more opportunity to find the solution than mother 3. Nevertheless, it is peculiar that mother 3 creates a "warmer" atmosphere during the performance of these tasks than mother 2.

Three years earlier, the parents of child 3 did not notice any problems in their attachment relationship with the child: they thought him obedient, easy-going and calm. At that time, we mentioned a lack of sensitivity to perceive the emotional problems of their child as a possible explanation. Three years later, the mother is aware of this insensitivity when she corrects herself by saying: "You think sometimes he is easy-going, but that isn't always the case". In the meantime the mother has experienced that much more is going on in the child than he expresses. For a long time the mother considered the child's awareness as being equal to his verbal competence, implying that the child would be impressed by events only from the moment he was able to talk. This misunderstanding and the several separations the child went through, seem to have contributed to the further development of the anxious attachments.

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