INTERVENTION FOR INSECURELY ATTACHED ADOPTED CHILDREN
IN THEIR SECOND YEAR OF LIFE

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Abstract
This experimental study aims to change insecure attachment at 13 months into secure attachment at 19 months by a professional intervention with video-feedback and advice at 14-17 months. The participants in this study are first-time adoptive mothers and their children, internationally adopted between 6 and 12 months. Dyads insecurely attached at 13 months are randomly assigned to the experimental or the dummy-control-group and the experimental group receives a short-term intervention, aiming to enhance maternal sensitive responsiveness. A pilot-group (N=6) will be described and two case studies will illustrate the intervention. An insecure-avoidant (A) child and an insecure-ambivalent (C) child both became securely attached (B) to their mother at 19 months.

Introduction
A preventive intervention study with first-time adoptive mothers of children adopted before the age of five months has been undertaken at the Center for Adoption Studies at Utrecht University (Juffer, Hoksbergen, Kohnstamm & Riksen-Walraven, 1995). A central question was, whether these infants could develop a secure attachment relationship and whether a professional intervention would promote secure attachment by enhancing the sensitive responsiveness of the mother. Results indicate that 30% of the adopted children in the control group were insecurely attached -as is found in most non-clinical populations- and only 10% of the adopted children in the video-feedback intervention group were insecurely attached.
This study is focusing on children who arrive in the Netherlands between their 6th and 12th month of age. The intervention, the design and the instruments are similar to those of the previous study. The goal of the current study is to evaluate the effect of an attachment-based intervention during the children's second year of life.

Research questions
1. How is the quality of attachment and the cognitive development at 13 months?
2. Does the intervention change an insecurely attached relationship at 13 months into a securely attached relationship at 19 months?
3. Does this intervention affect the cognitive development of the child at 19 months in this group?
Procedure
First-time adoptive mothers-to-be of children, internationally adopted between 6 and 12 months, are asked to participate in this study by their adoption counsellor and they receive a letter of the researcher with a reply form. When it is possible the researcher interviews the mother before the arrival of the child. At the child’s age of 12.5 months the researcher makes an appointment to visit the dyad at home to make video registrations of the mother-child interaction. Afterwards mother and child are invited to the laboratory for the pre-assessment of the attachment-relationship with the Ainsworth’ Strange Situation Procedure. During a second home visit the Bayley Scales of Infant Development are administered.

Those dyads who get the classification A (avoidant) or C (ambivalent) according to the Ainsworth’ A-B-C-classification system at the pre-assessment are randomly assigned to the experimental or the dummy-control-group, using a block-design for the A-subgroup (avoidant) and the C-subgroup (ambivalent). The securely attached dyads (B-subgroup) are invited for the post-assessment at 19 months. The experimental group receives a short-term intervention. The method is a pretest-posttest control group design with one experimental group (insecurely attached at pre-assessment), one insecure dummy-control group (insecurely attached at pre-assessment) and one secure control group (securely attached at pre-assessment). At pre-and postassessment quality of attachment, quality of mother-child interaction and cognitive development are measured.

Intervention
Departing from attachment theory a brief intervention aiming to enhance maternal sensitive responsiveness in order to promote secure infant-mother attachment relationship and infant competence was designed, based on Juffer et al.’s (1995) intervention study.

The researcher visits the dyads in the experimental group in their home four times. During every home-visit the researcher makes a video-recording of the mother-child interaction. The researcher shows the mother the video-recordings at the next visit and gives feedback and advice according to these images. The mother is stimulated to react sensitively on initiatives for contact of her child. She also learns not to interfere when the child is exploring. An important issue for this particular group is, that the mother learns to understand the often weak signals of insecurity, due to the child’s experiences in his birthcountry. At the second and third home visit this group will receive booklets with information about the life of the toddler and the special feature of being adopted in the second half of the first year. As advice we often use the metaphore of giving "an extra spoon full of contact-vitamin".
Pilot group (N=6)
Most children (four) are born in Asia, two came from Brazil, five children are girls, their mean age at arrival is 7.7 months and the majority (five children) has lived the first months of their life in an institution. Two children appeared to be second adopted children in their family (nr 2 and nr 3), the other four are the first child of their adoptive parents.

Attachment
Three children were insecurely attached to their mother at 13 months (classified with the Ainsworth A-B-C-system for classification). This 50% insecure attachment was more then the 30% of the Juffer study (1993) with children adopted before the age of 5 months. Medical problems (epilepsy and convulsion) made it impossible for one insecurely attached girl (nr 3) to be tested with the Bayley or with the Strange Situation at 19 months. As the aim of the study was to intervene on avoidant (A) or ambivalent (C) insecurity a classification for D-behavior is not undertaken yet, though there were signs of D-behavior recorded. In the mainstudy this will be one of the subjects of interest.

There seems to be no relation between age of arrival and security of attachment, nor with institutionalization prior to adoption. Possibly illness of the child can make her or him more vulnerable for insecurity: all three insecure children had a history of illness. One of the secure children (nr 5) was born three months premature.

<table>
<thead>
<tr>
<th>Nr</th>
<th>Gender</th>
<th>Age arrival</th>
<th>Birth Country</th>
<th>Institution</th>
<th>SS 13 mo</th>
<th>SS 19 mo</th>
<th>Bayley 13 months</th>
<th>Bayley 19 months</th>
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<tbody>
<tr>
<td>1</td>
<td>f</td>
<td>6 mo</td>
<td>China</td>
<td>yes</td>
<td>B</td>
<td>B</td>
<td>98 (k=5)</td>
<td>128 (k=7)</td>
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<td>f</td>
<td>6 mo</td>
<td>India</td>
<td>yes</td>
<td>C</td>
<td>B</td>
<td>92 (k=3)</td>
<td>115 (k=4)</td>
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<td>f</td>
<td>6 mo</td>
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<td>no</td>
<td>C</td>
<td>-</td>
<td>-</td>
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<td>4</td>
<td>f</td>
<td>10 mo</td>
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<td>yes</td>
<td>B</td>
<td>B</td>
<td>95 (k=3)</td>
<td>127 (k=5)</td>
</tr>
<tr>
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<td>10 mo</td>
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<td>B</td>
<td>77 (k&lt;3)</td>
<td>108 (k=4)</td>
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<td>m</td>
<td>8 mo</td>
<td>China</td>
<td>yes</td>
<td>A</td>
<td>B</td>
<td>108 (k=6)</td>
<td>125 (k=6)</td>
</tr>
</tbody>
</table>

Cognitive development
Five children were tested at 13.5 months and 18.8 months with the mental development scale of the BSID. The test-age of the premature child was corrected for (10.5 mo and 15.9 mo). The mean score is 94 at 13 mo and 121 at 19 mo. This is far below the norm group and even lower than comparable studies with adopted children (109 at 12 mo, Thompson & Fagan, 1991; 110 at 12 mo, Braungart, Fulker & Plomin, 1992). K-scores can be used to express delay: a score of 6 means age-appropriate, one point less means one month behind. Sixty percent of the children are functioning at least three months behind (at the level of 10 months). At 19 months all four delayed children made a progress, nr 1 even from one month behind to one month before age-appropriate; but still 60 percent was functioning lower than age-appropriate.

Intervention
In this pilot-group the intervention was carried out with two mother-child dyads (nr 2 and nr 6) as is illustrated with the next case descriptions.
Discussion
It is very hopeful that these two pilot intervention-cases seem to be successful. The avoidant A-infant had become strongly secure at 19 months, longing for his mother in a stressful situation and the ambivalent C-infant, instead of staying in the uncomfortable sad and angry mood (wanting mother and at the same time being angry at her, not willing to play again) at 19 months was able to play again with her mother after consolation.

The intervention originally was developed as a preventive one for mothers of children between 6 and 12 months, but seemed to be useful for this age-group as well. Next to the common feature of becoming more sensitive-responsive, the core of this intervention seems to be the personal feedback for this specific mother with this specific child, wrapped in a non-threatening message, send to her via the video-image of her cheerful child by a trustworthy intervenor. A careful and repeated analysis of each interaction-recording under supervision is required before every visit. Just showing the tape is not enough, one has to make sure at what point the tape will be paused and what the message or the question for the mother must be.

This study is one of the first trying to change an insecure attachment into a secure one during the second year of life, using the same valid instrument (the Strange Situation) as pre- and post-assessment to measure the effectiveness. Compared to preventive studies in the first year of life, we select the high-risk children: being adopted plus being insecurely attached.

Will it be possible to repeat these results with this group to reach the point where we are able to make the scientific proven - statistical significant- statement that an insecure attachment relationship at 13 months can be changed into a secure one at 19 months? The experimental controlled mainstudy described in this poster, which is on his way must justify the claim.

References:
Case Anthony: A becoming B

Anthony was adopted from China at the age of 8 months, he was probably abandoned due to his clubfeet. His adoptive parents, 29 and 32 years old, are highly educated (both University), both have fulltime jobs and have chosen not to have children of their own yet. Anthony has a history of several separations. when he was found he was brought to a children's home. A private organization took him to hospital to recover and to a small private clinic with personal care. When he arrived in the Netherlands he had to undergo medical surgery for his feet. A private nanny came to look after him in the house for three days a week.

Strange Situation pre-assessment at 13 months
At episode 5 Anthony does not give any reaction to mother, just looks at her, in episode 8 he seems to be scared of hearing her calling him (19.17), then he quickly turns away from her when she approaches him (19.27) and on his belly grabs the chair of the stranger while kicking with his feet (19.32). While this last behavior (being oriented on the wrong person) also could be classified as D-behavior, the strong avoidance of the mother must be classified as A within the Ainsworth-system.

Intervention at 14-17 months
The intervention consisted of four visits of about 2.5 hours. Anthony's mother seemed to be enthusiastic to be selected. The intervenor made a video-recording of the daily bathing routine (13.10.34 and 13.12.21) and afterwards showed mother the recordings of mother-child play made at the first pre-assessment visit.

The aim was to let her see the nice moments of interaction and the balance between moments of contact and periods of exploration. In the next visit a recording was made of mother and child playing with and without toys and the mother was enthusiastic about the nice moments shown from the bathing scene in which Anthony made thus many bids for interaction to his mother.
mother, we just made her feel the important person for him. During this second visit there was a mother-child interaction with a very fast changing cycle of nice and pretty interaction changing with conflict, anger and frustration. In the analysis during the third visit, we showed mother the nice things she did to keep the pleasant parts of the interaction going on, but also let her see the role she took in the beginning of the negative parts of the interaction. It just was an art not to do this in a accusatory way, but to consequently use the technique of 'speaking for the baby'. One of the items of conflict was, that the child was not allowed to stand on the couch with his shoes on. In a rapid changing tone of voice, way of looking with her face, pointing with her finger and body posture the mother warned him strongly not to stand upright next to her with his feet on the couch (12.47.17).

We showed her with the recordings, that it was impossible for him during this phase of development not to go and stand upright and that he was to small to understand that he could not do this on the couch. Another aspect we made clear to her was, that he could not understand why it just was pleasant with her on her lap (12.45.12) and two minutes later she was angry at him for no understandable reason.

During the last and fourth visit the boy was standing up the couch with his shoes on, climbing on it with his toddler-chair! We did not see any signs of conflict anymore, the interaction was cheerful.

Strange Situation post-assessment at 19 months
As in the first SS at 13 months, in episode 5 Anthony only greeted his mother, but this time it was not indifferent, but with a smile and he had a pleasant interaction with her. During episode 8 there seemed to be a dramatic change. When he heared her call, he stood upright, smiled at her and raised his hands (18.47), and in one smooth movement ran towards his mother (18.50) as quick as his legs could carry him, asked her with his hands and body language to be picked up by her (18.53) and when being close to her put his arms around her neck and stayed close to her with his face for some moments (18.58).

We concluded that this toddler was securely attached (B) to his adoptive mother.
Case Caroline: C becoming B

Caroline was the second adopted daughter of a middle-educated couple of 38 and 42 years of age, both unwillingly infertile. Father works every day and mother works for two evenings a week, when father is at home. Their oldest daughter Sophia was three years of age when Caroline came and she was born in India too. Caroline - a fifth child of a very poor family, brought to the orphanage by her mother- had been very ill with a gastronomical infection when she came to the orphanage in New Delhi by train, but she had fully recovered at 6 months.

Strange Situation pre-assessment at 13 months
Caroline played cheerful, but in episode 7 she started to cry. When mother arrived she gave an angry cry and kicked with legs and arms (20.04). When being picked up, she cried even harder with an angry voice (20.31) and when put down she did not become interested in the toys again, but kept weeping again and pulling with an angry grip at her mothers sleeve (22.32) and later on again she wanted to be held by her mother (24.02). She did not want to play anymore. We classified her as C.

Intervention
During the first recording at pre-assessment, Caroline 's mother was cooperative but kept at a significant physical distance from her daughter. With body language she seemed to sign: "do not come closer to me". Very distinctly image 9.39.21 makes clear, that she even wanted Caroline- who was not able yet to keep sitting by herself - to stay away and without contact from her. When she hold Caroline upright, she did that in a way that her own shoulder was turned away as far as possible. With that attitude she did not seem to be able to comfort Caroline and her daughter had to stand on her own feet more than she was capable of. During play-interaction (9.46.54) there seemed to be no cheerful interaction at all, sometimes mother seemed to be in trance, completely on her own for 30-40 seconds, while Caroline played on her own. They seemed two separate insula's.
This mother also was pleased to cooperate on the intensive study of four extra visits. The recording of the bath-situation was impressive for her. She was pleased to see herself in the care for her child and enjoyed the pleasant moments together. The child fortunately was very open in showing her mother her pleasure (9.28.40). Mother seemed to get the impression of herself that she was not so bad a mother after all and that she had a competent lovely child. The images strengthened the positive image of herself.

As with Anthony, Caroline's mother made a recording of three days in a row and described the different games they played together and the games Caroline liked to play on her own. The third and fourth visit the accent also was on playing together with more physical contact. It seemed easier for this mother to let Caroline come closer to her own body. Close bodily contact can be felt as a threat by unwillingly infertile women, whilst probably they themselves as the abandoned and deprived infant as well may 'hunger' for this contact. These contradictory feelings must be subject of interest in the third visit, when a bond between intervenor and mother can have been established. The metaphor of 'the extra spoon full of contact-vitamin' can be useful.

*Strange Situation post-assessment 19 months*

The procedure is shortened because Caroline is crying when left alone and she does not want the stranger either. When her mother arrives in episode 8, she wants to be picked up and she sinks in clearly (16.17), but then she is comforted enough to enjoy interaction with her mother by looking at pictures together (16.39) and playing with the ball (17.58) at a relative distance.

We concluded that this toddler was securely attached (B) to her adoptive mother.