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**Affect attunement and maternal attachment: An observational study of the intergenerational transmission of mothers' internal representations of attachment**

Haft, Wendy Laura, Ph.D.

City University of New York, 1989

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AFFECT ATTUNEMENT AND MATERNAL ATTACHMENT:  
An Observational Study of the Intergenerational  
Transmission of Mothers' Internal Representations  
of Attachment

A

by

Wendy L. Haft

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1989

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Abstract

AFFECT ATTUNEMENT AND MATERNAL ATTACHMENT:  
AN OBSERVATIONAL STUDY OF THE INTERGENERATIONAL  
TRANSMISSION OF MOTHERS' INTERNAL REPRESENTATIONS  
OF ATTACHMENT

by  
Wendy L. Haft

Advisor: Professor Arietta Slade

The present study investigates the notion that individual differences in maternal representations of their own early childhood attachment relationships will impede or facilitate the recognition of their infant's experiences and needs.

Mother-infant dyads were videotaped in a laboratory setting with their 10-13 month old babies. Maternal attunement behaviors and fantasies about the babies during the attunement moment were recorded and examined in light of individual differences in maternal attachment. Women were then classified as secure, dismissing or preoccupied in relation to attachment on the basis of the Adult Attachment Interview. (George, Kaplan, & Main, 1985)

The findings reveal that securely attached mothers are more attuned to their babies than those who are insecurely attached. Secure mothers attune to a range of infant affect, while insecure mothers attune to particular affects and not to others. Specifically, dismissing mothers tend not to attune to negative affect, whereas preoccupied mothers randomly and inconsistently attune to both positive and negative affect states. Qualitative analyses of the data suggest that insecure mothers misattune to infant affects that threaten their internalized attitudes toward attachment. The findings support the hypothesis that the nature of a mother's internal affective experience powerfully influences the affects she acknowledges and attunes to in her child.

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## Introduction

Most studies of the mother-child interaction have focused on just that - the interaction as a whole. The mother contributes uniquely to the shape and sensibility of the relationship to her infant by necessarily bringing her personality to bear on it within the context of the interaction. Bowlby describes what it is that the mother contributes: "...it is complex...it derives not only from her own endowment, but from a long history of interpersonal relations within her family of origin." (1969) In the broadest sense, it is this history of interpersonal relations that constitutes an individual's inner life. It is the aim of this study to examine the interface of a mother's inner world and her infant's affective experience.

The relationship between a mother's inner life or internal world and her infant's affective experience is one that cannot be understood in simple behavioral terms as it is a complex intermeshing of maternal history and infant affectivity, difficult to observe. Equally elusive to observation is a mother's internal world proper. However difficult to observe, this internal world exerts not only a powerful personal influence, but also a determinative influence on the mother-infant interaction, and the infant's affective experience.

The complex and often unconscious constituents of a woman's internal world are determined by her history of object relations, and her subjective, ongoing experience of these relationships. What is internalized is not the relationship per se, but an attitude: how one conceptualizes the relationship, and how accessible it is in a clear and objective way. It is this internalized attitude and quality of accessibility that are critical determinants of how a woman will respond to her infant's affect.

### Statement of Purpose

The present study examines how a woman's internal working model of attachment to her own mother, influences the nature of her dyadic attunement with her infant. Attachment theorists propose that different maternal attachment categories represent different strategies for coping with negative affects. (Kobak & Shaver, 1987) Thus, if a woman has an insecurely attached internal working model, it would follow that when confronted with her baby's affective expressions, especially negative affects, she will respond in a way that is reflective, and preserving of this internal working model. (Main, 1987) The same would hold true for women with secure internal working models of attachment.

Dyadic attunement measures a mother's response to her infant's affect displays. As such, attunements are a window for revealing the mother's internal representation of parenting; they represent a behavioral analogue of internal working models. One of the purposes of this study is to reveal how dyadic attunements serve as the mode by which mothers transmit their internal working models to their infants.

In the present study, I observed 15 mother-infant dyads; the mothers were between the ages of 25 and 35, and were first-time mothers; the infants were between 9.0 and 13 months old. Mother and baby were videotaped during free play for 15 minutes, and then during a series of 3 minute experimental paradigms designed to elicit attachment behavior in the infant. After the taping, mothers viewed the video with the experimenter and were asked a series of standardized questions, called, Attunement Probes. Finally, mothers were given the Adult Attachment Interview (AAI) in order to determine their maternal attachment category, their present state of mind regarding attachment. Coding of dyadic attunements during free play and experimental conditions, and analysis of maternal responses to queries regarding her attunement behavior, allowed for the description of mothers' internalized attitudes about parenting.

A separate analysis of the AAI provided a maternal attachment classification for each mother.

The review of relevant literature is divided into three sections; psychoanalytic theory, attachment theory, and the data of clinical infant research. These three approaches provide diverse and important perspectives on the complexities of the early mother-child relationship.

## CHAPTER ONE

### Review of the Literature

#### The impact of the mother's internal world: the psychoanalytic perspective.

Every woman comes to the role of mothering imbued with her own psychological history. It is an axiom of psychoanalytic thought that this history has a profound influence, and is passed on in varying degrees to the next generation. Edith Jacobson (1964) was one of the earliest object relations theorists who, without abandoning or denigrating Freud's drive model, assigned an equally important role to object relations in human development. Central to Jacobson's view is the conviction that from early on, the object-related attitudes acquire their own motivational power, independent of the search for drive gratification. The causative, functional significance that Jacobson attributes to others is evident in her discussion of severe pathology. (1964) However, both normal and pathological development are based on the evolution of images of the self and the other.

Jacobson takes as her starting point the oral phase. During this phase, she highlights the contribution of the mother's affective experience to the mother-child interactions, and the infant's seemingly intrinsic tendency to evoke conscious and unconscious archaic images and fantasies in the mother. These contributions from both members of the dyad constitute the "constant interplay" of the mother's affective experience and that of the child. Solely on the mother's side, Jacobson delineates the manifold effects that her attitudes and activities have on the infant; they provide him with libidinal stimulation, gratifications, and restrictions, and thus pave the way to his emotional attachments. (1964)

The infant's first experiences of the self as orally gratified or deprived become the central elements of the first self images, according to Jacobson. During the first stage of development the infant's largely fantasized transactions with the mother are carried out by the child through the processes of introjection and projection. The important point is that during the very early stages of development, the child uses introjective and projective mechanisms to build up internal images of self and of objects, and hence, of object relations. Thus the child's earliest self experiences are intermingled with, and informed by, those of the other. Not only does the mother bring her inner world to bear on the child, but in addition, the child actively partakes of this world from the earliest months of life.

As stated earlier, the mother's internal world is at least partly unconscious. Mahler stresses the importance of this aspect of the mother's functioning as it impacts on the interaction: "...the earliest interrelation between the unconscious of the mother and the reception of stimulation of the sense organs of the baby is a prototype of a way of communication between the child and the adult."(1942) This mode of communication allows for the transmission of signals, and suggests the existence of a relationship between mother and infant that transcends simple drive gratification, to include the transmission and subsequent "shareability" of the mother's inner world with her child.

Mahler specifies some aspects of this relationship in her writing on parent's anxiety. She states that dissatisfaction and anxiety in the mother can be transmitted to the child by "contagion" and disturb the early symbiotic relationship with the infant. (1961) In a more far-reaching statement about the early object relationship, Mahler says that development from her phase of normal autism to that of normal symbiosis involves much more than the mechanical satisfaction of oral and other vegetative needs. Whether the effects are positive or negative, the mother does, and must bring her personality, emotions, and history to the developing relationship. By bringing into the

picture conscious and unconscious parental attitudes, affective reactions, and responses to emotional needs, Mahler assigns to the mother's inner world a role of central importance in the child's early development. The dyadic aspects of Mahler's view of the earliest developmental periods imply an appreciation of the wide range of transactions in early life, and of the importance of the mental representations to which these transactions give rise.

Others have written about the kinds of responses the infant can evoke in the parent that cause a re-activation of the parent's often unconscious inner life within the context of the parent-child interaction. Loewald (1962) describes how the evolving ideals of the child are shaped and organized according to the parent's own projections, idealizations, demands, and expectations regarding the child. These expectations, etc., are often activated quite naturally by the child's behavior, and are differentially determined by the vicissitudes of the parent's inner world.

Loewald suggests that both the parent and the child have fantasies or illusions regarding one another's state of perfection, or at least perfectability. Like Mahler, he views the demands and expectations engendered by such fantasies as essential to proper development, and eventually, to the development of a sound superego: "...parental projective fantasies of the child's narcissistic perfection and wholeness, as well as infantile projective fantasies about the parent's omnipotent perfection, have an important bearing on the development of his superego." (1962) The mutual sharing of inner, or mental states between parent and child is critical for healthy development.

It is clear then, that the mother's internal life, her internalizations, comprised of her past and ongoing relationships, (Loewald, 1962) have an important influence on the infant, the interaction, and the infant's developing internal representational world. Kernberg (1976) writes extensively about the essentially bipolar or dyadic nature of the internalization. Using different terms than Loewald, Kernberg describes the infant as building up dyadic, intrapsychic representations (self and other images) as reflections

of the early mother-child relationship. The mother's contribution to this process then, are her own internalizations which, like her infant's, are based on relationships. Thus the infant builds his internal representational world, at least in part, on what his mother affectively imparts in the interaction of her critical past relationships.

Kohut's self psychology (1971,1977) stresses the early influence of the adult's experience on the infant. He sees the infant as a weak, amorphous being, who needs the parents in order to maintain his psychological homeostasis. It is only through interpersonal exchanges that the self develops at all. Thus in early development, the infant needs the object in order to ensure psychic survival.

Beyond basic survival, the infantile self relies on the participation of others in order to provide a sense of experiential coherence and resilience. Kohut terms these objects "selfobjects," because from the infant's perspective, they are not differentiated from the self, and they serve functions that will later be performed by the child's own psychic structure. In the child's initial merger with the selfobjects, Kohut describes a subtle, yet pervasive participation in the adult's experience, including the adult's experience of the child, which is extremely powerful:

"The child's rudimentary psyche participates in the selfobject's highly developed organization; the child experiences the feeling states of the selfobject - they are transmitted to the child via touch, and tone of voice and perhaps still other means - as if they were his own." (1971)

In short, Kohut considers the infant's partaking of the organization of his adult selfobjects, especially their affective experience, to have a profound influence on the infant's sense of self, and development of psychic structure.

Parental deviations from their optimal selfobject functioning (ability to be empathic, to be intimate, etc.) will lead to their being perceived by the child as a "non-empathic attacker of the integrity of the self." (1971) Kohut makes the important point that the periodic and inevitable failures in parental empathy further the cause of the

transmuting internalizations; the bit-by-bit transformation of the self and object images from the more global and archaic to the more complex and resilient, by which the child proceeds to develop healthy and differentiated self and object internalizations.

However, chronic failures in empathy, attributable to parental character pathology, undermine the healthy development of the child and are the cause of psychopathology.

(1971) In other words, Kohut sees the maldevelopment of the child caused by the specific pathogenic personality of the parents. Parents with certain forms of psychopathology are unable to serve as selfobjects. Thus in the face of the parent's inability to respond empathically to the child's emerging self, the child's original search for the selfobjects breaks down into sexual and aggressive concerns that correspond to the parent's pathological preoccupations. The child will then make use of whatever selfobject responsiveness he can derive from the relatively unavailable parent.

How is it however, that a parent with a history of psychopathology in the area of her object relations, does not translate this pathology as such to her child? Or to put it another way, what determines whether a mother will repeat her own pathological history by transmitting it into her relationship with her child, or whether she will be motivated and free to transmit it in some kind of transformed, non-malignant form.

The answer to this question has less to do with the objective nature of any given personal history and its constituent relationships, as it has to do with understanding how an individual has internalized the relationship in question. Loewald (1962) defines internalization as the general term for certain processes of transformation by which the relationships and interactions between the individual psychic apparatus and the environment are changed into inner relationships and interactions within the psychic apparatus. Through this mechanism, a resilient inner world is constituted.

Any such resiliency depends upon to what degree an internalization is integrated; by well integrated, Loewald means an internalization that "pictures" the relationship in a relatively objective way, undistorted by defensive psychic processes.

In all relationships there occur disappointments, rejections, and separations that impact on an individual's view of the relationship. However, it is not the disappointments, rejections, or separations per se that determine the nature of the internalized relationship, but rather, the degree of integration of the internalization.

In order to better understand the concept of integration, Loewald examines the phenomenon of mourning, and the defensive processes that can interfere with it. Mourning is examined because, as a process, it is paradigmatic of how individuals cope with the less permanent separations, disappointments and rejections that occur between parents and children. The experience of loss through death, as well as relatively smaller insults such as normal childhood separations and rejections, are all occasions for mourning and internalization. Thus by examining the processes of mourning, one can better understand the internalizing processes that occur in response to the disappointments, etc., of childhood.

In the optimal version of the mourning process, relationships with external objects are set up in the ego system as internal relationships in a process of further ego differentiation. However, loss of the object does not necessarily lead to healthy mourning and integrated internalization. When the loss or objective experience of the object is not mourned and internalized, but denied, the ultimate goal of ego differentiation is subverted. In the case of denial, substitutive, repetitive relationships are sought to replace the loss. Rather than promoting growth, this strategy renders the person unable to establish lasting, new relationships, and lasting, effective sublimations. The ability to form lasting, new external relationships, and the capacity for productive work (sublimations) appears to be based on, among other things, well integrated internalizations. (Loewald,1962)

It is the fate of the individual who denies the loss and/or the objective experience of the relationship with the object, to re-enact old forms of the relationship with new people in order to satisfy the overwhelming need to keep the relationship

"alive." Likewise, if an individual denies the existence or importance of, for example, a less permanent separation in an important relationship, he may be doomed to repeat the same kind of re-enactment in a new relationship.

In her research with mothers and infants, Selma Fraiberg (1980) observed a similar kind of re-enactment of a mother's pathological past relationship with a parent, in her relatively new relationship with her infant. She also observed cases where a pathological history was not repeated with the infant. Unconvinced that the answer to the question of pathological repetition was to be found in the simple narrative of the parental past, Fraiberg discovered the answer hinged on the same issue as did Loewald: whether the individual was able to objectively internalize, and thereby objectively experience, the relationship without defensive interference.

Many of the parents she observed seemed to have formed a pathological identification with an assaultive or dangerous parent, an "identification with the aggressor." Fraiberg (1980) posits that there is a form of repression present in this defense which provides motive and energy for repetition. The critical finding was that in recalling childhood trauma, memory was rarely impaired, but instead, the affect connected to the remembered event was repressed. Parents could recall in detail the events of childhood trauma, but could not experience the associated affect; the original affects had undergone repression to prevent the parent from "truly" remembering the trauma. The final, dramatic finding was that when parents became able to re-experience the affect along with the memories, they could no longer inflict their own childhood pain on their infants.

It is Fraiberg's hypothesis then, that access to childhood pain, unimpeded by defense, (repression in this case) is a powerful deterrent against pathological repetition in parenting. It follows that individual differences in accessibility to objective, affective experience of past relationships will affect the nature of the internalized representation of that relationship in a corresponding way. That is, if an individual denies or

represses aspects of a past relationship, there will appear distortions of the same nature in his internalization of the relationship. Likewise, if an individual had a traumatic childhood relationship with a parent, but had been able to objectively accept and integrate the affective experience of that relationship as an adolescent or an adult, he would develop a revised internalization reflective of the internal restructuring.

#### Attachment theory and internal working models

The process of internalization then, is central to understanding intergenerational transmission of representation of attachment. Main, Kaplan, & Cassidy (1984) are specifically interested in the different ways an individual forms internal representations of attachment relationships, and how these differences affect the nature of intergenerational transmission. A prominent attachment theorist, Main has developed a research paradigm based in the work of John Bowlby. Working within Bowlby's conceptual framework, (Bowlby, 1969) Main developed a research method for assessing the nature of the internal working model of relationship to the attachment figure.

Internal working models are actively constructed, and can be restructured. Since internal working models operate outside conscious awareness, they resist dramatic change. (Bowlby, 1969) These mental representations are built up out of the context of interpersonal relations. As such, Main agrees with Loewald that the essence of internalizations is the relationship, especially with the attachment figure. Thus, a mental concept of the attachment figure apart from the relationship does not exist. (Main et al. 1984)

Main assesses the security of the adult's overall working model of attachment relationships based upon the transcript of an interview used with adults, the Adult Attachment Interview. This interview asks for adjectival descriptions of early relationships, memories of specific events especially relevant to attachment, and for the adult's sense of the effects of early relationships and events upon their own personality, and upon their approach to their own child. In the analysis of the interview, attention is paid to the full transcript with an eye to contradictions, inconsistencies, and thematic development, rather than to single responses in isolation.

The rationale for this system of analysis is suggested by the nature of internal working models; they are conceived of subjectively experienced interpersonal relationships, and reside in the unconscious. Given the subtle subjective and unconscious determinants of these models, it seems unlikely that adults would be able to simply verbalize their concepts of relationships without the effects of stereotyping. Furthermore, when attempting to tap unconscious processes, it is unreliable to depend solely on direct or intended replies; it is more likely that unconscious processes would be revealed in the analysis of thematic development, contradictions, and incoherencies in the weave of the overall interview.

In the final analysis, each adult is assigned an attachment rating which describes their relationship to their internal working model of attachment. Though there are aspects of an individual's representation of attachment that are unique, the essential differences are probably finite and specifiable. (Main et al. 1984) The authors follow the three presently recognized organizations of attachment - secure, insecure-avoidant, insecure-ambivalent - and agree with Bowlby (1969)) that there may not be infinitely many such organizations. Though the adult ratings follow the accepted organization described above, they are given different titles: Autonomous, Dismissing, and Preoccupied with respect to attachment.

Adult ratings correspond descriptively to ratings of their infants. Parents rated as Autonomous (secure) tend to value attachment relationships in both a personal and an abstract sense, to regard attachment and related experiences as influential upon personality, and seem able to maintain an objectivity in describing attachment relationships. Main et. al. report (1984) a strong statistical relationship between the security of the adult's apparent internal working model of attachment (as assessed from transcripts of the Berkeley interview) and early infant security of attachment. Thus it can be inferred that the nature of an adult's internal working model, and the strategies employed to cope with the model, influences parental functioning.

Parents who are rated as Dismissing or Preoccupied (insecure) lack the qualities of the autonomous adults, and present patterns of their own. In the Dismissing pattern, the parents dismiss the importance and influence of attachment relationships, and are frequently the parents of insecure-avoidant infants. In the Preoccupied pattern, the parents seem involved in a prolonged dependency on their own parents; enmeshed with and struggling to please the parents, these adults are too angry to be objective regarding their own role in the enmeshed relationship. Most frequently, these are the parents of insecure-ambivalent infants.

What is most relevant to rating security of attachment in adulthood is not the mother's actual childhood experience, but how her current experience of it is integrated. Integration in this sense is expressed cognitively in language, in the form of fluidity and coherency, and emotionally in the form of acceptance and objectivity. Where the mother's experiences are not integrated, "restrictions of varying types are placed upon attention and the flow of information in respect to attachment, restrictions that appear in speech in the form of incoherencies, and in behavior as insensitivity." (Main et. al. 1984)

The restrictions are indicative of a Preoccupied or a Dismissing internal working model. These working models are unintegrated; they are characterized by splintered or

incoherent thought processes, and the interfering use of denial, repression, or idealization. These working models then, are typically distorted by defensive processes.

This concept of integration then, is central to both Main's and Loewald's understanding of internalized experience. Both authors suggest a continuum of internalized experience that ranges from the grossly distorted, unintegrated variety, to the objectively experienced, integrated internalization. Both offer useful examples of this range.

Main describes many autonomous parents whose unfavorable childhood attachment experiences had been "considered and integrated." Most saliently, these parents are able to coherently describe negative aspects of early experience; they can describe it objectively, as a coherent whole, without either idealizing or denying the painful aspects of the experience.

Lack of integration was expressed in several types of incoherencies: contradictions between semantic and episodic descriptions of the parents, persistent positive-negative oscillations in assessing the parents, extreme negativity about the parents without the adult seeing her role in the situation, and finally, refusal or inability to stay with the topic of the interview. In the first type of incoherency, for example, a parent described his mother (semantic) as "excellent," but remembered being fearful of her anger, and so was unable to tell her when he had broken his hand. (episodic) Here we see the use of idealization to distort, and thereby defend against, the true experience of a parent.

Loewald gives examples of patients whose internalizing processes have been subverted by their inability to cope with the loss of a love object. Rather than accept and internalize the loss, they choose to deny it, and seek external substitutions instead. One patient used all available figures in the environment as substitutes for the lost parents, clinging forever to relatives and other parental figures in her efforts to

perpetuate her role as a child. Instead of accepting the loss and its sequelae, this patient denied the real experience, and thus prevented the positive outcomes of a well-integrated internalization. Loewald stresses that it is only through such well integrated internalizations, unhampered by denial or idealization, that the individual is free to establish new and creative relationships.

This last point underscores the central influence of a mother's internal world, the nature of her internal working models, upon the interaction with her infant. Other studies have borne out the power of this influence, and have specified precise impacts of particular internal working models on the interaction and on the child's attachment status. (Main et al., 1985; Main & Goldwyn, 1987)

In a compelling study of child abuse, Main and Goldwyn (1984) found a strong relationship between a mother's failure to integrate aspects of her past experience, and her infant's avoidant behavior upon reunion. If a mother was unable to recall her childhood, her infant was significantly likely to avoid her. Likewise, if a mother idealized her rejecting mother, her infant was likely to avoid her. However, if a mother expressed resentment and anger toward her mother when questioned about her childhood, but was coherent in her expression of the feelings and experiences surrounding this attachment relationship, her own infant was unlikely to avoid her after a brief separation. Thus, the child's avoidance of its mother as assessed in infancy bore a systematic relationship to the mother's defensive approach in describing her own childhood experiences. It is crucial to remember that this systematic relationship was not found between infant behavior and mother's actual childhood experience, but between infant behavior and the way in which the mother had structured the representation of her experience.

It has been noted that certain defensive distortions occur in relation to insecure working models of attachment. In two important papers, Kobak (1987) and Kobak & Shaver (1987) describe how these distortions arise. In doing so, the authors delineate a

conceptual distinction between working models and the self-regulatory processes which define the personality. The latter, in the realm of attachment, are viewed as "organized and guided by different strategies for maintaining felt security during times of stress." (Kobak & Shaver, 1987) These different strategies are the outcomes of particular working models; they are the observable strategies the individual develops for coping with, or defending against, a particular working model.

During the first year of life, the child's attachment behavior becomes organized into a system designed to maintain felt security. (Bowlby, 1969) Under optimal circumstances, emotions related to fear or distress first activate the attachment system and communicate to the attachment figure a need for comfort or protection. Secondly, these emotions provide feedback to the child about the success of his efforts in evoking protection and care from the attachment figure. (Shaver & Kobak, 1987) In the context of a dyad where the attachment figure is emotionally available and responsive, the first level of the emotional signal is integrated with the second in a successful way: it has assured the child that the attachment figure is available and restores his sense of felt security.

It is in the context of a dyad where the first level of signalling is split off from the second and does not produce a successful outcome, that a conflict is experienced by the child. When the expression of attachment behavior in the child does not produce comfort from the parent, the child confronts a "dilemma." (Kobak & Shaver, 1987) If the attachment figure is rejecting or dismissing of the child's attachment behaviors, then the entire experience of attachment becomes a painful one for that child, and expression of attachment may actually reduce rather than enhance the availability of the attachment figure, and thus reduce rather than increase felt security. The same scenario follows for the child whose attachment behaviors produce insensitive or inconsistent behaviors in the attachment figure. The conflict rages between the child's instinct to "acknowledge

distress and seek comfort, on the one hand, and a need to maintain accessibility to the attachment figure on the other." (Kobak & Shaver, 1987)

In a dyad where the child has come to expect emotional availability in response to his attachment bids, he can openly communicate fear, distress, or anger with the confidence that such expressions will not reduce felt security or attachment. This openness is characteristic of what the authors call the secure strategy; it is marked by not only the freedom to express these emotions, but also by the willingness to process information which might lead to experiencing negative emotions. But what are the strategies that children evolve for maintaining felt security under the less than optimal circumstances created by an attachment figure who is unable to respond with emotional availability and consistency to attachment behaviors.

Those who adopt the strategy of dismissing or cutting off of the open expression of attachment have negative expectations about the appraisal and communication of fear, anger, or distress in the context of the attachment relationship. Not only does this strategy restrict and bias the expression of attachment behaviors, it imposes the same limitations in the realm of emotional and cognitive information processing. In adopting this strategy, one is attempting to "reduce anticipated anxiety and conflict ... and may try to exclude information that would lead to distress or fear appraisals." (Kobak & Shaver, 1987) Thus, an individual adopting this strategy may ignore, or appear to be oblivious to the expression of attachment behaviors. A further aim of this strategy is to cut off or blunt the expression of negative emotion. (Kobak, 1987)

Lastly, those adopting a strategy of preoccupation with attachment figures have expectancies of insensitivity and inconsistency from the attachment figure during times of distress. Unlike the dismissing strategy, this one admits, all too readily, fear-eliciting information for processing. In fact, these individuals may be overly-attentive to, even flooded by such information. Unlike the secure strategy, where openness of

attachment behavior enhances felt security and good communication, it does not do so in the preoccupied strategy. Rather, this preoccupied strategy seeks to obscure clear communication of attachment behaviors, as expression of the latter leads to a diminution of felt security and attachment. In this sense, it serves its function in helping the individual maintain a sense of felt security under less than optimal circumstances.

We can infer working models then, indirectly, based on strategies for maintaining felt security. We have seen that a particular strategy is a direct outgrowth of the working model of attachment and is evolved from the "child's expectations and forecasts about the outcome of attachment behavior ... these expectations form the basis of the child's strategy for maintaining felt security." As development proceeds, the individual forms representations of the self and others based on these working models, which Kobak & Shaver (1987) refer to in terms of "beliefs and cognitive biases about self and others." In this way, they distinguish between defensive beliefs that may evolve, and working models and strategies for maintaining felt security which influence the formation of these beliefs. They also underscore the inter-relatedness between working models, coping strategies and beliefs about the self and others.

When a child's working model of an attachment figure is based on expectations of sensitivity and contingent responses to attachment behaviors, the child builds a complementary model of himself as worthy of love and skilled at getting it from others. Likewise, he develops beliefs about himself as lovable, and about others as trustworthy. These beliefs are further supported by the secure strategy for maintaining felt security, which by definition encourages the open expression of attachment behaviors within the safe harbor of a consistently available attachment figure.

The development of beliefs about the self and others in individuals who adopt insecure strategies occur in a more convoluted way than those with secure strategies. One might think that when a working model forecasts rejection of an individual's

attachment needs, that individual would develop beliefs about himself as unworthy of love. However, since it is in the nature of the dismissing strategy for maintaining felt security to dissociate the painful feelings associated with the rebuffing of attachment bids, it follows that the individual adopting this strategy would build up beliefs about himself and others that correspond with this dismissive approach. Thus this person has defensive beliefs about himself as independent and invulnerable to everyday disappointments and distress.

In the preoccupied strategy, the individual's working model forecasts inconsistent and insensitive responses to attachment bid. In this scenario, the child develops beliefs about himself as unlovable and incompetent. Since this strategy fosters a heightened awareness of, often a kind of flooding of personal distress, cognitive awareness of inconsistent parental responses are difficult to coherently formulate. As a result, "the preoccupied strategy may predispose individuals to formulate beliefs that exaggerate personal difficulties while remaining confused about attachment figures." (Kobak & Shaver, 1987) Both insecure strategies have in common the imperative of defensively distorting working models.

This is the nature then of the internal working models of relationship that a mother brings to the role of mothering. These models incur various states of mind vis a vis the internalized relationship, states of mind that are manifested behaviorally in the form of strategies to maintain felt security. As detailed, the strategies provide rules and biases that impact on the mother's functioning, and that permit, limit or distort access to certain forms of knowledge regarding the self, the attachment figure, and the relationship between the self and the attachment figure. Finally, it has been shown how these models and strategies influence the adult's ability to respond to particular affects in the child as well as the infant's attachment organization.

The affective infant at 9 months: clinical infant research

This study takes as its focus the infant between nine and thirteen months old. During this period, not only does the infant begin to show marked affect expression, he also becomes especially responsive to such expression from others. As such, he is more receptive to the mother's affective communications; the mother's internal world exerts an intensified impact on this baby, on his felt experience.

Many authors have marked the age of nine months as a watershed in emotional development. Emde (1976) describes it as such: "There is a qualitative turning point...with profound developmental implications." Sroufe (1978) states that by nine months the infant is "an emotional being," whose primary focus is the subject-object relationship, and in a crucial shift in orientation, "the meaning of the event for the infant is responsible for the affect." By way of example, Sroufe describes how the infant now laughs in anticipation of mother's return in the peek-a-boo game, rather than simply in response to the completed sequence. The entire event (actual and anticipated) has taken on a tone of positive affect. Thus the nine month old can be seen as an emotional being because his mental images are clearly affectively toned, either positively or negatively. Furthermore, at this time one observes a sharpening and differentiating of affect expression toward the caregiver, the attachment figure. In a final point, Sroufe asserts that the nine month old is an emotional being because he has an awareness of the affect itself. The perception of feeling has become an integral part of the event.

In his book, *Playing and Reality*, Winnicott (1971) suggests that there is a special domain, a "potential space," an "intermediate area of experience;" this is the area between what is subjectively perceived and that which is objectively perceived. This is the area, or the space, within which a mother brings her inner life to bear on her

infant's felt and inner experience. As such, this space is truly shared by both mother and infant, for it contains the internal experience of both mother and infant. Existing in reality as it does, this area rests on the interface of objectivity and subjectivity.

Winnicott states that it is the "goodenough" mother who can allow this shared space, and that it must remain unchallenged by her; she must not assert its belonging to either the internal world or the external world exclusively. In leaving this area unchallenged, Winnicott forms a question which must never be asked by this goodenough mother:

"Did you conceive of this, or was it presented to you from without?" (1971)

This question emphatically expresses the sharedness of whatever phenomena may occur in this area, the "me" yet not "me-ness" of it. This seeming contradiction is but a paradox which Winnicott insists must remain as such in human experience. If the paradox is unquestioned, this area is the domain in which one person comes to know what another is experiencing subjectively, and where a parent's fantasies and inner world come to influence and penetrate (Hinde,1976) a child's behavior and felt experience.

This sensitivity which is demanded of the mother is all the more critical in the context of the infant's sharpened affectivity. There is an additional developmental watershed in this period that intensifies the importance of maternal sensitivity. It is now that the infant attributes agency to the other, that is, he can understand not only himself as the cause of action, but others as well. As such, he can impute mental states to himself and to others. He has a theory of mind. (Papousek & Papousek,1979)

More germane to my research question is the outcome of this watershed: the achievement of intersubjectivity. (Trevathan & Hubley,1978) As a result of this achievement, the infant has the ability to impute mental states to himself and to others, and subsequently, he understands that he can operate on the mind of others. Along with intersubjectivity comes what Stern (1985) has termed interaffectivity, the

affective version of intersubjectivity. Here, the infant's felt, or affective experience is interfaced with the felt, internal experience of another. Thus, the infant who is relating at the level of intersubjectivity and interaffectivity is especially responsive and susceptible to the influence of his mother's internal world.

The question remains then, of how a mother brings her inner world to bear on the interaction when she responds to her infant's affect expressions. Recent research by Stern, Hofer, Haft, & Dore (1984) and by Stern (1985) examines a particular way in which affective experiences enter the subjective domain via the phenomenon of affect attunement. This is a process that occurs between parents and infants that allows the infant to perceive how he is perceived. In order for this to occur, the parent must be able to "read" the infant's mental state or inner experience from his overt, non-verbal behavior, inter-modally perform some corresponding overt behavior, and finally, the infant must be able to "read" this parental response as reflective of his original experience.

Attunement events are distinguished from the flow of behavior by a marked affective display by the infant. Affect is not limited to the discrete, categorical affects described by Darwin: happiness, sadness, fear, anger, disgust, surprise, and interest. Stern (1985) states that there are many qualities of feeling that are not adequately described by these existing categories, and that these feelings have elusive qualities that "...are better captured by dynamic, kinetic terms, such as, 'surging,' 'fading away,' 'fleeting,' 'explosive,'... and so on." (1985) Such feelings are sensible to the infant from both without (another person) and within, and are of great importance to the infant. (1985) Stern refers to their inextricableness with the "vital processes of life," when he names these affects vitality affects. Both forms of affects are attuned to, but attunements seem to occur most often in response to vitality affects which are composed of the amodal qualities of intensity and time, and reside in virtually any

behavior. Attunements are typically made to: "...the inner quality of feeling of how an infant reaches for a toy, holds a block, kicks a foot, or listens to a sound." (1985)

How all this unfolds behaviorally is best explicated by example. Affect attunements are often so deeply embedded in ongoing behavior that they are difficult to pick out. The following examples are relatively free-standing.

Example #1.

A nine month old girl becomes very excited about a toy and reaches for it. As she grabs it, she lets out an exuberant "aaahhh!" and looks at her mother. Her mother looks back, squinches up her shoulders and performs a terrific shimmy of her upper body--like a go-go dancer. The shimmy lasts only about as long as her daughter's "aaahhh!" but is equally excited, joyful and intense.

Example #2.

An eight and one half month old boy reaches for a toy, just beyond reach. Silently, he stretches toward it, leaning and extending arms and fingers fully out. Still short of the toy, he tenses his body to squeeze out the needed extra inch of reach. At that moment, his mother says, "uuuh...uuuh!" with a crescendo of vocal effort, the expiration of air pushing against her tensed vocal cords. The mother's accelerating vocal-respiratory effort matched the infant's accelerating physical effort. (Stern et al.,1984)

On first impression, there is the sense that some kind of imitation has taken place. However, matching is a better term because unlike a true imitation, there is no faithful rendering of the infant's overt behavior. Furthermore, the matching is largely cross-modal or inter-modal, that is, the channel or modality used by the mother to match is different from that of the infant. In the first example, the child's voice is matched by the mother's body movement. In the second, the child's arm movement is matched by the mother's voice. Thus, the child's original affect expression is cross-

modally transposed by the mother when she matches. The overt behavior is not transmitted.

The reference for the match then, is not the overt behavior, but the internal state, inferred or directly apprehended by the mother. Imitations do not permit the partners to refer to the internal state because they maintain the focus of behavior on the external. Attunement behaviors, on the other hand, recast the event and shift the attention to focus on the inside, to the quality of feeling that is being shared. For this reason, attunement behaviors are important as a distinct phenomenon.

Matching seems to occur then, between the expressions of inner state. These expressions can take forms that differ in modality, form, etc., but which have a potential substitutability as corresponding manifestations of a single, recognizable internal state. (Stern et. al.,1984) As such, the matching takes place at the interface between maternal fantasy, which is informed by the mother's inner world, and infant affective expression, a manifestation of inner feeling state. It could be said that attunement takes place within Winnicott's shared space, that powerful domain between parent and child where the parent's fantasies and inner world come to penetrate the child's felt experience.

When they are positive, attunements have the function of joining in with the infant's experience, and nothing more. This kind of attunement is called a positive attunement. That is, beyond wanting to share in the infant's experiential moment, the mother has no further motive. Upon questioning, mothers commonly described this as simply wanting "to be with " their child. In the case of negative attunement, the function of the attunement is different. Here the motive behind the mother's response to the baby's affect display has more to do with subverting the infant's experience, then it does with slipping into it.

It is characteristic of attunements that they occur rapidly, and largely out of the mother's conscious awareness. (Stern et. al.,1984) It follows then, that they are

informed by internal, unconscious processes in the mother. Since attunements take place exclusively within the context of the relationship, it is logical to assume that a mother's specific attuning behavior is informed by her own internal working models of relationship. Underscoring this point, Main et al. (1984) state that at any point in time, relationship-related forms of behavior are guided simultaneously by internal working models and ongoing interaction patterns.

Thus, attunements provide a behavioral analogue for a mother's inner, mostly unconscious feelings. They are the *modus operandi* for transmitting these feelings to the baby within the context of the ongoing repartee of the individual dyad. They provide the behavioral context for a mother to "play back" her inner state to her child. As Stern says: (1985)

"An attunement is a recasting, a restatement of a subjective state. It treats the subjective state as the referent, and the overt behavior as one of several possible manifestations or expressions of the referent."

"...this period of the formation of the sense of a subjective self provides the experience with analogue in the form of attunements..."

A mother's ability to make affect attunements is by definition determined by her sensitivity to the infant's affective signalling. We have seen that if her internal working model is unintegrated, it will impose restrictions on her sensitivity, and thus one can hypothesize, on her ability to make affect attunements. One of the hypotheses of this study is that the outcome of these restrictions upon attunement will be of a predictable nature.

### Summary and Hypotheses

Matching behaviors, can be expected to fall along a continuum that corresponds to that of internal working models for adults. From the perspective of attunement, there are individual differences in the internal working models of mothers that will dictate both the nature and balance of her attunements. At one extreme pole is too enmeshed, (Preoccupied with attachment) at the other, too detached. (Dismissing of attachment) Both categories represent models of insecure attachment. It is my hypothesis that mothers who fall along either of these extremes of the range, will engage in little or no positive attunements with their child. In both types of insecure attachment, mothers may also make negative attunements or misattunements. These include those attunements whose motives are to mock, to make fun of, or to alter the baby's experience. In these cases, the mother appears to "join in" with the child by attuning to his internal state, but does so with either a negative interest or with the intention of changing his experience.

The mother who falls along the middle of the range, who is securely attached, (autonomous) is best equipped to engage in a balanced amount of positive attunements and comments. Comments are made in response to the infant's behavior and cognition, not to his internal, affective experience. They include a mother's efforts to reinforce an action, to indicate attentiveness, to teach, to cap off the behavior, to outright change the behavior, or to change the infant's mood or arousal level. The autonomous mother is neither too enmeshed to objectively distinguish between her own feelings and fantasies and the affective experience of her infant, nor too detached from her own internal state and that of her infant's to participate in their intermingling.

### Hypothesis Testing

#1. The level of integration of past experience, a mother's state of mind regarding attachment, has a predictable impact on her cognitive and emotional functioning, which will in turn have a similar predictable impact on her ability to respond with sensitivity to her infant's expression of inner state. Specifically, it is expected that there will be differences between the quality of dyadic attunement among different groups of attached mothers, as measured by Main's Adult Attachment Interview.

### Exploratory Hypotheses

Although we can infer that the infant's expression of affect during attunement will evoke unconscious fantasies, fears, and wishes in the mother, there has been no research focused on the content and structure of what mothers actually think and feel during dyadic attunement. It is the aim of this study to examine the process by which a mother's state of mind with regard to attachment influences not only her behavioral response pattern to her infant's affect display, but also determines the content and structure of her fantasies evoked by the affective display. Thus, the phenomena of affect attunement and the fantasies that are evoked, reveal both the mechanism and the qualitative nature of the process by which intergenerational transmission of attachment is achieved.

Main suggests (1987) that an adult's need to preserve a "particular state of mind with regard to attachment" may influence her response to infant cues. In Main's view, an infant's signals may be similar in the reactions they evoke in the parent to memories regarding early attachment experiences. Thus, one could expect the maternal fantasies evoked by the infant's affect display to be structured relative to the memories which determine the nature of her internal working model of attachment, her state of mind regarding attachment.

Thus, dyadic attunement represents a behavioral means of transmission of attachment. In addition, the fantasies that arise from queries regarding a mother's attunement reveal how she makes sense of her infant's affective cues, and likewise, how these cues evoke fantasies regarding her own experience of being parented. It is also hypothesized that the responses to these queries will be structured similarly to the responses in the AAI of the same mother. Specifically, it is expected that a mother's inability to accurately identify her infant's affective experience at the moment of affect attunement (this is determined by one of the Probes), will reflect distortions of the same affective experiences with her own mother as measured by the AAI.

These two phenomena, affect attunement and the responses to the queries regarding her attunement, provide the crucial links between internal representation and intergenerational transmission. They provide a window for observing the process by which representation of attachment is passed on within the mother-infant interaction.

## CHAPTER TWO

### Method

#### Subjects

Fifteen middle class mothers were recruited through a commercial list of families who recently had babies and who lived in the New York area. Approximately 100 letters were mailed to families throughout the borough of Manhattan. The subjects were first-time mothers, from intact marriages, between the ages of 25 and 35. The infants had been full-term, (weighing more than 2500 gms.) had normal developmental histories, and were between the ages of 9.0 and 13.0 months old.

Recruitment proceeded in the following way. Prospective subjects received a letter that briefly described the study, requested that they telephone if they were interested in participating. The letter stated that the study focused on the impact of the mother's experience of being parented on her current parenting of her baby. Subjects were informed that they would be videotaped with the baby, and then asked to view the videotape together with the investigator. They were also informed that the investigator would ask questions regarding the interaction in hopes of shedding light on how the mother understood her baby. Finally, the letter stated that they would be asked to return to the laboratory within two weeks for an interview that focused on their recollections of their own childhood and important relationships.

Within a few weeks of the mailing, 25 mothers had telephoned, expressing interest in the study. During this initial phone conversation, mothers were questioned to ascertain whether the baby had a normal birth, any developmental delays or major medical problems. For the first fifteen women who responded in the negative to these questions, an appointment was arranged for participation in the study.

Hereafter, when describing and calculating the sample,  $N = 14$  rather than 15. This is due to the fact that during data analysis, it was discovered that the AAI audio tape of subject # 014 was distorted such that it was impossible to analyze.

Informed consent was obtained at the time of the testing.

### Setting

There were two settings. Videotaping took place in a laboratory/playroom at the New York Hospital, Payne Whitney Clinic, in the Laboratory for Developmental Processes. The laboratory, approximately 10' x 30', was a carpeted room, supplied with toys provided by the experimenter, and one familiar toy which the mother was instructed to bring. The room was bisected by a wooden partition and black cloth which concealed both the camera and the investigator/camerawoman. Maternal interviews took place in a furnished office at the same location.

### Procedures

#### Visit #1

1. On their first visit to the laboratory, mother and infant were given the opportunity to look around the space. Mothers could chat with the investigator and ask any questions. During this time, in an anteroom to the laboratory, the investigator conducted a more in depth developmental history interview. Mothers were queried regarding any birth complications, what age the baby turned over, sat up unassisted, and began to crawl. The responses to these queries fell within an average expectable range for all fifteen subjects. Next, mothers were instructed to carefully read the informed consent, and to sign if they were in agreement with it.

At this juncture, the investigator gave a brief synopsis of the procedure. Mothers were told that they should follow the investigator (who would walk behind

the partition) into the laboratory and get settled on the floor with the baby. Finally, they were given the following instruction: " Try to play with your child just as you do at home. I know it may be difficult to forget about the camera, but just do your best. Have fun!"

## 2. Free Play

Mothers and infants were videotaped in a free-play situation for 15 minutes. Toys ( a soft book, a truck, a ring toy, a mirror rattle, a puppet, a stuffed animal, a ball, a transparent ball, and six blocks) were spread on the floor, but no instructions were given about playing with them. Mothers were fully aware of the videotaping in progress.

## 3. Rest Period

There was a five minute rest period, during which time mother and baby were not videotaped, but remained in the room. (no videotaping was ever conducted during the "rest periods")

## 4. Prohibition

In the next videotaped section, the investigator placed an interesting toy robot on the floor of the laboratory, a few feet away from the baby. Mothers were instructed to prohibit the baby from playing with this toy. She was given no further instructions as to how to prohibit. She and baby were videotaped in this situation for three minutes.

## 5. Social Referencing

At the end of the three minutes, the investigator signaled the mothers (by tapping on the partition) to switch on the robot toy. When activated, the toy walked toward the

baby, spinning and making loud noises as it went. This experimental condition was videotaped for three minutes.

6. Rest Period

Same as above

7. Ignore

Mothers were asked to read a newspaper in the corner of the room, a few feet away from the baby. Mothers were instructed to ignore the baby as much as possible during this three minute sequence.

8. Rest Period

Same as above.

9. Separation

Mothers were asked to leave the room for a brief period. The length of this separation was determined by one of two occurrences: (1) the mother judged that either she and/or her infant was uncomfortable for any reason and so returned to the room, or (2) the investigator invited the mother to rejoin the infant in the room due to either infant distress, or the end of a 3 minute time period. The 3 minute period was begun at the moment the mother was out of the baby's sight, behind the door separating the laboratory from the anteroom. Videotaping began however when mother was signalled by the investigator to leave the room after the five minute rest period. This way, mother's approach to leavetaking was recorded. Videotaping then continued uninterrupted until the end of the final sequence, Reunion.

#### 10. Reunion

When the mother returned to the laboratory, videotaping of the interaction continued for a final three minutes.

#### 11. Attunement Probes

Immediately following the taping session, mother, baby, and investigator viewed the videotape in the laboratory. The investigator then paused the tape at the appearance of the first five affect attunements, and asked the mother a series of questions related to the interaction. These probes were also asked one time during each of the five experimental sections: Prohibition, Social Referencing, Ignore (reading a magazine and ignoring the baby), Separation and Reunion. The Attunement Probes are described below.

#### Visit #2.

On a second visit to the lab, (within two weeks of her first visit) the mother was given the Adult Attachment Interview by an outside investigator, who was otherwise uninvolved with the study. The interview was taped on audio cassette and took approximately 60 minutes to administer. The baby was not present in most cases. The tapes were transcribed by a professional secretary, who was otherwise uninvolved with the study.

#### Measures

##### Dyadic Measure: Affect Attunement

All videotapes were scored for Affect Attunement. Segments scored were: the first ten minutes of Free Play, and the full three minutes of Prohibition, Social Referencing, and Reunion. The attunement measure was designed to assess (1) the number of times an affective event occurs, and (2) the category of the event. Mothers'

responses were scored along two, dimensional scales: sharedness and faithfulness. For the purposes of this study, only the results of the sharedness scale were analyzed.

The affect attunement scale assessed the mother's attuning behaviors along the subjectively derived dimensional scale of sharedness. On this scale, maternal responses were rated along a continuum from negative attunement, (a score of either -2 or -1) to comments or communications, (a score of zero) to positive attunements (a score of +1 or +2). Each event received one score on this scale, and the rater made a judgment about whether mother's response was: (1) an attunement or a comment, and (2) if it was an attunement, to what degree did the mother enter into, or share in the infant's subjective experience. The degree of sharedness was rated by the gradations of either the positive or negative score "1" or "2". A response with the score of "1" was called a low-order attunement; here the mother combined her desire to share in the baby's affective experience with an intention to teach or otherwise alter his experience. On the other hand, a response that received a score of "2" was called a high-order attunement since its intention was purely to share in the baby's affective experience.

Attunement was measured in each of the 4 segments: Free Play, Prohibition, Social Reference, and Reunion. Three different aspects of attunement were analyzed in each of the four segments. These were:

1. The # of low-order attunements
2. The # of high-order attunements
3. The average level of attunement

Average level of attunement was generated by summing up the # of level "1" attunements plus twice the # of level "2" attunements. (e.g.: adding up the level scores) This sum was divided by the # of opportunities for attunement. (opportunities = # of

level "1's" plus # of level "2's" plus # of comments) The rationale for using average level of attunement as opposed to a simple sum of attunement levels was to correct for differences between mothers on general activity level, in order to separate quality of attunement from overall amount of interaction. For example, fairly frequent attuners who interacted with less frequency than low attuning mothers should not be penalized in their score by their low activity level.

### Maternal Measures

#### Attunement Probes

Immediately following the entire videotape procedure, videotapes were viewed by mother and investigator together. Mothers were queried about the nature of their attunement responses; these questions are referred to as the Attunement Probes. Mothers were asked about their attunement behavior in all the videotaped segments: Free Play, Prohibition, Social Reference, Ignore, Separation, and Reunion.

The investigator paused the tape in order to ask a Probe at specific points: the first 5 attunements during Free Play, the first attunement that appeared during Prohibition, Social Reference, and Reunion, and after viewing the full 3 minutes of the segments, Ignore and Separation. In the case where there weren't five attunements during Free Play, or none at all during any one of the experimental segments, the investigator paused the tape and administered the Probe at the occurrence of a maternal comment. Finally, if there were no occurrences of either attunements or comments, or, if there were an insufficient number of either, the investigator paused the tape and administered the Probe at points where she judged there to be a marked affective change in the baby.

This technique was designed to get a fuller idea of how a mother makes sense of her baby's affective cues. It was based on a technique developed by Dr. Daniel

Stern for use in his pilot study of affect attunement. In the present study, an attempt was made to formalize the methods he piloted. Mothers were asked a standard set of questions that focused on their insights into their own attuning behaviors. The investigator paused the videotape before asking the probe and made sure that the mother was clear on the interaction in question. Once agreement was established and the first Probe was given, the investigator and the mother could re-wind and re-view the segment as often as desired. The set of Attunement Probes, comprised of 6 questions, were as follows:

1. Why did you do "that" just then?
2. What did the baby do to make you respond?
3. Were you aware of your response?
4. What do you think the baby was feeling just then?
5. What did you hope to accomplish with your response?
6. In a similar situation, with you and your mother (you as the baby or young child), how might your mother have responded to you? Might it have been similar? How? If different, how would it have been different?

Probes were analyzed to determine whether mothers were able simply to understand, in an intuitive way, the reflective and psychological nature of the probes. These responses were evaluated using the same analytical approach used to analyze the AAI: for their coherency or incoherency, amount or dearth of detail, ease of recall, and contradiction between episodic memory and semantic generalizations.

Second, the investigator returned to each videotape, and each segment that had been probed, and made her own assessment of Probe #4, "what do you think the baby was feeling at the time?", using a 5-point scale as follows: high-negative, low-negative, neutral, low positive, high positive. Comparisons were made by the investigator

between her evaluations and mother's evaluations, and scored as an agreement if the evaluations matched, and as a disagreement if they did not. The percent of disagreements between mother and rater occurring in the Free Play segment, and the percent of disagreements occurring in the Experimental segments were calculated. These 2 percentages account for 100% of the disagreements. However, since it was useful to look for disagreements in conjunction with type of baby affect, percent of disagreement was also calculated for positive, negative, and neutral affect states. Since the neutral level was essentially a miscellaneous category, (not clearly positive or negative) and since it occurred rather infrequently, the percent of disagreements for neutral baby responses was not analysed.

Finally, in the case of disagreements, the investigator returned once again to the videotape, in order to assess the nature and maternal intent of the responses in question. (eg.: whether they were attunements, misattunements, comments, or missed opportunities for responding)

Thus, the Attunement Probes were analyzed descriptively to determine whether and to what extent mothers could reflect on their own attuning behaviors. They were also analyzed in order to evaluate how accurately mothers assess their infants' affective experience, and whether their ability to accurately make these assessments was related to whether the baby affects expressed were negative or positive.

#### Adult Attachment Interview (AAI)

Adult Attachment Interviews were administered to all 15 mothers participating in the study. The AAI is a structured interview consisting of 18 questions which takes approximately an hour to an hour and a half to administer, and was designed to elicit memories and feelings about attachment experiences. Subjects were first asked to think of five adjectives to describe their relationships with both parents, and then asked to provide a narrative example to support each chosen adjective. The nature of early

relationships was then probed further by questions aimed at memories of early separations, rejections, means of seeking comfort, and feelings of closeness to the parent. In the final section of the interview, mothers were asked to reflect on how they understood their parents' motivations for their parenting approaches, and to reflect on how their approaches impacted on their adult personalities and on their relationship with their own child.

Adult classification was based upon repeated study of the entire interview transcript. Subjects were rated on five, nine-point scales, some of which referred to the subject's probable experience with each parent (loving/unloving), and others which reflected the adult's "state of mind" with regard to attachment: coherence/incoherence, idealization of parents, ease of recall for early experiences, and anger experienced toward parents now. Following this rating, transcripts were classified into one of three major adult attachment categories. As stated earlier, the degree of security implicit in adults' working models of attachment was determined not on the basis of actual events of an adult's childhood, but rather on how they have come to organize the memories and feelings surrounding any such events. Thus, the existence of trauma or neglect or insensitivity in an individual history did not automatically lead to an insecure attachment classification; rather, classification was based on whether the memories and experiences were organized in such a way as to allow for freedom of access to them, and insight into their effects. Coherent organization of memories and feelings was marked by fluency of ideation and speech; the absence of contradictions in the narrative, and the ability to match semantic generalizations of the relationship (my mother was loving) with episodic memories which supported such generalizations (memories of the mother that did in fact support the generalization that she was loving)

In the manual of the adult attachment classification system, (Main & Goldwyn, 1985) each classification category is described in detail, and sub-categorized accordingly. An overall description of each attachment classification is as follows:

Autonomous with respect to attachment - These adults tended to value attachment relationships, regarded these relationships as influential in their personalities, and yet were objective in describing any particular relationship or experience. They were easily able to recall early relationships, speak about attachment in a way that suggested prior reflection and integration, and for the most part, did not idealize the parent. Negative memories were part of the narrative flow; they did not create incoherency or disruption. Finally, secure adults were able to provide supportive and credible episodic memories for their semantic generalizations of the relationship.

Detached: dismissing of attachment - These adults viewed attachment as having little value or influence, and showed little concern for attachment relationships. They had substantial difficulty recalling early memories or describing them in any detail, with any feeling or insight. They also tended to idealize the parents, and in so doing, they obscured the reality of rejection and their own internal hurt and disappointment. Negative memories and their associated affects were excluded from consciousness. As a result, semantic generalizations were often at odds with the apparent reality of the relationship, and then, episodic memories were not available to serve as evidence for their semantic generalizations.

Enmeshed, confused and unobjective: preoccupied with or by early attachment - Preoccupied adults still seemed enmeshed in dependencies on their parents and still struggle to please them. A sense of confusion, and incoherency, was characteristic of the narrative offered by these adults. Typically, they were flooded with memories of early experiences and their associated negative affects and confusion, but lacked the structure to integrate these memories and affects, or to place them in any perspective. These adults impressed one as passive and vague; fearful and caught.

Transcripts of the AAI were scored by Dr. Arietta Slade and Dr. Mary Jo Ward, who have achieved inter-rater reliability on the measure. Any disagreements were resolved by conference. The investigator remained naive to the results of the scoring

until she coded the videotapes for attunement, as well as transcribed (from audio tapes) and coded the Attunement Probes.

## CHAPTER THREE

### Results

In the following two chapters the data will be analyzed using two different approaches. In the first approach, a statistical analysis was done. It examined the relation between maternal attachment and 1) the level and frequency of attunement and 2) Disagreement with the rater. Secondly, a qualitative analysis was conducted in order to elaborate on the statistical findings; this descriptive approach to the data provided a more complete understanding of the meaning of the group differences and the relations that were found.

#### Quantitative Findings

Although it was anticipated that the small sample size would present problems with data analysis, these were compounded by the unusual spread of subjects within the attachment groups. The expected distribution of a given sample is 60% secure/Autonomous, 30% Dismissing, and 10% Preoccupied. This sample was distributed as follows: 21% Autonomous (N=3); 43% Dismissing (N=6); 36% Preoccupied (N=5). Thus the sample problems necessarily influenced the distribution of subjects within the groups, the frequency with which events occurred, and complicated the statistical analyses. Consequently, results were considered up to the .10 significance level.

Even though some of the analyses of variance that were conducted reached significance, it cannot be emphasized enough that the findings of the statistical analyses reported in this section must be interpreted as simply suggestive of group differences. In order to make any broad generalizations of the findings, it would be necessary to replicate this study using a larger, independent sample. Because the sample size of

each group was so small, analysis of the differences between their means tends to blur some of the extremes that existed within each group. Furthermore, such analysis does not serve the purpose of fully describing these groups. For these reasons, raw data was included in the analysis of the differences between the groups, and the central approach to the data analysis was more descriptive and qualitative.

#### Attachment group differences on Affect Attunement.

A series of one-way analyses of variance (ANOVAS) were used to examine attachment group differences on attunement variables. In the first analysis, the # of low-order attunements were compared across attachment groups in the 4 videotaped segments: Free Play (FP), Prohibition (Proh.), Social Reference (SR), and Reunion (R). Table #1 summarizes the ANOVAS for # of low-order attunements in the 4 segments.

For the # of low-order attunements, only the measurement from the Reunion segment was significant. ( $F=4.66$ ;  $DF=2,10$ ;  $p<.05$ ) Post-hoc T-tests revealed that the Dismissing group's group mean of .67 was significantly lower at the .05 level than the 2.0 group mean for the Preoccupied group. During Reunion then, Dismissing mothers used low-order attunements in response to their infant's affect expression less often than those who were Preoccupied. Thus, the differences on this variable emerged amongst the Dismissing and Preoccupied groups, and not the Autonomous group.

Table #1

1-way ANOVAS on # of low-order attainments

<u>Segment</u>	<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D.</u>	<u>F ratio</u>	<u>F prob.</u>
FP	Auton	3	7.7	3.79	.486	.627
	Dismiss	6	5.8	3.60		
	Preocc	5	4.8	4.50		
Proh.	Auton	3	.3	.58	.491	.625
	Dismiss	6	.3	.82		
	Preocc	5	1.0	1.73		
SR	Auton	3	.6	.57	.471	.636
	Dismiss	6	1.8	2.14		
	Preocc	5	1.6	1.52		
R	Auton	2 <sup>^</sup>	1.0	0.0	4.664	.037*
	Dismiss	6	.66	.52		
	Preocc	5	2.0	1.0		

<sup>^</sup> Since the reunion for one mother in this subgroup took place off-camera, the count for this subgroup during this segment will always be 2 rather than 3.

\*  $p < .05$

In the second analysis, the # of high-order attunements were compared across attachment groups in the 4 videotaped segments. For the # of high-order attunements, a trend towards significance was noted in the Free Play segment. ( $F=3.30$ ;  $DF=2,11$ ;  $p<.10$ ) Post-hoc T-tests revealed that the Preoccupied group mean of .4 was significantly lower at the .05 level than the Autonomous group mean of 2.0. Moreover, at the .10 level, the Preoccupied group mean was also significantly lower than the Dismissing group mean of 1.67. Thus, mothers in the Preoccupied group responded with fewer high-order attunements during Free Play than did mothers in the Autonomous group. In addition, at a higher significance level, mothers in the Preoccupied group responded with fewer high-order attunements than did mothers in the Dismissing group. Table #2 summarizes the 1-way ANOVAS for the # of high-order attunements.

Table #2

1-way ANOVAS on # of high-order attainments

<u>Segment</u>	<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D.</u>	<u>Fratio</u>	<u>Fprob.</u>
FP	Auton	3	2.0	1.00	3.302	.075t
	Dismiss	6	1.6	1.21		
	Preocc	5	.4	.54		
Proh.	Auton	3	0.0	0.0	.272	.766
	Dismiss	6	.17	.40		
	Preocc	5	.20	.45		
SR	Auton	3	.33	.57	.272	.766
	Dismiss	6	.83	1.60		
	Preocc	5	.40	.54		
R	Auton	2	0.0	0.0	.538	.599
	Dismiss	6	16	.41		
	Preocc	5	0.0	0.0		

t &lt; .10

Finally, in the third analysis, the average level of attunements were compared across attachment groups in the 4 videotaped segments. For the average level of attunement then, main effects were significant in the Free Play segment. ( $F=4.01$ ;  $DF=2,11$ ;  $p<.05$ ) Post-hoc t-tests revealed that the Preoccupied group mean of .47 was significantly lower at the .05 level than the Autonomous group mean of .73. At the .10 level, the Preoccupied group mean was also found to be significantly lower than the Dismissing group mean of .63. Thus, mothers in the Preoccupied group responded at a lower average level of attunement during Free Play with their infants than did mothers in the Autonomous group. In addition, at a higher significance level, mothers in the Preoccupied group responded at a lower average level of attunement than did mothers in the Dismissing group. Table #3 summarizes the 1-way ANOVAS for the average level of attunement.

Table #3

1-way ANOVAS on average level of attunement

<u>Segment</u>	<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D.</u>	<u>Fratio</u>	<u>Fprob</u>
FP	Auton	3	.73	.131	4.010	.049*
	Dismiss	6	.63	.169		
	Preocc	5	.47*	.070		
Proh.	Auton	3	.06	.096	.173	.843
	Dismiss	6	.11	.180		
	Preocc	5	.13	.217		
SR	Auton	3	.61	.787	.166	.849
	Dismiss	6	.55	.498		
	Preocc	5	.39	.551		
R	Auton	2	.25	.117	.259	.777
	Dismiss	6	.27	.301		
	Preocc	5	.35	.099		

\* p &lt; .05

As discussed earlier in this section, both the small size of this sample as well as its skewed distribution made it difficult to detect significant differences that may have existed among the groups. Inspection of the raw data suggests that the lack of power was indeed a factor in the failure to detect significant differences between groups, for, as an examination of Table 4 indicates, these numbers give a clear sense of the differences that do exist between attachment groups and attunement. These differences are most clearly seen during Free Play where the securely attached mothers are shown to be attuning more than both insecurely attached groups. Furthermore, it can be seen that Dismissing mothers attune more than those who are Preoccupied with attachment. As will be discussed more fully in the qualitative analysis section, this difference between the two insecure groups is of considerable theoretical interest. These findings support the hypothesis that securely attached women are more sensitive to their infants' affective experience, enabling them to be more attuned to their affective expressions. Likewise, they highlight the insecure mothers' relatively diminished capacity to attune to their infants' affective experience. Table #4 presents the average attunement scores for each subject broken down by attachment group and videotape segment.

Table #4

Average Attunement scores by attachment group and segment

<u>Group</u>	<u>Segment a</u>			
	<u>Fp</u>	<u>Proh.</u>	<u>Sr</u>	<u>R</u>
<u>Autonomous</u>				
#010	0.800	0.000	0.000	0.333
#09	0.818	0.167	1.500	<b>b</b>
#01	<u>0.581</u>	<u>0.000</u>	<u>0.333</u>	<u>0.167</u>
Average:	0.733	0.056	0.611	0.250
<u>Dismissing</u>				
#05	0.667	0.000	1.000	0.000
#015	0.429	0.000	0.200	0.500
#012	0.778	0.400	0.571	0.429
#08	0.400	0.000	0.000	0.000
#06	0.750	0.000	0.250	0.000
#02	<u>0.741</u>	<u>0.286</u>	<u>1.273</u>	<u>0.667</u>
Average:	0.628	0.114	0.549	0.266
<u>Preoccupied</u>				
#013	0.500	0.000	1.200	0.500
#011	0.538	0.500	0.333	0.333
#07	0.357	0.000	-0.333	0.286
#04	0.444	0.000	0.500	0.400
#03	<u>0.500</u>	<u>0.167</u>	<u>0.250</u>	<u>0.250</u>
Average:	0.468	0.135	0.390	0.354

a Key - Segments refer to the videotaped segments: Free Play (Fp), Prohibition (Proh.), Social Reference (Sr), and Reunion (R).

b no score for this subject, as reunion took place off-camera

### Attachment Group Differences on Disagreement with rater

Disagreement with the rater was the measure designed to examine mothers' evaluation of their infant's affective state in relation to the same evaluation by the researcher. If, for example, a mother described her baby as "happy" during a particular attunement moment, and the researcher (the rater) assessed that the baby was "mildly negative" at that moment, a disagreement was scored. This measure was singled out for analysis because it was thought that mothers who were more sensitive to their infants' affect expression would be best able to accurately assess the full range of their emotional experience and would have less disagreement with the rater. Thus, Disagreement with the rater would be a good barometer of maternal sensitivity and ability to objectively recognize the baby's emotional experience.

1-way ANOVAS were used to examine group differences on the various measurements of Disagreement with the rater. None of the ANOVAS (% of Disagreement in Free Play, Experimental segments, positive affect, and negative affect), were significant. Overall, there were no significant differences in mothers' disagreement with the rater on their infants' affect displays.

In summary, the quantitative analysis of the data suggested differences between attachment group membership and affect attunement. During Free Play, mothers in the Preoccupied group were found to respond with fewer high-order attunements than those in both the Autonomous and the Dismissing groups. Likewise, mothers in the Preoccupied group were found to respond during Free Play at a lower average level of attunement than those in both the Autonomous and the Dismissing groups. Mothers in the Dismissing group were found to respond with fewer low-order attunements during Reunion than those in the Preoccupied group. Inspection of the raw data revealed that securely attached women are more attuned to their babies during Free Play than the

mothers in the insecure group. Furthermore, the raw numbers pointed to a difference on attunement between the two insecure groups.

## Qualitative Findings

### Affect Attunement and transmission of state of mind regarding attachment.

Qualitative analysis of the data revealed that the quality of a mother's response to her baby's affect display, as captured by the measure of maternal attunement, is related in important ways to her representation of relationships, as measured by the AAI. Affect attunement provided a window for observing the process by which the representation of attachment could be transmitted from mother to baby through their interaction. Analysis of mothers' responses to queries regarding their attunement (Attunement Probes), revealed that the attunement moment evoked responses and fantasies in them that were similar to their memories of early relationships as evoked by the AAI. The mothers' fantasies were structured similarly to the memories evoked by the AAI. Concretely, distortions in the text of mothers' narrative responses to the Probes were associated with narrative distortions in the text of their AAI. These associations manifested themselves in two important ways. First, there were structural correspondences between the language used to describe the interaction with the baby and thoughts and feelings that emerged to describe early childhood relationships. Both narratives contained the same kinds of linguistic incoherencies and contradictions. Second, the distortions arose around parallel kinds of affect; those affects regarding early attachment that were problematic for the mothers on the AAI were also problematic when they arose in the interaction with her baby. Where mothers were compelled to block off or otherwise defensively distort access to memories of particular affective experiences regarding attachment, they were likewise compelled to distort these kinds of affective experiences when they arose with their infants.

These findings will be discussed by attachment group. A descriptive look at mothers' Attunement Probes and AAIs will reveal their specific similarities of content and linguistic structure. In addition, the ways in which mothers defend against and

distort certain affective memories will be examined, and contrasted with parallel affective experience with the baby. Subjects representing each subgroup of their basic attachment group will be discussed in this way.

### The Autonomous Group

The research sample contained only one exemplar of this group, the category F3. This mother's AAI presented an integrated picture of her parents that was devoid of idealization, objective about their shortcomings, and yet not devaluing. In particular, she thoughtfully described positive and negative features of her relationship with her mother, and recalled incidents to describe both. She spoke freely of her mother's passivity and detachment toward her as a child; there was a simplicity and a sense of forgiveness to this interview. Finally, this mother could reflect objectively, without idealization or denigration, on how her mother's behavior influenced her adult personality and her own parenting approaches.

Throughout the entire attunement videotape, this mother consistently responded to her infant's affect. She was equally responsive to and acknowledging of positive as well as negative affect, apparently comfortable with both. She moved with ease from describing her infant's joy and exuberance playing with a toy to her frustration and negativity when she was prohibited from playing with the robot. As predicted by the integrated image she created of her mother in the AAI, this mother was able to respond with equanimity to the gamut of positive and negative affects in her baby. Finally, just as this mother could respond coherently to queries regarding early attachment to her own mother, likewise, she was able to respond coherently, thoughtfully and objectively when asked during attunement moments, to imagine her mother responding to her in a similar circumstance.

The two remaining mothers who fell within this category were rated Autonomous: Somewhat incoherent or dependent (F4). On the whole, they responded

with the same freedom and coherence as the mother rated F3, but with an important constriction. Whereas the F4 mothers were generally attentive to their infants' affective expressions and coherent regarding early attachment memories and fantasies, they became inattentive and incoherent (in a similar but less pervasive way as the insecure subgroup E2) in response to particular infant affects and queries about them. The problematic affective areas corresponded to those alluded to by questions on the AAI.

Mother #09 was emblematic of this Autonomous subgroup. She gave a very clear picture of how she experienced being parented by her mother: she was insensitive, inconsistent, and overbearing. Consequently, she developed a deep resolve to be a different kind of parent to her own daughter. During the Attunement Probes, she pointed out how she made an effort to listen to her daughter's cues and needs, to respond without being intrusive, and to make sure the responses were clear and consistent. For the most part, mother #09 was able to be true to her resolve to be a "different" kind of mother.

However, when she was required to establish a boundary between herself and her daughter, she was unable to adhere to her resolve. During these experimental segments, this otherwise consistent and concise signaller now gave very ambiguous signals. The Prohibition segment required a clear "no" to dissuade this very curious infant; this mother could only muster a weak one, whose sweetness of tone belied her ambivalence about being firm with the baby. Mother #09 had tremendous difficulty saying goodbye and leaving the room as required by the Separation segment. She repeatedly told her daughter that she would be leaving for a short time and would be "right back," only to remain, hovering about the infant, who was becoming increasingly distressed at each warning. Thus, when mother did finally leave the room, the baby was highly distressed.

Upon viewing these segments on the videotape, mother appeared to be unaware of her inconsistent, contradictory signalling. Furthermore, when asked to fantasize

about herself and her own mother in a similar situation, (eg: separation) she became incoherent and contradictory in her descriptions. She described her mother as "always there," "involved and into my life," then stated that she couldn't imagine her mother responding in a similar situation at all because "she never left me," and finally, she recalled a childhood memory of her fury at her mother's abandoning her, both physically and psychologically, at a time of need. The behavioral mixed messages that mother #09 conveyed to her baby during Separation mirrored the still somewhat confused nature of her ongoing, internal experience of separation and rejection.

The findings of her AAI reflected the area of confusion once again. Overall, the interview revealed mother #09 to be an individual who had achieved some autonomy, but who became somewhat incoherent as a function of particular traumatic experiences around the issues of separation and rejection. Though this mother could articulate her childhood experience of being smothered as well as abandoned by her own mother, she literally could not put the two ideas together: her narrative episodes contained both these experiences, yet they were not precisely connected, but rather seemed entangled with one another. Thus, while this mother testified to having a "sense that I had a very conditional kind of love," it was still only a "sense." She was as yet unable to fully integrate the meaning of her experience of her mother as "smothering" and "involved," along with her affective experience of feeling misunderstood and even abandoned by her. This pocket of internal incoherence and struggle was reflected in her behavior and fantasies during particular attunement moments.

### The Dismissing Group

The AAI's of the 6 mothers who fell into this category, Dismissing: dismissing of attachment, were moderately coherent. Overall, the mothers in this category could describe unfavorable attachment experiences, and sometimes even acknowledge some influence. However, their reactions were not felt on an emotional level; while they

showed good understanding on the cognitive level, they remained emotionally detached from the experiences. They had not been thoroughly integrated.

Notwithstanding the relative coherency of their AAI's, these mothers relied on the defense of idealization to create emotional distance between themselves and their own mothers. It was typical for those in this group to simply repeat a phrase such as "She was great!" throughout the interview. Rarely elaborated, these kinds of idealizations were cut and dried and devoid of affective verve; they seemed to support the internal experience of the mother as inaccessible and unattainable. They maintained the distance. Overall, idealization functioned for the Dismissing group in the service of minimizing the influence of the attachment relationship.

The research sample yielded two sub-groups within the overall category.

Mother #05 was the only woman rated D1: Dismissing: Dismissing of attachment. She described attachment memories in only the most abstracted way throughout the AAI, with an extreme paucity of detail; it was as if she had no language with which to describe attachment. It seemed alien to her. Many times, she was unable to provide any memories of early attachment whatsoever. At the same time, she spoke with equanimity, giving the impression that she was not consciously "hiding" anything, but had simply never questioned anything about her early experience. Upon close reading of the record, it was clear that this equanimity belied a childhood experience that was in fact lonely and lacking parental support or comfort.

It was not surprising then to find the same dearth of fantasy material on the Attunement Probes; there was not a single attunement moment that triggered any kind of fantasy or introspection. This mother consistently responded to the probe regarding herself and her own mother by saying: "My memory is drawing a blank." The only response she could muster focused on superficial features. When asked to elaborate on what she inevitably described as the similarity between her responses to her son and her fantasies about her mother's responses to herself as a child, she stated: "I get an image

of my mother ... I guess there's some kind of style ... or movement." Her difficulty finding a more descriptive language underscored the inaccessibility of her inner experience of relationship.

Her attunement responses followed a similar pattern. She attuned primarily to the cognitive aspects of her son's play rather than to his feeling states. These responses then shed light on what was alluded to in her AAI: the lack of physical and psychological comfort in her childhood and her sense of isolation. Viewing the Reunion segment, this mother stated that "it was nice to get him to stop crying." In fact, the baby did not stop crying, but rather persisted in an angry, inconsolable way. It was as if she could not perceive his distress, and so certainly could not attune to it. She was unable to share in her son's feeling state of anger and distress; she left him "alone" in it, rendering to the observer a vivid behavioral analogue of her own ongoing, internal experience of emotional isolation.

The remaining 5 women in the Dismissing research sample fell within the subgroup D3: Dismissing: Restricted in feeling. Mother #08 clearly and consistently described her mother on the AAI as self-absorbed, hysterical, insensitive to her feelings, and rejecting of their expression. She related episodes in which she ran to another room to be alone, in order to express feelings of rage or sadness; expression of any vulnerability raised an expectation that she would provoke her mother's derision. She conveyed an atmosphere of mutual wariness between mother and daughter. Many stories related memories of humiliation that arose from being physically slapped around by her mother, or otherwise abused by her "emotional outbursts." Her mother was either uninvolved, uncaring about her life, or suddenly, over-involved, to be guarded against.

Though moderately coherent in her narrative memory, there was a crucial missing link to affect in this mother. She could recount her mother's capacity for cruelty and insensitivity, could make the statement that she thought her mother's

behavior affected her adult personality, and yet she could not make the final leap to affective integration by describing what the influence might be and how it might be manifested in her personality. Thus, her understanding remained on a cognitive level. She seemed emotionally detached from the experiences with her mother.

The discontinuity between cognition and affective experience revealed in her AAI was predictive of the findings in her Attunement Probes and behavior. Her consistent fantasy about her mother's responses to her as a small child focused on insensitivity and rejection. She stated that she thought her mother would have been intrusive in her play, would not have observed and followed her cues, but would have imposed her own agenda. On the other hand, she had fantasies that focused on her feelings of rejection, of her mother's uninvolved involvement in her emotional life. There was an illustrative piece of a fantasy regarding the segment, Ignore: "I never thought 'OK, I'll just jump on mommy.' I don't think my mom would have let me invade her time."

Again, this mother made a fairly coherent presentation. And she attested that unlike her mother, she wanted "to be a good listener to my kid ... I think I'm a good listener." In fact, mother #08 was a very infrequent attuner. Opportunities for attunement were typically met with a maternal response to the cognitive aspects of the play, where she enacted her own need to master a toy or move on to another activity. Sometimes opportunities (affective signals from the baby) were ignored entirely.

When the baby was in distress during Prohibition and Reunion, this mother showed a real capacity for sadism in the attunement moments, either by glossing over the apparently unacceptable emotion or by teasing the baby. During Separation, this mother remained out of the room for the full 3 minutes, while her daughter cried hysterically in the adjacent laboratory. While viewing the Separation segment on videotape, she seemed disturbed at how upset her daughter became, and stated that she didn't remember her being so upset at the time. The time between the actual event and the video review was approximately 10 minutes. Her reaction to the video and her

responses in the attunement moment gave dramatic focus to her need to distance herself from particular kinds of affective experience, and the strategies she employed to do so. Just as she was detached from the emotional impact this kind of behavior had exerted on her own personality, she was disconnected from its very existence in her relationship with her daughter. Thus, her attunement behavior was predicted and determined by the nature of her internal working model.

Another mother (#06) rated D3 used consistently idealizing ideation to describe her mother on the AAI, which was almost as consistently contradicted by the episodic memories she produced regarding her attachment experience. A reading of the episodic memories produced in the reader a strong sense of rejection and stifled anger in this childhood, which was compulsively covered up or muted by her general statements regarding these issues. Memories of receiving harsh punishments for misdemeanors were followed by bald denial of ever being emotionally upset or sad as a child. Likewise, episodic memories gave the reader the impression of her mother as emotionally distant, somewhat unattainable. She was unable to integrate these at a more general abstract level, and could only state repeatedly: "My mother has just always been there, it's a continuation." The experience of emotional distance and the feelings that may have been engendered as a result were to be disavowed: "She (mother) doesn't like it if I am cross with anyone ... she likes everyone to be happy."

The same insistence on never-ending happiness, while denying the existence of more negative kinds of affect, was revealed in this mother's Attunement Probes and behavior. Most striking and illustrative were mother #06's responses to the Separation and Reunion segments. At the beginning of the the Separation segment, mother #06 rose and left the room without providing any warning or leavetaking to her son. After a few moments of loud, protesting crying, she returned. Viewing the videotape, mother spontaneously commented on the fact that she did not say goodbye to her son:

"Probably my mother would have said that she was leaving, and I didn't. I'd just rather get up and leave the room - not such a big thing."

Describing her feelings upon reunion with her son, mother #06 underscored how imperative it was to not only deny feelings of rejection in herself, but also to deny the existence of any such set of feelings in her son. She said: "It's not separations and reunions, it's a part of life, because really they don't mean anything, I'm always there. I want him to feel it's all a flow, it's not separate, unite, separate." This statement was an eloquent testimony to her need to deny painful feelings associated with separation; this mother attempted to deny the very fact of their separation, and of course, the ensuing negative affects it necessarily provoked in her son.

### The Preoccupied Group

Five mothers were categorized Enmeshed, confused and unobjective: Preoccupied with Early Attachments. These individuals related a variety of personal histories ranging from struggles resulting from a weak and unprotective parent, to those arising from a parent-child relationship characterized by guilt-producing criticism or other interference. Unlike the moderate coherence of the Dismissing group's AAI's, those of the Preoccupied group were loose and incoherent. The Preoccupied group typically provided vivid stories illustrative of their difficulties with attachment figures around such issues as separation and rejection. It was also typical that these stories were unfocused and unaccompanied by insight; mothers in this group were still caught up in struggle with the attachment figure and were unable to objectively describe the experience.

Although both insecure groups relied heavily on idealization, they put it to use toward different defensive ends. While the Dismissing group used it to support an experience of emotional distance, the Preoccupied group employed the defense in order to maintain an experience of enmeshment and emotional entanglement with the mother.

Overall, the idealizations of the Preoccupied mothers were geared to maintain their high level of confusion and ambivalence about the attachment relationship.

Like the Dismissing group, the Preoccupied mothers had difficulty responding to their babies' negative affects. Unable to attune to them and unable to gloss over them like the Dismissing group, they produced irritation or outright neglect as a response. The Preoccupied mothers attempted to somehow negate their babies' negative affect by becoming uncharacteristically sensitive attuners to their affective expressions of dependency and sadness. Doing so seemed to provide to the mothers a means of denying any impact of negative affect on the interaction.

The research sample produced at least one subject in each of the three subgroups.

The only mother rated E1, Enmeshed: Passive, (#013) gave an AAI interview that was classic for this subgroup. Main & Goldwyn (1985) characterized the reader's impression of this type of transcript as that of "inchoate negativity." Mother #013 conveyed this by alluding to feeling threatened by both her parents; their anger toward herself and her siblings ran throughout the transcript, but in an ill-defined way. She described her mother as a strong disciplinarian who would hit her with a wooden spoon; she reflected on the deleterious effect of the lack of "affection" in her childhood, but then testified to her desire to be like her mother in her own child-rearing approaches: "I try to model myself on what my mother did, and I take her advice whenever she says, 'I did this or this.'" These oscillations between a negative and positive viewpoint were typical of this subgroup.

Mother #013 gave the impression of being emotionally stifled, and reported having "held in" her feelings during times of emotional duress in her childhood. There was a quality of passive acceptance of this state of affairs, expressed in her difficulty reflecting on any impact her childhood experiences may have had on her adult personality: "It's hard to get inside yourself and look in now." This passivity was also

expressed in her inability to focus incisively during the interview; despite her extensive discussion of relationships and events from her childhood, mother #013 never made fruitful connections between them.

The attunement moments reveal the strategies this mother employed to keep the negativity "inchoate" when it arose in the interaction with her son. During the Prohibition segment mother #013 blithely attested to the ease with which she blotted out her baby's negative affect: "I turn my emotions off when he gets upset. It was the same with my mother ..There were no emotions involved ... you knew you were going to get hit, just by looking at her." Though attentive to her baby, she only acknowledged his negative affect in a literal sense, by labeling it; in so doing, she was able to blunt its emotional, experiential impact on her. Thus, this mother was able to remain passive and abstracted in relation to her baby's anger. She preserved her state of mind regarding attachment.

The majority of this sample (3 of the 5 subjects) fell within the subgroup E2, Enmeshed: Conflicted and ambivalent. As a group, they described histories of stressful mother-child interactions, but were unable to directly ascribe the experience of rejection. They all gave the impression of being aware of effects of these early experiences; in fact, they seemed quite obsessed by them. However, they were unable to provide the crucial link between the experiential and the cognitive; they could not coherently identify the cause of the effect. As a result, these individuals seemed to be endlessly caught up with their mothers, either through ongoing dependency, or active struggles for independence.

The AAI of mother #04 revealed that her active struggle for independence from her mother belied a critical, angry and fragile ongoing internal working model. She described how she emotionally turned away from her mother at 14 years old, and became close to her father. This experience seemed still very much alive in her. In describing it to the researcher she actually became angry, enacting the anger and

rejection that she experienced in relation to her mother. However, she denied that her turning away was a reaction to the quality of their relationship, and offered partial explanations such as: "That's the way mothers and daughters are." This mother described anger in her family as only being expressed indirectly: specifically, she stated that her mother never "took out her anger on me, she only took it out on my father." Likewise, she undid all the volition and anger in her current stance vis a vis her mother with statements such as: "I don't always like her, but I'm never hostile."

Though her interview was replete with stories describing lack of maternal comfort or empathy, this mother protested that she never felt rejected. Once again the disjunction between an effect and a coherent cause was evident. Like many of the women in this subgroup, this mother was mired in an ongoing experience of anger and humiliation regarding attachment to her mother, yet was unable to name her experience as such or to link it with any particular event or set of events in her past. While the Dismissing mother gave the impression of coherent recognition of potential causes without being aware of their effects in her life, the Preoccupied mother was well aware of the effects but unable to identify a coherent cause in her history. These two strategies (especially clear-cut in the E2's and the D3's) are really opposite sides of the same coin since they both represent a disjunction between cognition and affect and an impediment to an objective state of mind regarding attachment.

An evocative storyteller, mother #04's recollections were ultimately limited in scope, for they provided no objectivity about or insight into the origins of the feelings they evoked. When probed directly about the impact of her experiences with her parents on her adult personality, she repeatedly lost her train of thought, and requested to hear the question repeated two more times. This uncharacteristic loss of concentration provided more evidence of the difficulty she experienced when challenged to integrate her affective experience with any coherent cause.

This mother's attunement moments revealed fantasies that had a direct impact on her responses to particular types of affect in her son, and evolved directly from her experience with the same affects with her own mother. During the Prohibition segment, the baby responded to her prohibition with mild resistance. Mother #04 stated however, that her son had no understanding of her "no," that it had no impact on him, and she completely disregarded his mildly defiant response.

Despite her attempts to deny its existence, the baby's defiance of her "no" did impact on her, as it evoked a striking memory. (The memory was consistent in tone with many that appeared in her AAI.) At about 6 years old, she remembered defying her mother's prohibiting dictum by putting dog food on her dog's face. Her mother responded by smearing her daughter's face with the same dog food and forcing her to sit that way in the corner. As she told the researcher, she seemed to re-experience the humiliation and anger that she felt at the time. When she was probed further, she was unable to coherently connect her feeling humiliated with her mother's response to her defiance as a child. She began to back pedal, to say that her mother's extreme measure had virtually no impact on her; even as she re-experienced its impact, the humiliation. Just as she could not objectively acknowledge the influence of her mother's cruel prohibition, she was compelled to deny the impact of her own prohibiting behavior on her baby.

The experience (it occurred out of her awareness) of the baby's mild defiance evoked powerful memories and feelings in this mother. To consciously acknowledge her infant's defiance would apparently threaten her current state of mind regarding attachment: conflicted and ambivalent. Concretely, this mother's own experience of defiance were so entwined with experiences of rejection and humiliation, that to consciously acknowledge defiance in her son would be to threaten to make conscious an acknowledgement of her own sense of the rejection and humiliation in her attachment relationship with her mother. Another E2, mother #07, was very much

enmeshed in a still-continuing dependency with her mother; she was tearful throughout the interview when she described the lifetime "guilt" she has felt regarding her mother's "selflessness", and her continuing reliance on her mother. She was preoccupied, from the earliest point in the interview until the end, with loss and dependency regarding her mother; the following statement captured the level of internal disorganization and panic that she experienced throughout the interview when these issues came up. Five minutes into the interview, as she expounded on her last choice of adjective (guilt) to describe her relationship with her mother, she began to cry and said, " ... it is a very scary thought to be without my mother. It really is, up to the point that if she moved, I would go into a severe depression. I just feel I need her close."

This mother then, was able to describe in moving detail, her fears of separation from and her deep attachment to her mother. She was preoccupied with the intensity of these feelings toward her mother. In a more vague, incoherent way, mother #07 described her craving for symbiosis, and how she manipulated her mother to achieve that end. When upset as a child, she described how she would throw violent temper tantrums during which she kicked and screamed and verbally abused her mother. She said: "All of that was my way of asking for my mother to just put her arms around me. I knew it was wrong, what I was doing, but I wanted that reaction." She went on to describe how she always felt rejected as a child, that her siblings got more love than she did, and that presently she still feels this way.

Again, these vivid descriptions were unaccompanied by insight. This mother eagerly described her sense of past and ongoing deprivation in relation to her mother, yet was unable to provide any causal explanations for her feelings beyond statements such as, "I'm a middle child, you know." She could not attribute her sense of deprivation to the relationship; her mother was consistently idealized as self-sacrificing and hallowed, while she was self-denigrating in her portrayal of herself as needy, insatiable and endlessly enmeshed. There were only the vaguest hints throughout the

interview of underlying anger toward her mother or any moves toward individuation. However, even these oblique expressions were immediately contradicted and swept away, replaced by another description of symbiotic experience with her mother.

Due to her intense preoccupation with this attachment relationship, this mother's attunement moments were suffused with her ongoing experience of herself as a child, still enmeshed in guilt regarding her mother. She found it almost impossible to reflect on her own behavior as a parent in the context of her experience of being parented herself. This was most poignantly underscored by her response during the Separation segment to the Probe: "What do you think the baby is feeling?" She replied: "He likes having me there...I still get upset, a little sad to me when I have to say bye to my mom." At this point, she began to cry. The sight of her baby's distress during her absence so stirred her own fears and preoccupations that she literally slid, both semantically and experientially, into her own childhood experience and away from that of her infant's. Thus, she was prevented not only from any objective reflection regarding her baby's experience, but from any reflection on her role as mother.

So desperate to experience and re-experience "perfect" union, this mother created 2 reunions with her baby. She returned to the room after the Separation segment as instructed, hugged the baby, remained for a few moments while the baby calmed, and then left the room again, much to the surprise of the researcher. Thus, she effected 2 reunions rather than the usual single event. No other mother in the study took such initiative. Beyond the departure from the instruction, this move was significant for the extra opportunity it created for this mother to have the experience of reunion with her baby. These were the moments of her greatest attunement with her child; she was more acknowledging of and so, more attuned with, his expressions of outright need for her comfort and holding than she was in response to his expressions of initiative or negativity. Her creation of this extra opportunity echoed her descriptions of her childhood temper tantrums. Like the tantrums, the reunions provided a paradigm of

emotional experience that was most akin to the enmeshed attachment relationship with which she was so preoccupied.

There was another echo of the AAI in this mother's attunement moments. Just as she retreated from the recognition of any negativity with her mother by invoking the symbiotic nature of their relationship, she attempted to do the same with her son. Most of her son's affective expressions of initiative or negativity were met with irritation, a change of subject, or outright neglect. These affective experiences were rarely attuned to, and were thus left out of their sharable world. It was most striking then, to observe the sensitivity with which mother #07 responded to his affective expressions of sadness and neediness. These feelings resonated in her internal world; just as they provided a refuge from unacceptable feelings of negativity or individuation regarding her mother, they served the same function in her relationship with her son. Thus her state of mind regarding attachment was preserved.

Finally, one mother (#03) was rated E3, Enmeshed: Fearful. Her AAI was replete with a sense of anxiety and fears of loss. She provided extensive episodes descriptive of her profound separation anxiety as a child, and related fears of death and loss. However, she was unable to reflect on the etiology of these fears. Though they always arose (episodically) in the context of the relationship with her mother, she described her mother exclusively in idealized terms that perpetuated an image of she and her mother in a seamless symbiosis.

The same pervasive anxiety informed her attunement moments. She was a relatively infrequent attuner. Although she verbally expressed tremendous interest in her baby's affective life, she appeared to have some difficulty actually joining in with its expression. In the videotape, this mother actually looked like she was internally preoccupied; she was often sitting at a remove from the baby's play, staring without expression either at the floor or at the baby.

Her responses to the Probes were often focused on her tremendous separation anxiety. During the segments Separation and Reunion, she told how for the first 4 months, she would sit by her son's crib while he napped, for fear that he might die in her absence. She also described her ongoing inability to leave him with a babysitter, even for the shortest time, and her attendant fears that he was fragile. Finally, in response to the Probe regarding her mother, she did not give a direct answer, but rather, told how her mother never left her, and how she was "scared to death" to stay alone at night, up into her 20's. Though there was evidence of a kind of active struggle with these feelings, (she stated her hope that her son would not share her outlook) she still seemed overwhelmed by them. Just as she could not be objective or organize her own chaotic and fearful childhood experiences in a more abstracted way, likewise she could not create meaning when the same experiences were provoked in interaction with her baby.

Preservation of state of mind regarding attachment, distortion of infant affect, and Affect Attunement

The findings in the previous section describe how mothers' fantasies and attunements are structured relative to the memories which determined the nature of their internal experience of relationships. As was shown, the distortions that arose on the the AAI around particular areas of affect also arose around similar affective experiences in the mother-baby interaction. It was hypothesized that these distortions represented mothers' strategies for preserving a particular state of mind with regard to attachment.

Qualitative analysis revealed a corollary finding. It was found that a mother's need to preserve a particular state of mind regarding attachment had a predictable impact on the variable, Disagreement with rater. Within the same mother, there could be a varying ability to objectively evaluate her infant's affective signalling. For example, the same mother who was an accurate judge of how her baby was feeling (= agreement with rater) when the baby expressed positive affect, could become an inaccurate judge of her baby's affective state (= disagreement with rater) when it was negative. The areas of affect in which these disagreements occurred were predicted by the occurrence of distortions and incoherencies in the same affective contexts on the AAI and Attunement Probes.

Finally, the need to preserve state of mind also had an impact on the quality of attunement response given during moments when the mother inaccurately judged the baby's affective state. At these times, no mother gave a high-order type of attunement, and most gave only a smattering of low-order attunements. The majority of maternal responses were in the form of comments. For the comments and most of the low-order attunements, mothers almost always had the underlying intention of changing the babies' focus, and altering, however slightly, their affective experience. They very

rarely had the benign intention that a comment can have of simply bearing witness to an affective state.

As in the the last section, these results will be discussed according to attachment group, using the same subjects as exemplars. The descriptive data from each subject will be analysed in three ways. First, Disagreements with the rater will be described in the following ways: how many occurred, in which affective areas they occurred (positive, negative or neutral), and any pattern of inconsistency in the mother's ability to accurately assess one type of affect and not another. Second, the affective areas in which the Disagreements occur will be related to similar problematic areas that arose in the AAI and in the Attunement Probes. (e.g.: around the negative affective experience of rejection) Third, the impact of Disagreement with the rater on Attunement will be explored.

### The Autonomous Group

The hallmark of the AAI and Attunement Probes of mother #010 (F3, Autonomous) was her ability to be objective and accesible to a gamut of affective experience, both in terms of memory and the current interaction with her baby. It was not suprising then, that she had no disagreements with the rater during either the Free Play or Experimental segments. She consistently appraised her baby's affective experience with accuracy. Whether the target of her daughter's anger, or a witness to her exuberant independent play, mother #010 was free to recognize the baby's feeling state for what it was. Having objective memorial access to both positive and negative affective experiences with her own mother, she was able to "hear", without distortion, her baby's internal experience.

It was around the issue of separation, and the task of establishing boundaries that mother #09 (rated F4, somewhat incoherent or dependent) became incoherent both on the AAI and during the Probes of her attunement moments. Not suprisingly then, it

was during the Experimental segments of Prohibition and Separation that she had disagreements (a total of 2) with the rater. In both segments, she misjudged her infant's "low-negative" affect for something more benign. During Separation she did not acknowledge the baby's anger when she saw it on the video, but instead, said that the baby was feeling "kind of upset." Likewise during Prohibition, she mislabeled the baby's open anger at being prohibited as "confusion." Finally, mother #09 responded during Prohibition with comments.

### The Dismissing Group

Overall, the mothers in this group (5 out of 6 were rated D3; restricted in feeling) distorted their babies' affective experience by misreading it only when it occurred in the negative realm. (The exception was the only subject rated D1; dismissing of attachment, who misread her baby's affect when it was both negative and positive.) Positive expressions were accurately judged. The distortions occurred most consistently when the baby directed the negativity directly at the mother, rather than for example, at an object. Finally, mothers in this group responded to the negative expressions with comments aimed at glossing over the affect, or with low-order attunements. The latter were clearly misattunements; in these instances, the mother slips inside the baby's experience by way of attunement with the intent not to share it but to alter it.

Mother #08's (D3, Restricted in feeling) 2 disagreements with the rater revealed a pattern of insensitivity to and rejection of her daughter's affective experience that mirrored the ongoing internal experience of her own mother. This mother was accurate in describing her baby's affective experience when it was positive, and when it was negative, only when it was exclusive of anger directed at her. This occurred for the first time during the Social Reference segment when this mother described her daughter as "a bit upset". In fact she was quite distressed; she imploringly cried at her mother,

building to an almost phobic reaction to the robot toy. This pattern continued in the Reunion segment. Here, when the baby was extremely distressed, the mother described it in these blunted terms: "she needs reassurance."

Mother's responses to her baby during the Social Reference segment were all in the form of comments. Far from being benign, these comments bordered on the sadistic. Blatantly rejecting the fact that her baby was extremely frightened, mother #08 seemed almost angry as she repeatedly placed the robot in front of the baby, responding to her distress signals with statements such as: "See, he's a nice robot."

Upon re-entering the room during the Reunion segment, her initial response to the baby was in the form of a comment: she blithely stated that she had returned to the room. When the baby continued to show distress, mother made a low-order attunement. The baby however was not dissuaded from her distress by this misattunement, and continued to focus her tearful protest on the mother. Finally, mother responded with a negative low-order attunement. Again, she angrily rejected her daughter's affective experience, this time by slipping into it for the purpose of mocking her.

Mother #06 (also rated D3) accurately judged the nature of her infant's positive affective experience during the Free Play segment. During these attunement moments, mother was attentive to the baby, responding with low-order attunements, or with benign comments. However, she was consistently dismissing of the the Probe regarding her own mother, unable to really reflect on the question. The following was typical of her reply to this Probe: "It would never come into my head to think of this with my mother."

Suddenly during the fifth attunement moment, everything was reversed. This mother who had been such an accurate judge, now misjudged her baby's neutral affect by reading in negativity. Next, her response to him was a non-benign comment; she scolded him about dropping a toy: "He's got to know too that he's got to pick up after

himself." Mother #06's suddenly coherent response to the Probe regarding her mother provided an explanation for these reversals. Able to reply to the "mother" Probe for the first time, she strongly asserted that she and her mother would have responded in like manner. "You know, you can't always have your behind wiped for you, and my mother is a big believer in independence", she told the investigator. The first time then, that this mother distorted her son's affect she imputed a negative intent to him and made a non-benign comment in response. And she did so in the context of a rather harsh associative memory to her own mother. Something about the baby's play with this toy triggered the harshness of her response, and aroused the unconscious imperative to distort his affective state.

The Reunion segment posed another challenge for this mother. Upon her return to the room, her son was in mild distress, and sent clear signals of protesting anger to her. However, she could only appraise his feelings by focusing on his desire to leave the room, his "trying to get his own way." Where it was clear that this mother was able to focus on her baby's internal experience in other contexts, here, she could not. The nature of the segment and of the baby's affective experience hold the keys to understanding her sudden inability to accurately judge.

The baby was angry at the mother during this segment. The mother could not acknowledge this. This was the mother who categorically stated, on her Attunement Probes, that there was no such experience as separation between herself and her son; it didn't exist. During her AAI, she went to great lengths to verbally deny that she felt any rejection or anger as a result of real or psychological separation, even though her episodic memories often alluded to such experiences. If this mother were to acknowledge her baby's anger at her upon reunion, she would consequently be forced to acknowledge the rejection and anger, the very existence, of separation experiences not only between herself and her son, but also between herself and her mother. The

latter was anathema to this mother since it would challenge, rather than preserve her denial, her state of mind regarding attachment.

Mother #05 (D1, Dismissing of attachment) had 6 disagreements with the rater. She misread her baby every time (3) he expressed negative affect, as well as 3 times when he expressed positive affect. All negative affect expression was totally glossed over by this mother. When the baby was mildly upset during the Ignore segment, she said he was "fine"; when he was extremely angry during Separation and Reunion, she said, respectively, "It's hard to know what he's feeling...it upsets his sense of play," and "He feels relieved." Positive affect was difficult for different reasons. Here, mother #05 couldn't accurately describe what her baby was feeling because she seemed to have no vocabulary to do so. The same inarticulateness about affective experience was revealed in the AAI.

In moments of disagreement regarding positive affect, she responded with some low-order attunements. However, these had a bland, automatic quality, which underscored the fundamentally dismissing position she took in relation to all attachment experiences, even those of a positive nature. During Reunion, she responded exclusively with comments aimed at distracting the baby from his highly negative experience. The baby became increasingly resistant to her, as she persisted in her attempts to change the subject and ignore his distress at her leaving the room. Not once did she attribute his behavior to the preceding Separation segment.

### The Preoccupied Group

Overall, the mothers in this group had Disagreements with the rater and distorted their babies' affective expressions when they occurred in both the positive and the negative realms. (The exception was the one mother rated E1; enmeshed, passive, whose Disagreements all occurred in the negative realm) Unlike the Dismissing group, the Preoccupied group's Disagreements occurred in a pervasive way, across the board.

Regardless of whether the baby affects expressed were positive or negative, they seemed to readily provoke fantasies related to the mother's preoccupation with her own mother which then interfered with accurate appraisal of the immediate experience of the baby. Finally, mothers in this group responded with a mix of comments and low-order misattunements during the moments of Disagreement with the same intent as the Dismissing group: to override a particular affect or to covertly alter it.

The 4 Disagreements of mother #04 (E2, Enmeshed: conflicted and ambivalent) occurred mostly in the context of her baby's expression of positive affect; 1 occurred with the baby's mild negative affect. She distorted her son's affect on two occasions during the Free Play segment; both times she imputed to him a kind of impudence, where the rater saw a quiet, low-positive affect display. Next, during the Prohibition segment, she refused to see the baby's mild negativity when it was there.

The common thread connecting these occurrences of distortion were the associations (made during the Attunement Probes) to mother #04's own mother that arose in connection to these affect displays. They all conjured an experience of humiliation, of being "cut down to size," of having one's experience somehow blunted from the outside. Ironically, this also appeared to be the intent of mother #04's responses to her son in these moments: all her responses were comments aimed at either scolding or mocking the baby, in the case of Free Play, or, in the case of Prohibition, they were intended to override his mildly negative feelings.

Finally, there was distortion of the baby's affect during the Reunion segment. Along with being relieved, the baby was mildly angry and resistant upon the mother's return. Mother only acknowledged the relief. Once again, mother #04 needed to blunt her son's affective experience, this time by only acknowledging an aspect of it. Her attuning behavior in this segment followed the same course. While she made low-order attunements in response to his relief at her return, she made rather harsh comments in response to his anger.

Another E2, mother #07, had 5 disagreements with the rater. They occurred across the board, in positive and negative affect states. Her ability to objectively judge what her baby was feeling at a given moment was impaired in the same pervasive way as was her ability to objectively reflect on her own experience of being parented. This mother was so preoccupied with her ongoing guilt and dependency regarding her own mother that it intruded on the mother-infant interaction whether her son's affect was positive, negative, or neutral.

During Free Play, mother #07 disagreed twice with the rater. On both occasions, she was totally unable to describe what her baby might have been feeling: "Maybe he's clearing his throat ... maybe it's boredom, I don't know ... maybe it's just a deep breath." On both occasions, the baby was playing in a quiet, independent way, not directly focused on the mother. Mother responded each time with comments aimed at jazzing the baby. It was as if his independence (their separateness) made her uncomfortable, and compelled her to insinuate herself into his play.

During the Prohibition segment, the baby displayed neutral affect, accepting his mother's "no" with equanimity. Mother however, appraised the baby as feeling "rejected, upset, perhaps not loved." Once again, it seemed that this mother became so overwhelmed with her own preoccupations with these feelings, that she imputed them to her baby. Her behavioral responses during this segment were exclusively comments.

During the Social Reference segment, the baby displayed low-positive affect, as he signalled both his enthusiasm for and his slightly wary interest in the robot toy. Once again, mother was unable to describe what he might have been feeling: "It couldn't be if it's OK to play with it, that's too sophisticated for him ... maybe he's showing it to me?" Initially she responded to his cues with directive comments, such as: "Go ahead, you get it." When he persisted to non-verbally "ask" her to clarify his relationship to this strange new toy in the room, it seemed to make her increasingly

anxious - not knowing what he felt, what he was asking of her. Finally, she responded to him with a negative low-order attunement. Apparently so unnerved by his persistence, she could only enter his feeling state with a negative intent, in order to jeer at him, not to share in a feeling state she did not comprehend.

The final disagreement took place during the Separation segment. The baby was highly distressed throughout, crying and flailing his arms as he stared at the door that separated him from his mother. Initially, mother #07 described what her son was feeling by talking about the positive feelings she thought he had for her when she was in the room: "He likes having me there, he must feel secure." As she continued to watch the tape, she became sad and tearful, pointed to her son (on tape) and said, "I still get upset, it's a little sad to me when I have to say goodbye to my mother." This mother could not reflect on her son's experience of abandonment or sadness; at the sight of it she was flooded by her own internal experience.

The 4 disagreements of mother #03, (rated E3, Enmeshed: fearful) occurred half in negative affect and half in positive. This split however, did not represent different issues, but rather, two sides of the same coin. In order to preserve her state of mind regarding attachment, this mother was compelled to exaggerate the positive and to overlook the negative, thereby preserving the idealization with which she attempted to gloss a chaotic internal experience.

There were 2 disagreements in the Free Play segment. On both occasions, the baby was quietly playing, expressing a low-positive affect, and the mother judged him to be more intensely positive than he was. Once, she responded with a comment, once with a low-order misattunement. Both responses however, really missed the baby's experience by grossly overshooting its intensity level, and intruding the mother's agenda to jazz up the intensity level.

During Prohibition, the baby was very angry and feisty in response to his mother's "no." Mother described him as only "sort of determined." During Reunion,

when the baby was fairly distressed, she characterized his feelings as: "relieved." The former response was aimed at downplaying his negativity, while the latter completely overlooked it. She responded during Prohibition only with comments, and during Reunion with a mix of comments and low-order misattunements. Like her responses during Free Play, these necessarily missed the baby's internal experiences, as they were aimed at circumventing them.

The 3 disagreements mother #013 (E1, Enmeshed: passive) had with the rater all occurred in the context of the baby's expression of negative affect. This finding was completely consonant with the those of the AAI and Attunement Probes. The transcript of the former gave the impression of inchoate negativity, while the responses in the latter contained testimony as to how this mother "turned off" her emotions when her son was upset or angry. The 3 disagreements provided evidence of how this mother distorted her son's affective experience according to the restrictions of her own internal working model (Enmeshed, passive). These restrictions compelled her to become passive in the face of her son's negativity, (e.g.: "turning off") to thus render it inchoate, in concordance with her internal stance regarding negative affective experience.

Mother #013 was a good judge of her son's affective state when it was unequivocally positive. With the expression of negative affect, she sought to minimize the role she may have played in inducing it. Viewing the Separation segment, she stated: "If the robot wasn't there, he would have been happy," completely overlooking the effects of her leaving the room. Likewise, in her efforts to minimize it she misread his distress during this segment: "I knew there was nothing really wrong." She approached his distress in the same way during the Ignore segment. During Prohibition, she acknowledged her son's anger, but played it down, in another variant of her need to diffuse his expression of negative affect. Not surprisingly, she responded exclusively with unwaveringly firm comments during this segment.

### Absence of Disagreement in an insecurely attached group

It was surprising to the researcher to find that 2 mothers rated D3 (Dismissing: Restricted in feeling), had no Disagreements with the rater. It had been expected that since these mothers were unable to be objective about certain aspects of their own attachment experience, they would have a similar selective inability to judge how their babies felt. They did not.

These two mothers had in common more than their attachment ratings. Both were actively reflecting on their relationships with their mothers, and its impact on their ability to be a parent now. They were quite open with the researcher, revealing the nature of their ongoing internal struggles with their mothers.

Mother #02 was somewhat avoidant of affect in her baby, but when pressed by the researcher to describe it, she was able. She was also able to reflect on this difficulty, and related it to the sterile atmosphere of her childhood. During the Reunion segment, for example, she told of the lack of physical touching in her family and her mother's formal attitude toward her. At the same time she vowed to be different in this regard as a parent herself; she was in fact physically demonstrative and warm with her baby. Despite the fact that she had not yet fully integrated some of the negative childhood experiences with her mother, she had enough objectivity, and perhaps will, to understand their influences on her as a parent, and to begin to make changes in this domain.

Mother #015 was extremely articulate and moving in describing her internal struggles with a cold and rejecting mother. She was well aware of how she had learned as a child, from her mother's angry reactions, to squelch, and ultimately to deny, any feelings other than positive ones in herself. She was also able to reflect, during the Attachment Probes, on her mother's preference for cognitive expression, and that she would have been more likely to respond to the "external" rather than the "emotional."

Finally, she was reflective about how this has damaged her as an adult, in terms of her parenting: "Sometimes I think, if I just deny the feelings completely ... 'Oh, she'll be fine'... no matter. I must work very hard to stay with her." Although this mother had not fully integrated her childhood experience within herself, her efforts with her daughter suggested that she might be well on the road to doing so. She judged her daughter's feelings accurately, acknowledging both positive and negative affect. She even learned from the study. When she initially returned to the room in the Reunion segment, she sweetly said to her crying baby: "Oh, you're alright." Upon viewing the videotape, she observed this response. She stated that she was unaware of saying it at the time, that it disturbed her, and that it sprung from her relationship with her mother.

## CHAPTER FOUR

### Discussion

#### Summary of the Findings

Quantitative analysis of the data revealed that securely attached mothers were more attuned overall and attuned at a higher level than mothers who were rated insecurely attached. Within the insecurely attached group, mothers rated Preoccupied with attachment were less attuned overall than mothers rated Dismissing of attachment. It was shown that only during the Reunion segment were Preoccupied mothers more attuned than Dismissing mothers.

These data were supported by the qualitative findings. In addition to being less attuned overall, the insecure group misattuned to their infants' affect more than the secure group. Furthermore, they did so according to patterns that reflected their internal attitudes toward attachment; either Dismissing or Preoccupied.

Finally, additional qualitative findings revealed that the insecurely attached mothers verbally distorted and misunderstood their babies' affective experience more often than securely attached mothers. These distortions occurred during the moments of misattunement. Likewise, securely attached mothers distorted their babies' affect much less frequently, allowing a wide range of infant affect expression.

#### The Findings: Theoretical and Clinical Issues

How do these findings fit into theories about early mother-infant interaction? Both Jacobson (1964) and Mahler (1942, 1961) stress the early and profound contribution of the mother's affective experience to the mother-infant interaction.

Jacobson (1964) sees the infant as having an intrinsic tendency to evoke both conscious and unconscious fantasies in the mother. She goes on to describe how mothers' attitudes, shaped by their fantasies, provide the baby with not only libidinal stimulation but also with restrictions and gratifications that lay the ground rules for his future emotional attachments. Mahler (1961) also stresses the central influence of the mother's unconscious on the interaction, placing it at the center of the infant's developing sense of self. She says: "...the earliest interrelation between the unconscious of the mother and the reception of stimulation of the sense organs of the baby is a prototype of a way of communication between the child and the adult." (1942)

The current findings shed light on the complimentary theoretical emphases of Mahler and Jacobson. Not only do both writers point to the central impact of the mother's inner life on the interaction, they posit the ideas that the baby evokes unconscious fantasies in the mother, that these in turn are expressed as maternal attitudes, which in turn have a formative influence on the baby's evolving inner world. These ideas describe precisely the central hypotheses and findings of this study.

The study revealed that infant signals in the attunement moment do in fact evoke unconscious fantasies in the mother that are expressions of her internalized attitudes regarding attachment. It was also shown that these infant signals provoke attuning behavior in the mother that were intended, unconsciously, to preserve these internalized attitudes.

One ANOVA that compared the # of high-order attunements across attachment groups revealed that during Free Play, securely attached mothers (F's) responded with more high-order attunements to their babies' affect expressions than mothers in the insecure-Preoccupied group. (E's) Another ANOVA revealed that securely attached mothers responded at a higher average level of attunement during Free Play than mothers in the insecure-Preoccupied group. Thus, "F" mothers responded with the

intention to fully share in their babies' affective experience more often than "E" mothers. In relation to the number of opportunities to respond to their babies' affect, Autonomous mothers overall were higher attuners than Preoccupied mothers. Finally, the raw data showed that securely attached mothers were more attuned overall than both Dismissing and Preoccupied mothers.

These findings were predicted on the basis of the secure groups' broad ability to be sensitive to infant signals, and the limitations necessarily imposed on the sensitivity of the insecure group. One could speculate that securely attached mothers are best equipped to freely enter into and fully share in their infants' emotional experience because they have free access to a broad range of their own emotional history, while insecure mothers are either so enmeshed in or so detached from their histories that they have a limited ability to participate in the emotional lives of their infants. The secure groups' availability to their own experience permits the same availability to their infants'; they are not internally prohibited from acknowledging and experiencing aspects of their own emotional experience, and so they need not prohibit themselves from affective sharing with their infants.

Within the insecure group, the Preoccupied mothers almost always attuned less frequently to their babies than the Dismissing mothers. One could speculate that although the sensitivity of the Dismissing group is restricted such that they are not as free to make high-order attunements as the secure group, the restrictions imposed on the Preoccupied group are more severe. They seem to be the least able of the three groups of mothers to respond, with the intention of joining, to their infants' affective experience.

However, the data analysis revealed an interesting finding that would appear to contradict this last speculation. During Reunion, Preoccupied mothers responded more often with low-order attunements than the Dismissing mother in the same situation.

On the face of it, this finding suggests that the Preoccupied group was more sensitive and responsive to the babies' negative emotions than the Dismissing group during Reunion. This finding should not be interpreted on face value.

In fact, Preoccupied mothers were overly attentive, indeed they seemed attracted to expressions of fear in their babies. Mother #07 was typical. Unresponsive to her baby's expressions of negativity or initiative, she had her moments of greatest attunement during Reunion when the baby was frightened. However, as Kobak & Shaver point out, (1987) this attentiveness to fear cues by Preoccupied adults was not linked with efficacious emotional communication, and open expressiveness of this affect was not linked to good communication in the dyad. This point was dramatically highlighted once again by the data of mother #07. Even as this mother seemed to be more attuned to her baby, she couldn't objectively reflect on his experience, but could only speak of her own fears of losing her mother and the sense of loss that she dreaded. She was not psychologically involved with her baby's affective state but rather with her own; her attraction and increased attuning to his affective state during Reunion was dictated less by empathy than by narcissistic needs.

Attunement per se then is not always the simple, straightforward experience of a high-order attunement where mother shares in and validates the baby's affective experience. In the case of the low-order attunement, the mechanism of attunement (slipping into the baby's affect via cross-modal affect matching) is used to alter or to appropriate the baby's experience, rather than to share in it. The study revealed three varieties of this type of maternal response. First there was the benign use of these low-order attunements. One securely attached mother who used them matched the baby's internal state, but sharing not being her sole intention, she would then go on to teach the baby something related to his play. It must be stressed that while she slipped into the baby's experience in order to achieve something of her own agenda, her main focus

was not to fundamentally alter the baby's feeling state. Her intent was to share in the baby's affective experience and to add on a cognitive element, such as teaching. Perhaps her goal was to place affect and learning on an equal footing. In another version of this response a mother would capture cross-modally the affective essence of the infant's expression but her intensity level would be slightly higher or lower than the baby's. These are true low-order attunements.

In the case where the mother uses a low-order attunement to alter the baby's affective experience, it is called a misattunement. (Stern, 1985) Since misattunements are clearly not attempts to simply share in the baby's experience, Stern speculates as to how they might be experienced by the baby. In the cases where the mother has been successful in slipping inside of the infant's subjective experience "the illusion of sharing, but not the actual sense of sharing" is set up. The mother at this point can pull the baby off in the direction she prefers, sometimes by a switch in the affective mood, sometimes by mocking or teasing the baby. This is clearly an experience for the baby that is very different from a simple comment, a true low-order attunement, and certainly from that of a high-order attunement.

It is important to understand that misattunement can be a normal, necessary technique used every day by mothers. A good example is provided by the Reunion segment, where it makes sense for a mother to "misattune" to the baby's distress and/or anger. Here, a sensitive mother would want to share somewhat in the infant's experience in order to validate it, but not so much that she couldn't help him to calm and feel comforted on her return. In order to achieve this dual purpose, she misattunes to the affect. However, when this response is used excessively and selectively for particular kinds of affective experiences, it poses a potential threat to the infant's evolving sense of self by throwing into question the infant's sense and evaluation of internal states in himself and in others.

Preserving state of mind regarding attachment, distortion of infant affect and affect attunement. The data showed a pattern of selective misattunements in the insecurely attached group. What causes mothers to use misattunements selectively? Main et. al. (1985) described the need of the insecure adult to "preserve a particular state of mind regarding attachment." A mother's persistent need to alter her baby's affect by misattuning to it is understood as originating in her need to preserve a particular mental organization of attachment.

In order to preserve their state of mind regarding attachment, the insecurely attached mothers excluded certain affective information from their babies' cues because the information posed a threat to their state of mind. For example, it seems reasonable to speculate that the Dismissing mother may have learned from her childhood attachment experiences that her expressions of anger reduced her sense of "felt security" (Kobak & Shaver, 1987) with her own mother, because it alienated her. Thus, she learned to repress these feelings in the service of maintaining her connection to her mother. Now an adult, she must continue to exclude any information such as: "I feel angry." Her strategy then is to cut off anger. And this is what we observe her doing to her baby when he is angry. Either by systematically misattuning, or ignoring his anger altogether, she passes along her own emotional restrictions about attachment to the baby. Perhaps the message plays something like this: "I don't recognize your anger as such. I don't like it, it upsets my internal equilibrium, and I don't want you to express it around me."

Main's ideas about mothers preserving their state of mind in relation to attachment were further supported by the data of Disagreement with the rater. When a mother was unable to accept her baby's affect state for the reasons outlined above, she not only misattuned to it, but she also verbally distorted it on the Attunement Probes.

For example, when asked what she thought the baby was feeling, she might say relieved, when in fact, he was angry. This was termed a Disagreement with the rater. Insecurely attached mothers had significantly more of these during the Experimental segments than mothers in the secure group. Overall, it was shown that Disagreement with the rater occurs with much greater frequency when the affect in question is negative versus positive. This finding seems to follow from common sense. On the face of it, it seems more likely for the expression of negative affect to challenge internal homeostasis and compel defensive maneuvering than for positive affect to have such an effect. A closer look at the data revealed an important difference between the two insecurely attached groups on this point. Overall, the Dismissing group distorted their babies' affect by misreading it primarily when it was negative, and did so most consistently when the baby directed the negativity at the mother, and not at an object. They distorted and misattuned consistently, following a pattern that was defined by the type of baby affect displayed.

This finding stands in marked contrast to the data of the Preoccupied group, which reveal an unpredictable arc of distortions and misattunements that occurred pervasively, in the context of both positive and negative baby affect. A detailed look at the data of the Attunement Probes reveals that the distortions and misattunements of the Preoccupied mother are defined by the intrusiveness of her preoccupation with her "role as attached offspring rather than as caregiver." (Main, 1987) Mother #07 is a good example. On more than one occasion when the baby expressed initiative by playing independently of mother, she interpreted his feeling state as "bored." Another time when his affect was neutral, she thought (again via her ubiquitous use of projection) that he was upset and feeling "unloved." Observing her distressed son on videotape during their separation, she was so flooded by her past attachment and her sense of herself as a child that she literally could not reflect on his feelings in the moment, but

only on those that related to her own preoccupation. When asked to respond to the Probe, "what do you think your baby is feeling," she spoke, without missing a beat, about how sad she still feels when she says goodbye to her mother.

Preoccupied mothers responded with misattunements in a myriad of contexts with their babies. Unlike the Dismissing subjects, these mothers did not attune to or validate their babies' expression of initiative and exuberance during play. These women either totally ignored these kinds of expressions in their babies or misattuned to them.

Both responses are manifestations of the Preoccupied mothers' limited ability to simply witness or to simply share in their babies' emotional life. In the first scenario where these mothers often missed the cues, one could speculate that they were not sufficiently compelled by the baby's independent initiative to become "unpreoccupied" enough by their own internal world to simply witness the baby's play and thereby lend him some support. In the second scenario one could speculate that these mothers feel left out by the baby, and this has a unique impact on her responsivity to his cues. Here when they misattuned to the baby, they generally jazzed him up to a higher arousal level, as if to enlarge the experience such that they became the focus rather than the babies' sense of competency in playing. Once again, their experience took precedence over that of the babies'.

Ambiguous situations such as the Social Referencing segment seemed to provoke confusion and anxiety in the Preoccupied mothers. When the baby signalled to the mothers that they needed to know what to make of the robot and their feelings, these mothers tended to become anxious at their own inability to understand their babies' persistent requests for definition. One mother finally responded to the ambiguity with a negative misattunement after trying a string of comments that were insensitive attempts to push the child into playing with the strange toy. In the

misattunement, she finally entered into his feeling state, though only as an opportunity to jeer at the baby. One could speculate that this mother was so enmeshed in and unobjective about her own attachment needs that she could not possibly decipher those needs and affects in her child. The Preoccupied mother's ability to attune to a range of affective experiences in her child is limited by the ability to hear only those of her own.

One could speculate that the unconscious message to the baby that is implicit in this Preoccupied pattern goes something like this: "No matter what kind of emotional experience you're having, I may appropriate it as my own or I may get it all wrong because I'm so preoccupied with being a child myself. Either way, I can't be counted on to share in your experience and affirm its validity." Perhaps what will be most damaging for the infant of the Preoccupied mother is what must seem to him to be a "patternlessness," the unpredictability of his mother's responses to his affect. Under some conditions she may correctly assess his experience while under others she will not. The problem for the baby is that he cannot come to predict her response based on any intrinsic pattern of his own signalling since his mother's response pattern is defined entirely by her internal experience, which intrudes unpredictably into the interaction. If this dyad continues to evolve in this way, one could speculate that the child will become more sensitive to the promptings of his mother's internal state than to those of his own. On the other hand, the baby of the Dismissing mother may have a better chance of learning which of his affect expressions will be objectively perceived and which will not. Dismissing mothers distorted their infants' affective experience with relative consistency: it occurred when their babies' negative affect expressions were directed at them. When asked in these moments what they thought their baby was feeling, these mothers gave responses that either glossed over the baby's experience, or denigrated it. Both responses had the common aim of denying the baby's experience. However, positive expressions such as joy and satisfaction were accurately assessed and

acknowledged by these mothers, most likely because they are indices of autonomy and separateness, affective states that Dismissing mothers are comfortable with.

Why were negative affects so problematic for the Dismissing mother? Much of the time, infants signalled their mothers that they were in distress and/or needed proximity by expressing affects that were categorized as negative, due to their peremptoriness or obvious negativity. For example, a sad, crying baby's affect was judged negative, as was a protesting, angry baby. During these times when the baby was demanding contingent attachment responses from the mother, the Dismissing mothers verbally distorted the affect, and so, misread the baby. Just as they were dismissing of their own attachment related memories, they dismissed or devalued infant attachment related behaviors. Like the memories, the infant behaviors threatened the mothers' internal homeostasis with regard to attachment by interfering with their ability to keep their attachment system de-activated. (Bowlby, 1980) Dismissing mothers needed to keep their attachment systems de-activated in order to preserve their state of mind regarding attachment; to experience need or dependency, from themselves or their babies, would be too conflictual for these women. Once again the findings demonstrated how a mother's need to preserve her state of mind influences her ability to objectively perceive and evaluate her infant's affective cues.

Dismissing mothers were most comfortable attuning to their babies' expressions of exuberance, especially in the context of mastery in play. Autonomy and separateness seems to be the preferred state for affective sharing. On the other hand, they tended to be rejecting of their babies' bids for comfort and reassurance. When these bids occurred, the first line of approach was typically to use comments to override the baby's affect, as if trying to make it go away. Then if this wasn't "successful" and the baby continued to be distressed or angry, a misattunement would often follow. On one occasion, after the failure of both the comment and the misattunement, a

Dismissing mother moved on to use a negative misattunement, perhaps the most overtly hostile of attunement choices.

This pattern of misattunement responses to the babies' negative affect/attachment bids is important for two reasons. First it betrays the Dismissing mother's preference to avoid meeting her child's emotional state when it is at all negative. At these times, her first choice is to respond to the external elements of his cueing with comments, even when in reality it is the baby's internal experience that she wishes to blot out. Second, there was a sadistic quality to these misattunements and comments. Dismissing mothers seemed compelled to humiliate their babies when they expressed attachment needs; perhaps this was a recreation of their own childhood experience, the experience from which they are emotionally cut off. One could speculate that the unconscious message to the baby that is implicit in the response pattern of the Dismissing mother might be: "I will not acknowledge your emotional experience when you are demanding closeness or comfort. I will acknowledge it only when it is unabashedly positive. I will be consistent in this."

The only mother who fell into the most prototypically secure category of the secure group had no Disagreements with the rater. This was not surprising given her ability to be objective and accessible to a gamut of affective experience both in terms of her own memories of attachment and in terms of responding to her baby. She could correctly assess, and therefore allow into the relationship, her baby's affect when it was positive and negative. She had no psychological need to distort the baby's affect in order to protect her state of mind regarding attachment; her state of mind permitted objective processing of her infant's cues. As a result, she was able to truly "hear" the baby's internal experience, for as Fraiberg et.al. said, (1975) this mother had allowed herself to hear her own "cries" and so could hear the "cries" of her child.

The small number of securely attached women in this study make it difficult to generalize about their attuning patterns. The only mother in the most secure subgroup, the group exemplar, had an attunement pattern that was predicted by her state of mind regarding attachment. Free to share in but not overwhelm her baby's affective experience, she attuned with an even hand to her baby's expressions of initiative, effort, exuberance, frustration, anger, and need for closeness. When she did misattune, it was not in any systematic way with a bias in favor of one kind of affective experience of self over another. For example, she used misattunement during the Reunion segment to empathize with the baby's distress and anger and then to alter it in such a way as to comfort him. She misattuned then with the interests of the baby being paramount.

What can we imagine the baby is feeling when his mother's psychological "restrictions" regarding attachment are passed along to him in the interaction? Stern (1985) writes about different, developing ways in which the infant experiences himself in relation to others. "Intersubjectivity" is a proposed dimension and achievement of the baby's subjective experience with the mother which nicely describes what one observes between them during affect attunement. The sense of self, "intersubjective relatedness," adds on to the physical sense of self and other the growing realization that what is felt and experienced by the mother is close enough to what is felt by the baby and that they are capable of non-verbally communicating about their subjective experience. "Psychic intimacy as well as physical intimacy is now possible. The desire to know and be known is great." (p. 126) In the case of affect attunement, the infant begins to realize that subjective experience is shareable with someone else through the mother's sharing in his felt experience.

The desire to feel understood by sharing affective experience is great, and it is the focal achievement of intersubjective relatedness. With the advent of

intersubjectivity, Stern points out that the parents begin their "socialization" of the infant's subjective experience. They decide, consciously and unconsciously, what of this experience will be shared, what will not.

He writes:

"What is ultimately at stake is nothing less than discovering what part of the private world of inner experience is shareable and what part falls outside the pale of commonly recognized human experiences. At one end is psychic human membership, at the other psychic isolation." (p. 126)

The present findings suggest that attunement is more plentiful and more liberally applied to a range of infant affective experience in the dyads of securely attached mothers who were freely valuing of attachment. They were not compelled by their own psychic needs to cut off or appropriate particular affects expressed by their infants.

The patterns of misattunement and selective attunement of the two insecurely attached groups necessarily limit the kinds of subjective experiences that can be shared. Because these are patterned and not isolated responses, one could speculate that the infant will come to perceive that those affective experiences that are misattuned to fall outside the realm of shareable experience, and perhaps will become the kinds of subjective experience that will be most vulnerable to denial and disavowal. By accentuating certain aspects of the infant's experience over others, these misattunements are so powerful because they transmit to the baby profoundly important information about his mother's internal world; they let him know what is shareable between them and what is not. When a mother selectively attunes to a particular kind of emotion in the baby, e.g.: sadness, he learns not only that this state holds special status for the mother, but perhaps that re-creating it is one of the few ways he has available to him for achieving intersubjective union with his mother.

Finally, Stern points out that this carving up of the child's experience by the parent can be the beginning of development of the "false self" as Winnicott described it.

Whatever the the ultimate fate of these selected experiences, whether they become part of the "false self" or are totally pushed out of consciousness, the beginning lies in attunement, when a parent exerts, to varying degrees, a selective bias in their attuning behaviors.

Lack of Disagreements in the insecure-Dismissing group. Two of the mothers rated D3 (Detached: restricted in feeling) had no Disagreements with the rater, a surprising finding given that the majority of Dismissing mothers had a number of these Disagreements. These women were distinguished from others in their attachment group; unlike the majority, they were actively struggling to objectively understand their past relationships with their mothers. Their struggle seemed to be focused on their current relationship with the babies, specifically around their wish not to repeat some of their own painful attachment experiences with their infants.

What was most compelling about this finding was that while these women were as yet unable to be objective about certain aspects of their own attachment histories, they were able to objectively assess affective experience in their babies when it was both positive and negative. (Thus, the lack of Disagreements with the rater) One could speculate that it is their active reflection and desire to change that permits this objectivity about their babies' experience. However, it is hard-fought achievement; these mothers did not possess the same ease and sense of peace as the securely attached woman who had no Disagreements with the rater. They were making a tremendous effort to objectively "hear" their babies' affective cues - really in defiance of their internalized attitudes toward attachment.

This tension between a woman's internal world and her attempts to behave objectively with her baby is best described by example. Mother #015 was eloquent as she described her wish to permit and respond to a range of attachment expressions from

her baby; she described her mother as cold and rejecting, and her ongoing struggle to accept feelings in herself as well as her baby. Though objective about her infant's affect when it was both positive and negative, this mother missed many opportunities to attune, especially to enthusiasm. One could speculate that while she was not openly rejecting of any particular affective experience, she nonetheless sent a kind of rejecting signal to the baby about what he was feeling by omission, by not attuning. Indeed, this mother seemed more comfortable attuning to her baby's quiet moments; her attunements were selective. Though fervently struggling against the emotional detachment inherent in her internalized attitudes toward attachment, she is not free yet, and is still unconsciously identified with her mother. This finding then illustrates something critical about how change occurs in internalized state of mind regarding attachment, for it speaks both of its resistance and availability to change.

Negative affect and attunement. Stern (1985) states that one cannot attune to anger directed at himself, that "one can experience the level of intensity and quality of feeling that is occurring in the other and that may be elicited in yourself." He states though that at this point one is no longer sharing in the other person's anger because "you are involved in your own." These statements were supported by the findings; no mother responded with a high-order attunement when their babies directed their anger at them. Perhaps the "best" choice for a maternal response in this situation is a misattunement that validates the babies' experience and then attempts to alter it such that he feels comforted and reassured.

#### Limitations of the Present Study and Need for Further Research.

Because of the small size and skewedness (relatively small number in the secure group) of the present sample, these findings can only be regarded as suggestive of

group differences. It would be necessary to replicate this study using larger, independent samples in order to understand the nature of the group differences. Furthermore, larger samples of each attachment group might provide more detailed understanding of some of the interesting differences that appeared within the groups after a descriptive review of the data. For example, within the Dismissing group, most mothers had similar average attunement scores during Free Play but two stood out with much lower scores. With more subjects, one could pursue the question of whether there are two different kinds of Dismissing attuners. More subjects might also shed extra light on the finding that certain insecurely attached mothers who seemed to be working on their childhood attachment relationships were surprisingly objective in assessing their babies' affect.

As was seen in the discussion of misattunement, the findings suggest that there are three different breeds of attunement that were scored in the same way; as a low-order attunement. Any future studies should change the present attunement scoring system in order to reflect these important differences. The three types are as follows: first, there is the low-order attunement that matches the internal state but also adds a cognitive, usually educational component; second, the low-order attunement that misattunes to the baby's internal state to alter it, but does so to help the baby through a difficult state and is a maternal response to an isolated incident; third, the low-order attunement that misattunes and does so as a part of a pattern of misattunement that reflects the repeated precedence of the mother's internal state of mind over the internal experience of the baby.

Finally, affect attunement could be used in the future as an assessment tool for troubled dyads. With an eye out for patterned misattunement, selective attunement and missed opportunities for attunement, the clinician or researcher can make a quick study of potential problems within the dyad.

### Conclusion

The findings of the present study support the hypothesis that the different internalized attitudes manifested as state of mind regarding attachment will be reflected in different patterns of attunement. Attunement is the behavioral analogue of the mother's state of mind regarding attachment; thus, attunement is the means by which representation of attachment is transmitted to the baby in the interaction. As a group, securely attached mothers could be objective about the range of emotional expression in the baby; they attuned most freely to both positive and negative emotions in the baby. The insecurely attached mothers transmitted the limitations and restrictions of their state of mind regarding attachment such that they distorted certain kinds of baby affect expressions, and systematically misattuned and selectively attuned to them in the interaction.

In many ways, securely attached mothers can be seen in the context described by this study as Winnicott's "good enough" mother who shares with the baby most aspects of the self that he brings to their interaction. Of course all parents bring some selective bias to their attuning behavior, but those who are securely attached are best equipped to validate the range of affective experience in their children. Thus securely attached mothers create for their babies the widest opportunity to learn about self experience.

The present data show that the insecurely attached mothers respond to their babies' affective experience in a systematically selective way, determined by their state of mind regarding attachment and the presumed underlying internal working model. The findings highlighted how the insecure and secure mothers differed in the breadth of subjective experience they could share with their infants; we can only speculate about how these differences might influence future development. As Winnicott (1971)

describes it, the process of the infant bringing forth "subjective experience," and the mother responding with "objective perception," is the developmental process by which experience is given meaning. We do know that a mother's ability to share in and validate her baby's affective experience is central to the healthy developmental process of the infant, imputing meaning to his world and discovering himself. Systematically cutting out a part of that experience will certainly be detrimental to this crucial process of self discovery.

## References

- Aber, J. L. & Slade, A. ( 1987, January ). Attachment theory and research: A framework for clinical interventions. Paper presented at the meeting of the Childhood and Adolescence Division for Psychoanalysis of the American Psychological Association, New York, N.Y.
- Ainsworth, M. D. S. ( 1969 ) Object relations, dependency and attachment: A theoretical review of the infant-mother relationship. Child Development, 40, 969-1025.
- Ainsworth, M. D. S. ( 1973 ) The development of infant-mother attachment. In B. M. Caldwell and H. N. Ricciuti ( Eds. ) Review of child development research ( Vol. 3 ). Chicago: University of Chicago Press.
- Bowlby, J. ( 1969-1980 ). Attachment and loss ( Vol 1-3 ). New York : Basic Books.
- Bretherton, I. and Bates, E. ( 1979 ) The emergence of intentional communication. In I. Uzzises. ( Ed. ), New Directions for Child Development ( Vol. 4 ) San Francisco: Jossey-Bass.
- Bretherton, I. ( 1984 ) Attachment theory: retrospect and prospect, In I. Bretherton and E. Waters ( Eds. ), Growing Points in Attachment.
- Emde, R., Gaensbauer, T., and Harmon, R. ( 1976 ) Emotional expression in infancy: A biobehavioral study. Psychological Issues Monographs Studies, 10: #37.
- Fraiberg, S., Adelson, E., & Shapiro, V. ( 1980 ) Ghosts in the nursery: A psychoanalytical approach to the problems of impaired infant-mother relationships, In S. Fraiberg ( Ed. ), Clinical Studies in Infant Mental Health: The First Year of Life. New York: Basic Books.
- Freud, A. ( 1966 ) The Ego and the Mechanisms of Defense. New York: International Universities Press.
- Hinde, R. A. ( 1976 ) On describing relationships. Journal of Child Psychology and Psychiatry, 17 : 1-19.
- Jacobson, E. ( 1964 ) The Self and the Object World. New York: International Universities Press.
- Kernberg, O. ( 1976 ) Object Relations Theory and Clinical Psychoanalysis. New York: Jacob Aronson, Inc.
- Kobak, R. Attachment, affect regulation and defense. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Baltimore, MD., April, 25, 1987.

- Kobak, R. & Sceery, A. Attachment in later adolescence: Working models, affect regulation and representations of self and others. Child Development, in press, 1987.
- Kobak, R., & Shaver, P. Strategies for maintaining felt security: A theoretical analysis of continuity and change in styles of social adaptation. Paper presented at the Conference in Honor of John Bowlby's 80th Birthday, London, UK, June 21, 1987.
- Kohut, H. (1971) The Analysis of the Self. New York: International Universities Press.
- Kohut, H. (1977) The Restoration of the Self. New York: International Universities Press.
- Loewald, H. (1962) Internalization, separation, mourning and the superego. Psychoanalytic Quarterly, 31 : 483-504.
- Mahler, M. (1942) Pseudoimbecility: a magic cap of invisibility. Psychoanalytic Quarterly, 11 : 149-164.
- Mahler, M. (1961) On sadness and grief in infancy and childhood: loss and restoration of the symbiotic love object. Psychoanalytic Study of the Child. 16 : 332-351.
- Mahler, M., Pine, F., & Bergman, A. (1975) The Psychological Birth of the Human Infant. New York: Basic Books.
- Main, M., & Goldwyn, R. Predicting rejection of her infant from mother's representation of her own experience: implications for the abused-abusing intergenerational cycle. International Journal of Child Abuse and Neglect, 1984.
- Main, M., & Goldwyn, R. An adult classification and rating system. Unpublished manuscript, University of California at Berkeley, 1985.
- Main, M., Kaplan, N., & Cassidy, J. Security in infancy, childhood and adulthood: A move to the level of representation. Monographs of the Society for Research in Child Development, 1985, 50, (1-2, Serial No. 209).
- Main, M. & Goldwyn, R. Interview-based adult attachment classifications: Related to infant-mother and infant-father attachment. Developmental Psychology, in press, 1988.
- Papousek, H., & Papousek, M. (1979) Early ontogeny of human interaction: its biological roots and social dimensions. In M. von Cranach, K. Foppa, W. Lепенies, & D. Ploog. (Eds.), Human Ethology: Claims and Limits of a New Discipline. Cambridge: Cambridge Universities Press.
- Piaget, J. (1963) The Origins of Intelligence. New York: Norton.
- Premack, D., & Woodruff, G. (1978) Does the chimpanzee have a theory of mind? The Behavioral and Brain Sciences, 1,4.

- Sander, L. (1962) Issues in early mother-child interaction. Journal of the American Academy of Child Psychiatry, 1, 141-166.
- Sander, L. (1969) The longitudinal course of the mother-child interaction: Cross-case comparison in a sample of mother-child pairs. In B. Foss (Ed.), Determinants of Infant Behavior, (Vol. 4). London: Methuen.
- Sroufe, L. A., & Waters, E. (1977) Attachment as an organizational construct. Child Development, 48, 1184-1199.
- Sroufe, L. A. (1978) Socioemotional development. In J. Osofsky (Ed.), Handbook of Infant Development. New York: Wiley.
- Stern, D. N., Hofer, L., Haft, W., & Dore, J. (1984) Affect attunement: the sharing of feeling states between mother and infant by means of inter-modal fluency. In I. Field & N. Fox. (Eds.), Social Perception in Infants. Norwood, N. J.: Ablex.
- Stern, D. N. (1984) Affect attunement. In J. Call, E. Galenson, & R. Tyson. (Eds.), Frontiers of Infant Psychiatry, (Vol. 2). New York: Basic Books.
- Stern, D. N. (1985) The Interpersonal World of the Infant. New York: Basic Books.
- Trevarthan, C., & Hubley, P. (1978) Secondary intersubjectivity: confidence, confiding, and acts of meaning in the first year. In A. Lock (Ed.), Action, Gesture and Symbol: The Emergence of Language. New York & London: Academic Press.
- Tronick, E. (1978) The infant's response to entrapment between contradictory messages in face-to-face interactions. Journal of the American Academy of Child Psychiatry. 17, 1-18.
- Winnicott, D. W. (1951) Transitional objects and transitional phenomena. In Through Paediatrics to Psychoanalysis. New York: Basic Books, 1975.
- Winnicott, D. W. (1960) Ego distortion in terms of true and false self. In The Maturation Processes and the Facilitating Environment. New York: International Universities Press, Inc. 1965.
- Winnicott, D. W. (1971) Playing and reality. New York: Basic Books.