

THE MOTHER-INFANT INTERACTION PICTURE BOOK



Origins of Attachment

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CHAPTER 12

Infant Distress and Maternal Surprise, Anger, Disgust, and Emotional Disconnection in the Origins of Insecure-Disorganized Infant Attachment

DRAWINGS: INFANT DISTRESS AND MATERNAL SURPRISE, ANGER, DISGUST, AND EMOTIONAL DISCONNECTION

This sequence depicts a mother and infant at four months where the infant was classified as insecure-disorganized attachment at one year (Beebe et al., 2010).

This sequence of drawings presents 20 frames, over 48 seconds. As we begin, the infant is upset. The mother tries to engage her infant, but she seems unable to connect with her infant or empathize with her distress. The infant gradually shifts into looking fearful and then becomes extremely distressed. The mother's face shows expressions of mock surprise, anger, and finally disgust in response to the infant's distress. Intermittently, she touches her infant's hand. Eventually, the mother seems to withdraw emotionally from her infant.

12.1 MINUTE:SECOND 34:23–34:27

Storyline: The infant is upset. Her mother responds first with a worried face, then with a mock surprise face, as the infant becomes more distressed. Then, the mother smiles as her infant turns away and closes her eyes, covering her face (Frame 3).

Frame 1. Minute:Second 34:23

The mother and infant are both looking at each other's face. The infant is becoming distressed, frowning with her mouth partially open and her arms tensed. The mother has a slightly drooped mouth. She seems not to know how to respond to her infant's distress. She seems distant. The mother's right hand touches the infant's hand.

**Frame 2.** Minute:Second 34:24

From Frame 1 to 2, one second later, the infant's facial distress and frown increase. (From the video, we know the infant vocalizes with an angry protest.) The mother responds with a mock surprise face, with raised eyebrows, showing the whites of her eyes. This face does not seem to match the infant's distress. She keeps her hand on her infant's hand.





Frame 3. Minute:Second 34:27

From Frame 2 to 3, three seconds later, the infant has dramatically turned away, closed her eyes, and covered her face with her hand. It is as if the infant visually protects herself from viewing the mother's face that is so discrepant with the infant's own state. The mother has a big open-mouth smile that is completely at odds with the infant's distress. The infant's fingers and the mother's hand are still in contact.

Examining the video frame-by-frame to identify the exact sequence from Frame 2 to 3, first the mother displayed the mock surprise face (shown in Frame 2). Then, the infant began to turn away and cover her face (Frame 3). We infer that the infant found the mock surprise face too discrepant or too upsetting.

12.2. MINUTE:SECOND 34:29–34:30

Storyline: The infant continues to be distressed; the mother seems closed-up, then surprised.

Frame 4. Minute:Second 34:29

From Frame 3 to 4, two seconds later, the infant continues to close her eyes and cover her face, as if she is attempting to regulate or regroup. Following the large open-mouth smile in the previous frame that was so discrepant with the infant's state, the mother sobers, and her face darkens. Although we cannot see clearly, it seems that the infant's left hand is still in the same position as the previous frame, and likely still touching mother's hand.

**Frame 5.** Minute:Second 34:30a

From Frame 4 to 5, a half a second later, the infant turns back to her mother and peeks out, while still covering her face with her right hand. The infant remains distressed, with a frown. The mother disconnects and seems emotionally absent. Her mouth sets, narrowed. Her eyes seem vacant, glazed, as if she is barely seeing her infant. She does not seem to register that the infant is peeking out. Nor does she respond to her infant's distress. Perhaps the mother feels discouraged. She seems to look at her infant from far away. The infant's left hand and the mother's hand are still in contact.





Frame 6. Minute:Second
34:30b

From Frame 5 to 6, within the same second, the infant looks directly at her mother with a cry face and a frown and puts her right hand down. The mother's mouth and eyes seem to carry different messages, a mixed signal. The mother has an open-mouth surprise expression with a questioning look as if to say: "Why are you upset?" This surprise expression is discrepant with the infant's distress. But the mother's eyes and eyebrows do not participate in the surprise expression. She moves toward the infant slightly. Although it is hard to see clearly, it looks like the infant has put her hand down and is no longer touching her mother's hand.

12.3 TEN SECONDS LATER: MINUTE:SECOND 34:41–34:43

Storyline: The mother puts her finger in her infant’s mouth. The infant whimpers. The mother then displays a disgust face, which culminates in a full disgust display with bared teeth.

Frame 7. Minute:Second 34:41

At Frame 7, we reenter the film ten seconds later. The infant is distressed with a frown, looking at her mother. The mother has put her finger in the infant’s mouth. The mother has a slight frown and an open mouth; she seems unsure, possibly worried.

(From the video, we can see the infant’s feet kicking wildly as the mother puts her finger in the infant’s mouth.)

**Frame 8.** Minute:Second 34:42a

From Frame 7 to 8, a half second later, the infant’s distress continues. The infant’s eyebrows rise with a frown, and her mouth is more open. The infant’s left hand grasps the mother’s pinkie. The mother’s face shows disgust and possibly anger. She may be disappointed that the infant is not giving her a positive response, and instead is continuing to be distressed. The mother keeps her finger in her infant’s mouth.

(On the video, the infant whimpers. Mother says, “Don’t be that way.” Her words are disapproving, her tone pleading.)





Frame 9. Minute:Second 34:42b

From Frame 8 to 9, a half second later, the infant continues to frown and to be distressed while she looks at her mother. The infant seems alarmed. She continues to hold onto the mother's pinkie. (On the video, the infant continues to whimper.) The mother has a deepening disgust face (seen in the nasolabial fold on the right side of her face). She seems dismayed and sad. She keeps her finger in her infant's mouth.



Frame 10. Minute:Second 34:42c

From Frame 9 to 10, still within the same second, the infant is still distressed as she continues to look at her mother. She shows a look of surprise with eyebrows raised. (In the video, she whimpers.) Her hands and feet flail. But she continues to hold onto her mother's pinkie. The mother shows a full-display disgust face and begins to bare her teeth, a potentially threatening face. She keeps her finger in her infant's mouth.

Frame 11. Minute:Second
34:43a

From Frame 10 to 11, a half second later, the mother continues to show a full-display disgust face. She opens her mouth further. The bared teeth display increases, and both the upper and lower teeth are bared. The infant moves her head back and almost closes her eyes. (In the video she continues to whimper.) She now lets go of her mother's pinkie. This frame shows a profound degree of discrepancy between the mother's expression and the infant's expression. The infant closes her eyes to the threat display.



Frame 12. Minute:Second
34:43b

From Frame 11 to 12, within the same second, the infant opens her eyes, looks directly at her mother, and continues to be very upset. Her feet flail. The mother's disgust face begins to soften but is still discrepant with the infant's expression.





Frame 13. Minute:Second
34:43c

From Frame 12 to 13, within the same second, the infant continues to look intently at her mother, with a frown. Both the mother's mouth and the infant's mouth close; the mother starts to pull her finger out of her infant's mouth. The mother has a closed-up face. She seems distant, emotionally disconnected, possibly resigned. A hint of the disgust is still visible.

12.4 FOURTEEN SECONDS LATER: MINUTE:SECOND 34:57–35:10

Storyline: The infant becomes increasingly upset, lurches away from her mother. The mother has many rapidly changing reactions to her infant's distress: mock surprise, anger, looking away, surprise/shock, and partial sympathetic woe face. In the final Frame 20, the mother withdraws with a closed-up face as the infant breaks into a full cry.

Frame 14. Minute:Second 34:57

We enter 14 seconds later. Both mother and infant look at each other. The infant shows a surprised, fearful, pre-cry face with raised eyebrows and an intense frown. The infant seems alarmed, horrified. The mother has a mock surprise face with raised eyebrows, an expression very discrepant from her infant's distress. The mother keeps her hand on her infant.





Frame 15. Minute:Second 34:58

From Frame 14 to 15, one second later, the infant continues to frown with a pre-cry face, but she looks down and narrows her eyes. The mother's lips purse in a slight pout. She seems resigned. She has withdrawn her hand.



Frame 16. Minute:Second 35:02

Four seconds later, the infant is more upset, with a cry face. She looks toward at her mother, but without the same direct eye contact seen in Frame 14. Her right hand is moving in toward her body. She is very distressed. (In the video, her angry protest vocalization seems frantic.) The mother looks at her infant with a closed-up face. She seems emotionally withdrawn and disconnected. This is a profoundly discrepant moment. From the mother's face alone, we would have no idea that her infant is distressed to this degree.

Frame 17. Minute:Second
35:06

From Frame 16 to 17, four seconds later, the infant continues to be very distressed; she begins to lurch away from her mother. The infant seems less fearful and more angry. The mother looks down and away from her distressed infant. She seems helpless and emotionally disconnected.



Frame 18. Minute:Second
35:07

From Frame 17 to 18, one second later, the infant remains frantic and sharply twists her body further away from her mother, looking away, with a cry face. This is an intense infant protest and aversion. (On the video, she protests angrily.) The mother is surprised, almost shocked. The mother's left hand is now visible between her infant's legs.





Frame 19. Minute:Second 35:08

From Frame 18 to 19, one second later, the infant shifts her body back toward her mother, but she is looking down and away from her mother, and she is still very upset. The mother seems more sympathetic with a partial woe face. Her left hand now touches the infant's right leg.



Frame 20. Minute:Second 35:10

From Frame 19 to 20, two seconds later, the infant becomes frantic and begins to cry angrily, kicking her right leg up. She closes her eyes, not looking at her mother, and she moves her hand to her mouth, perhaps to self-soothe. The mother has a closed-up, blank face. She seems emotionally disconnected, far away. She is not available to help the infant in her intense distress. This is another profoundly discrepant moment.

INFANT WARINESS WITH THE STRANGER

Following the interaction with the mother, seen above, this infant then played immediately with the stranger, a novel partner. In this sequence of drawings of four frames over four seconds, the infant is visually engaged but remains wary. The stranger works hard to engage the infant. The infant's face has a subtle hint of interest until the final frame. It is striking that the infant continues to make direct eye contact and to hold the stranger's hand across this sequence of four seconds. It is not unusual for infants to be wary at the beginning with a stranger. But this infant does not warm up across the entire two and a half-minute play interaction.

12.5 MINUTE:SECOND 32:17–32:20

Storyline: In these four seconds, the infant continues looking directly at the stranger while holding the stranger's hand. By the final frame, the stranger joins the infant in looking down.

Frame 1. Minute:Second 32:17
The infant looks directly at the stranger with an alert look. A very subtle widening of the right side of the infant's mouth is visible, a hint of an interest expression. The stranger leans in as she looks at the infant with raised eyebrows, an inquiring look, as if to say: "Can we engage?" The stranger's left hand holds the infant under the infant's right arm. The infant reaches her right arm out and holds the stranger's right hand.





Frame 2. Minute:Second 32:18
From Frame 1 to 2, in the next second, the infant continues to show a hint of interest. She continues to hold the stranger's hand. The stranger responds by pulling in her bottom lip slightly, as if to say, "Ohhhh."



Frame 3. Minute:Second 32:19
From Frame 2 to 3, in the next second, the infant does not change her body, gaze, or facial expression; she continues to hold the stranger's hand. She is wary, almost frozen. The stranger raises her eyebrows, as if to say: "Oh, what's happening? Are you ok?," and her expression shifts to a partial sympathetic woe face.

Frame 4. Minute:Second 32:20
From Frame 3 to 4, one second later, the infant's face loses its hint of positive interest. The infant has closed her face into a slightly more neutral, wary look. She continues to hold the stranger's hand. The stranger moves in slightly toward the infant (more of the stranger's hair is visible within the infant's frame); her eyebrows remain raised, and her face dampens, as if to say: "Oh, something is wrong."



COMMENTARY ON INFANT DISTRESS AND MATERNAL SURPRISE, ANGER, DISGUST, AND EMOTIONAL DISCONNECTION

We chose this sequence because it illustrates several patterns that predicted insecure-disorganized attachment at one year in our research (Beebe et al., 2010). Portions of the following descriptions are adapted from Beebe and colleagues (2010, 2012).

Comment on Mother and Infant

As we enter this sequence of drawings in Chapter 12, the infant is distressed. The mother initially shows a remote, neutral face that does not acknowledge her infant's distress (Frame 1). But immediately the mother shows a mock surprise expression, with raised eyebrows, showing the whites of her eyes (Frame 2). This expression is so discrepant from her infant's distress. Perhaps the mock surprise expression is the mother's attempt to ride negative into positive, that is, to ride the intensity of the infant's emotion, but shift the emotions from negative to positive. The mother's display of the whites of her eyes is potentially frightening for the infant (Hesse & Main, 2006). Thus, in this moment while the mother registers the infant's distress, she reacts with a discrepant, potentially frightening expression, rather than an empathic one.

The infant's distress then increases. As she turns away, closes her eyes, and partially covers her face, the mother smiles broadly, with her mouth wide open (Frame

3). Again we see a discrepancy between the infant's distress and the mother's big smile. Perhaps the infant closes her eyes and turns away to protect herself from viewing the mother's discrepant face. Again in this moment, the mother registers the infant's distress, but she reacts with laughter, rather than an empathic expression.

The mother then seems to disconnect from her infant, becoming remote, with a closed-up face (Frame 5). When the infant turns back to look at her mother, with a cry face, the mother seems quite surprised (Frame 6), as if she is confused by her infant's distress.

The most difficult portion of the interaction comes next. As the mother puts her finger in her infant's mouth (Frame 7), the infant whimpers. It seems that the infant's mouth hurts. From the video, we know that the mother says at that moment, "Don't be that way." The mother seems to be pleading with her infant not to be unhappy. But then the mother shows her infant an increasing disgust face, which culminates in an open-mouth, bared-teeth disgust face, overtly threatening (Frames 10 and 11). This is a dramatic moment in which the mother shows her own distress, which includes disgust and anger, at her infant's distress. Perhaps the mother feels, "You must stop this distress." She seems to have no idea that she has displayed a threatening face to her infant.

Fourteen seconds later, we reenter the sequence. As the infant now becomes increasingly upset, the mother shows a large open-mouth mock surprise face, and the infant seems horrified (Frame 14). But the mother then emotionally disconnects, with a pout, then a closed-up face, and then by looking away from her infant (Frames 15–17).

The infant now becomes increasingly even more upset. She vocalizes with an angry protest, shows a cry face, and seems angry. When the infant sharply lurches away from her mother, continuing to vocally protest, with a cry face, the mother again seems so surprised, almost shocked (Frame 18). At first the mother shows a hint of a sympathetic face (Frame 19). But then, the mother again emotionally disconnects, with a closed-up face, as her infant becomes frantic and cries (Frame 20). The mother is not emotionally available to help her infant. The mother's own emotional state seems shut down.

This mother is perceiving and responding to the infant's changes of behavior, noting every change. Thus, the difficulty is not a sheer absence of maternal responsiveness. There is a complex dance here, with each partner affecting the other, but it is an extremely uncomfortable and mismatched one.

We see here several repetitions of mother's smiles and/or mock surprise faces to her infant's distress, true surprise expressions, and moments of emotionally disconnecting. After she shows the threatening disgust face with bared teeth, the mother again emotionally disconnects. We see a mother struggling with her infant's distress. Both mother and infant seem to feel, for different reasons, that "This cannot be happening."

We conjecture that the mother's smiles or mock surprise faces to her infant's distress, or her moments of emotional disconnection, may be dissociative efforts to regulate herself. We infer that she becomes emotionally disconnected to protect herself

from her own unresolved, unbearable distress, which is being triggered by the infant's distress. Perhaps her infant's distress triggered her own unresolved traumatic issues from her childhood. This mother likely has unresolved fears about intimate relating. The mother's complex self-protective behaviors, which are most likely completely out of her awareness, and which are so discrepant from the infant's distress, derail the infant.

Illustrations of Expectancies

We now turn to the question of what the infant and mother come to expect from their interactive encounters. We attempt to translate the action–dialogue into language, as if the infant or mother could put the experience into words.

We imagine that the infant may create the following procedural, action–sequence expectancies of their interaction:

“I know that when I feel upset, you won't be helping me. Sometimes when I feel upset, you are surprised. Sometimes you smile at me when I am distressed. I don't want to look at you when you do that. It makes me feel confused about what I feel and about what you feel. You do not recognize my distress or sympathize with me. Sometimes you look away from me when I am upset. That's awful too. Where are you? I feel so alone. But the worst is when I'm feeling distressed, and you are looking right at me, but you don't seem to really see me. Your face doesn't move, even when I get more and more upset. You stonewall me. Then I really don't know where you are. It's scary. You really don't get me. There's something wrong. You seem happy or surprised when I am upset. I don't understand you. I feel helpless to influence you. I feel frantic.”

We imagine that the mother may create the following procedural expectancies of their interaction, out of awareness:

“Your distress makes me feel anxious and inadequate. Why don't you smile at me? What's wrong with you? I try to jolly you out of it, but it doesn't work. Stop it! I can't let myself be too affected by you; I'm not going to let myself be controlled by you or your moods. I just need you to smile and be happy. And I won't hear of anything else!”

Relevant Research

In our own research, mothers of infants on the way to disorganized (vs. secure) attachment were more likely to show smiles or surprise faces during infant distress moments (Beebe et al., 2010), a form of dyadic affective conflict. This pattern was prevalent in Chapter 10 above, and again is salient here, especially in Frames 2, 3, 6, and 14. We construe such moments as the mother's emotional denial of her infant's distress. It may be a maternal effort to shift the infant's distress to a positive state, but without first acknowledging that the infant is in distress. Thus, mothers of future disorganized infants oppose or counter their infants' distress, literally going in the opposite affective direction.

We infer that this maternal countering of infant distress confuses the infant, and makes it difficult for the infant to feel that her mother senses and acknowledges her distress. We infer that infants on the way to disorganized attachment in general come to expect that their mothers do not empathically share their distress. This finding evokes Winnicott's (1965) description of a maternal impingement. Instead of mirroring the infant's gesture, that is, joining the infant's distress, the mother substitutes her own gesture, such as a smile or mock surprise (personal communication, Lin Reicher, December 2, 2008).

In our research, we found that mothers of infants on the way to disorganized, compared with secure, attachment were more likely to display maternal smiles or surprise faces to infant facial and/or vocal distress (Beebe et al., 2010). Van Egeren, Baratt, and Roach (2001) analyzed maternal responses to infant vocal distress in a large sample of firstborn infants, without regard to attachment. They found that, when infants fussed, mothers were most likely to vocalize. They also found that, when infants fussed, maternal smile or social play was *suppressed*, that is, significantly unlikely.

Thus, our finding of maternal smile to infant vocal distress in mothers of infants on the way to disorganized attachment is highly atypical. It disturbs the infant's ability to come to expect that the mother will match the direction of the infant's affective change, which is one hallmark of interactions that predict secure infant attachment. In the secure pattern, mothers are not only likely to become positive as the infant becomes positive, but they are also likely to dampen and become empathic, with empathic faces and vocalizations, as the infant becomes distressed (Beebe et al., 2010).

Maternal Response to Infant Distress

Several studies have shown that maternal sensitive responsiveness (promptness and appropriateness of response to infant distress) predicts secure infant attachment and more optimal infant outcomes (see Ainsworth et al., 1978). For example, McElwain and Booth-LaForce (2006) found that greater maternal sensitivity to infant distress at six months predicted subsequent secure infant attachment at twelve to eighteen months. A very large study of 376 mother-child dyads by Leerkes and colleagues examined whether maternal sensitivity to bouts of infant distress and nondistress behavior predicted infant social-emotional adjustment. Maternal sensitivity to bouts of infant distress (but not nondistress) behavior at six months predicted fewer child behavioral problems and higher child social competence at two years and three years (Leerkes, Blankson, & O'Brien, 2009). This latter study points to the specific importance of maternal response to infant distress.

Leerkes and Crockenberg (2006) interviewed mothers regarding the ways that their own early experiences may affect how mothers feel about their infants' distress. Mothers whose emotional needs were not met in childhood were less confident in their ability to respond to their infants' distress, were less empathic, and experienced more negative emotions in response to their infant's distress.

Leerkes and colleagues also found that secure maternal attachment predicted

higher maternal sensitivity to infant distress (Leerkes et al., 2014). Leerkes and Siepak (2006) showed that individuals with insecure attachment styles were more likely to make negative attributions when exposed to infant crying, attributions such as spoiled or difficult temperament; they were less accurate at identifying infant emotions, and were more likely to be amused or neutral in response to infant distress. Moreover, mothers who were more focused on their own needs when exposed to videotapes of infants crying were less sensitive to their infants' distress (Leerkes et al., 2014). Mothers who were more focused on their own needs were characterized by higher maternal negative emotionality, difficulties regulating their own emotions, and greater likelihood of reporting feeling anxious and angry in response to the infant cry videos. In these studies, Leerkes and colleagues identified aspects of the mother's own history and functioning that contribute to her difficulty in responding to her infant's distress.

Another study also sheds light on maternal responses to infant distress, comparing mothers who themselves had secure, compared with insecure, childhood histories of attachment, assessed with the AAI (coded with the Dynamic Maturational Model; Crittenden, 2004) before the birth of the mother's first child. On viewing photos of their own infants' smiling and crying faces during functional MRI scanning, mothers with secure (vs. insecure) attachment showed greater activation of reward regions of the brain (Strathearn, Fonagy, Amico, & Montague, 2009). Thus, secure maternal attachment was associated with more intense maternal reward activation to infant facial expressions, whether positive or negative. The authors suggest that, for securely attached mothers, infant facial emotions, whether positive or negative, may reinforce and motivate responsive maternal care.

Mothers with insecure, compared with secure, attachment histories had a different pattern of response to their infants' crying faces. Mothers with insecure attachment showed greater activation of a region associated with feelings of unfairness, pain, and disgust (the anterior insula). The authors suggested that this finding may indicate that these mothers were exerting cognitive control over their own negative affective response to their infants' crying faces. Comparing secure and insecure mothers in response to viewing their infants' crying faces, the pattern of activation of secure mothers was consistent with anticipation of gain, whereas the pattern of activation of insecure mothers was consistent with anticipation of loss (Strathearn et al., 2009).

This study by Strathearn and colleagues helps us understand the mother's disgust faces in response to her infant's distress in the mother and infant in Chapter 12. The infant's intense distress, such as a cry face, may activate feelings of unfairness, pain, and disgust in the mother when she herself has an insecure attachment history. The mother's experience of her crying infant may be one of loss—loss of love, loss of the expected smiling infant, loss of the infant she needs in order to feel like she is a good mother.