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**Adult attachment classification and its relationship to the
psychological tasks of pregnancy**

Grunebaum, Laurie Blum, Ph.D.

City University of New York, 1990

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**ADULT ATTACHMENT CLASSIFICATION AND ITS
RELATIONSHIP TO THE PSYCHOLOGICAL TASKS OF PREGNANCY**

by

Laurie B. Grunebaum

**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**

1990

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Abstract

ADULT ATTACHMENT CLASSIFICATION AND ITS
RELATIONSHIP TO THE PSYCHOLOGICAL TASKS OF PREGNANCY

by

Laurie B. Grunebaum

Adviser: Professor Arietta Slade

The present study investigates the theoretical notion that an adult's history of attachment relationships, as they are currently represented ("state of mind with respect to attachment"), will influence the way in which women negotiate the psychological tasks of pregnancy. This includes the establishment of a relationship to their babies in utero.

Eighteen women in their first pregnancies were given a semi-structured Pregnancy Interview during their eighth month of pregnancy, designed to elicit data reflecting the major areas of concern and emotional significance for the pregnant woman. A coding system was developed to rate women in a number of important areas of their psychological experience and response to pregnancy. All subjects were given an Adult Attachment Interview (Main et. al., 1985) yielding an attachment classification of Secure-Autonomous, Insecure-Dismissing or Insecure-Preoccupied with respect to attachment. Seven subjects were classified as Secure-Autonomous, six as Dismissing and five as Preoccupied.

The major finding in this pilot sample is that those women classified as secure can be differentiated from those classified as insecure in the way that they negotiate psychological tasks of pregnancy. The two insecure groups are less distinguishable from one another. Statistical analyses revealed that the Pregnancy Coding Scales demonstrate good internal consistency for assessing women's psychological response to pregnancy. This represents a first step toward establishment of their validity for future research.

Two out of the five scales proved to be most sensitive to differences based upon secure

versus insecure attachment classification, wherein women classified as secure: 1) demonstrate the capacity to recognize and tolerate the idea of their babies' dependency needs as well as the idea of their separateness and individuality, demonstrate an awareness and acceptance of the potential for conflict within the mother-child relationship (Scale I); and 2) tend to have a highly developed and articulated sense of a relationship to their unborn babies (Scale V). In contrast, women classified as insecure (Dismissing or Preoccupied), 1) tend to have difficulty with the ideas of both their babies' dependency needs and their separateness (Scale I); and 2) tend to have less well developed or minimally developed and articulated senses of a relationship to their babies (Scale V).

The results further suggest that the three attachment groups appear to be most distinguishable from one another on a measure of overall affect tone in relation to pregnancy (Scale II), supporting those who cite the centrality of affective experience in how individuals respond to developmental junctures. Women in the Dismissing group tend to be overly negative and anxious, while women in the Preoccupied group tend to be overly positive with a constriction of negative affect in relation to their pregnancies and impending parenthood. Both insecure groups demonstrate problems tolerating ambivalence.

Contrary to what was hypothesized, the three attachment groups could not be clearly distinguished on a measure of how they negotiate their relationships to their own mothers. The women in all three attachment groups demonstrate a high degree of struggle and conflict with mother-daughter issues. However, the results suggest that the scale is not sensitive to the important qualitative differences in the way the three attachment groups struggle with these issues, and that a modified scale might be able to make these distinctions.

The results did not yield statistically significant overall differences between the three groups in the way that they negotiate the tasks of pregnancy. However, the findings suggest that such differences can be demonstrated when a larger sample is studied.

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There have been a vast number of studies that have focussed upon the critical nature of the child's early interaction with and attachment to its primary caregiver. Particularly crucial to the study of infant attachment have been the theories of John Bowlby. Bowlby has argued that humans have an innate predisposition to form attachment bonds to a primary caregiver. The goal of "the attachment behavioral system" Bowlby maintains, is to insure proximity to the caregiver as well as meet the infant's needs for safety, comfort and security. It is this feeling of security in relation to the primary caregiver which enables the infant to gradually reach greater levels of independence in the the world.

Mary Ainsworth (1978) was the first to extend Bowlby's theory by developing a reliable measure (The Strange Situation) for observing qualitative differences in infant attachment behavior. More recently, Mary Main and her colleagues (Main, Kaplan, and Cassidy, 1985) have suggested that an adult's history of attachment relationships, as it is currently internally represented, results in a characteristic mode of functioning in the interpersonal world. Using the Adult Attachment Interview, Main and her colleagues have been able to document the ways an adult's "state of mind with respect to attachment" is related to their childrens' security and quality of attachment.

While mother-infant attachment has been widely studied, attachment related processes which might be relevant to the experience of pregnancy have received little attention in the literature. In view of the fact that many theorists, clinicians and researchers believe that mothers begin to develop an attachment to their unborn children during pregnancy, this is an obvious and important area for study. The few early psychoanalytic theorists who explored the areas of pregnancy and motherhood (Bibring, 1959, 1961; Benedek, 1970; Deutsch, 1945), proposed that pregnancy is a critical developmental phase in a woman's life cycle, during which certain psychological tasks must be accomplished. They agreed that pregnancy calls upon the woman to engage in an internal process leading to the working

through of a variety of feelings and conflicts which are specifically evoked by this experience. These theorists have been joined by contemporary theorists (Bellou, 1978; Blum, 1981; Breen, 1975; Pines, 1979) in concluding that two of the most important tasks of pregnancy are, the renegotiation of the pregnant woman's relationship to her own mother, and the formation of an emotional attachment to her unborn child. Such a conclusion strongly suggests that much of the psychological work of pregnancy concerns attachment related feelings and conflicts. Many theorists have suggested that the way in which a woman negotiates these important psychological tasks during pregnancy plays a significant role in subsequent mother-infant attachment (Leifer, 1980; Rubin, 1984; Winnicott, 1975).

Main's discovery that it is possible to study adult attachment using the Adult Attachment Interview provides a way of examining the relationship between a woman's "state of mind with respect to attachment" (Main and Goldwyn, 1988b), and the way she copes with the psychological processes of pregnancy, including her beginning attachment to her unborn child. It seems highly likely that the relationship between adult and child attachment documented by Main indeed begins during pregnancy.

To date, psychologists know surprisingly little about the way women feel about the enormous life changes represented by pregnancy, how they experience and attach to their babies, or how they struggle to come to a new understanding of their relationships with their own mothers through the course of pregnancy. In addition, there is much to be understood about the ways a mother's history of attachment relationships influence her response to a range of pregnancy related psychological tasks, and how these adaptations may effect subsequent mother-infant attachment. If a group of related emotional processes can be more clearly delineated, and a progression of mothers' attachment to their babies can be enumerated during pregnancy, our understanding of both pregnancy and aspects of mother-infant attachment may be expanded considerably. These are among the aims of the

of the present study.

Statement of Purpose

The primary aim of the present study is to examine the relationship between maternal "state of mind with respect to attachment" (Main and Goldwyn, 1988b) and the way in which women negotiate the tasks of pregnancy. Specifically, differences in maternal "state of mind with respect to attachment" (insecure vs. secure) are correlated with subjects' ratings on scales designed to examine their developing feelings in relation to impending parenthood, to their changing lives, to their own mothers and to their babies. Based upon the literature, five scales have been developed to rate women (based upon their responses to a semi-structured interview) in a number of significant areas of their psychological experience and response to pregnancy. These scales are as follows: I) maternal capacity for recognition of the unborn baby as a highly dependent yet separate individual with its own needs and feelings, and of the potential for maternal-child conflict; II) overall maternal affective experience of pregnancy; III) feelings about steps taken/changes made to insure the well-being of the pregnancy and baby; IV) negotiation of maternal relationship to own mother; and V) evidence and quality of maternal-fetal attachment.

The following pages will develop the argument that qualitative individual differences exist between women in the way that they traverse these areas of pregnancy, and that such differences can be linked to the way in which they characteristically negotiate attachment related experiences. Through the use of qualitative interview data, the specific nature of such differences will be elaborated.

CHAPTER ONE

Literature Review

The theoretical framework which will be used for the present study is drawn from the literature on attachment theory and research. The review of the literature concerning the psychological processes of pregnancy will incorporate pregnancy related theory and research from psychoanalytic, psychosocial, and object relations frameworks.

ATTACHMENT THEORY AND RESEARCH

Theory: A Brief Overview

It is widely accepted that a positive mother-infant attachment is crucial for healthy child development and adaptation. Much of the research concerning the importance of the early mother-child relationship has its roots in the theories of John Bowlby (Slade and Aber, 1987).

In his three unprecedented volumes of Attachment and Loss (1969/1982b, 1973, 1980), John Bowlby conceptualized attachment as a system of psychological organization through which one obtains and maintains a feeling of security. This is accomplished in early life through the maintenance of proximity to a primary caregiver(s) who meets the infant's and child's needs for protection, comfort, love and affiliation, becoming what is called an attachment figure. Thus, attachment is a relationship with a discriminated person(s) which is experienced by the attached person as a powerful psychological bond. It is a unique and relatively stable state between two people that endures over time and distance. The

attachment figure, in turn provides a base of safety and security, by creating a sense of psychological well-being in the child. In early life, this allows for and facilitates progressively higher levels of functioning and exploration of the world. Attachment behavior is most directly observable in young children. They necessarily seek out their attachment figures when they are frightened, sick, tired, or in any situation where they feel vulnerable and security is threatened or compromised. Infants, toddlers and children utilize a variety of behaviors that evolve and change with development in order to regain access to their caregivers and to a feeling of security (crying, reaching, looking, crawling to, walking to, etc.). Although attachment behaviors are most directly observable in early childhood, the attachment system can be set in motion throughout the life cycle, particularly in unfamiliar or stressful situations (Bretherton, 1985).

In its serving the biological function of protecting the attached individual from physical and psychological harm, Bowlby (1988) believes that the attachment system has its own separate internal motivation which, "neither is subordinate to nor derivative of food or sex" (p. 121). It is in this claim that Bowlby departs from traditional psychoanalytic theory. However, Bowlby's related notion that early attachment relationships pave the way for and significantly influence the formation of future lasting interpersonal relationships, is almost universally supported (Ainsworth, Blehar, Waters and Wall, 1978; Beebe and Stern, 1977; Bretherton, 1985a; Emde, 1985; Fraiberg, 1981; Mahler, Pine and Bergman, 1975; Ricks, 1985; Sroufe and Waters, 1977; Stern, 1977, 1985; Winnicott, 1965).

Ainsworth, (1973), following Bowlby, defined an attachment as an "affectional bond" which characterizes a relatively long lived tie in which the partner is a unique individual, interchangeable with none other, from whom inexplicable, involuntary separation would cause distress and whose loss would occasion grief. Early in life, Ainsworth states that the

the hallmark of attachment is behavior that promotes proximity to or contact with the figure(s) to whom the person is attached. These behaviors include initiation of active physical contact, orienting behaviors and signalling behaviors. Ainsworth notes that these behaviors increase during the postpartum period. However, it is likely that these behaviors are present in rudimentary form in the antepartum period as well.

Shoupe and Waters (1977) also view attachment as referring to an "affective bond" between infant and caregiver, and as a metaphor that captures expressions of affect in reaction to caregivers. When such affect is positive, the comfort derived from the mere presence and later from the internal representation of the caregiver is, "the psychological tether that binds infant and caregiver together" (p. 121). In this vein, they see the attachment system as the "mediator of the affective bond" which serves a powerful integrative function for the individual's experiences throughout life. In his most recent book, Bowlby (1988) emphasizes the primacy of intimate emotional bonds in human nature, and roots these bonds in the early caregiver-infant relationship. He writes that "the capacity to make intimate emotional bonds with other individuals, sometimes in the careseeking role and sometimes in the caregiving one, is regarded as a principal feature of effective personality functioning and mental health" (p. 121).

Bowlby (1988) goes on to say that the caretaking required in successful parenting plays a complementary role to careseeking, and should also be regarded as a fundamental aspect of human nature. However, as a number of theorists including Bowlby (1969), Kaufman (1970), Rubin (1984) and others have been careful to stress, there is no evidence for a solely biological maternal/parental capacity in humans. It is only through an interactive process with the interpersonal world that complex acts of mothering/parenting can be transmitted. Rubin (1984) contends that while most women are biologically capable of becoming pregnant, mothering is, "a volitional act of lending oneself, one's life space, and

life course to the very significant giving to another". Chodorow (1978), agrees that maternal instinct and biology play a minimal role in mothering. She suggests that maternal behavior is a function of gender personality, wherein psychological preparation for mothering is transmitted through developmental experiences of being mothered and then reproduced across generations. Current attachment theorists would agree with a notion of generational transmission of patterns of attachment, and are presently engaged in intergenerational studies of attachment relationships (reviewed below).

Research: Mother-Infant Attachment

Mary Ainsworth (1978) became interested in Bowlby's ideas and initiated home observations of mothers' and babies' interactions in order to study differences in quality of infant attachment. She developed measures of maternal sensitivity to infant cues, observing the ways in which mothers held their babies, responded to their cries and interacted with them during feeding and play. She surmised that infants' behavior in relation to their mothers would reflect their response to and perceptions of maternal sensitivity and availability. She further reasoned that differences in such perceptions during the first 12 months of life would likely yield variations in quality of mother-infant attachment by the end of the first year (Slade and Aber, 1987). However, during laboratory observations of infants' behavior in response to brief separations from their mothers, Ainsworth unexpectedly noted that there appeared to be distinct patterns of behavior manifested by infants upon reunion. These laboratory separations became known as the Strange Situation and were used to identify 3 distinct patterns of organization of attachment; 1) Securely Attached Infants, 2) Insecure-Avoidant Infants, and 3) Insecure-Resistant Infants (Slade and Aber, 1987). These classifications were viewed as encompassing a range of types of infant attachment to its primary caregiver.

Since Ainsworth's original studies, a host of attachment researchers have utilized the Strange Situation procedure to correlate variables of maternal sensitivity and responsiveness with security of attachment and child adaptation (Bretherton, 1985a, 1985b; Main, 1985b; Main and Stadtman, 1981; Ricks, 1985t; Sroufe, 1983). Maternal sensitivity and responsiveness have been consistently associated with secure attachment in the child, while maternal rejection, insensitivity, and inconsistency have been associated with distortions in optimal functioning of the attachment system, including decreased competency in preschool (Matas, Arend, and Sroufe, 1978; Sroufe, 1983). These studies have been replicated in both the U. S. and abroad as have the results, providing confirmatory evidence that the mother has a measurable influence on the organization of the emerging attachment relationship (Bretherton, 1985). Furthermore, these theorists propose that the attachment patterns established in infancy play a significant role in the patterning of personality (Ainsworth, 1985; Bowlby, 1973; Hinde, 1982; Kobak and Shaver, 1987; Main, Kaplan and Cassidy, 1985a; Ricks, 1985; Sroufe & Fleeson, 1987). The quality of the child's attachment, as defined by these categories, provides a history of the mother-child relationship, and appears to reflect the infant's early representation of this relationship (Ainsworth et. al, 1978; Main and Goldwyn, 1988b). Furthermore, it may also reveal crucial characteristics of the mother's behavior with her infant, and the organization of her own attachment system, including her representation of her child (Bretherton, 1985b; Slade and Aber, 1985; Zeanah, 1988). The idea that the mother's attachment organization is reflected in the child is the basis for the current research on intergenerational transmission of patterns of attachment (Main et. al., 1985; Main and Goldwyn, 1988; Ricks, 1985, Bretherton, 1987; Kobak & Shaver, 1987). This idea also underlies the present study into how pregnant womens' internal organization of attachment may be reflected in their overall emotional response to

to pregnancy and their developing attachments to their unborn children.

Theory: Models of Representation

Attachment researchers, psychoanalysts and object relations theorists have been interested in how the infant comes to internalize an image of its mother or primary caregiver. The nature of internal representations and individual differences in their quality, fluidity, developmental level of organization and accessibility, has been the subject of wide ranging interest.

In their conceptualizations about attachment, Bowlby and his followers have long been concerned with addressing questions of internal representation. Bowlby coined the term "internal working models of attachment relationships" to describe increasingly complex inner constructions of objects and self which are gradually built up by the child through continuous transactions with primary attachment figures (Bowlby, 1969/1982b, 1973, 1980). Because an attachment relationship is one that exists between two people, Bowlby theorizes that inner representations of attachment figures reflect the organization of a dyadic system within the attached person (Bretherton, 1985a). Main et al. (1985a) define the internal working model as a, "mental representation of an aspect of the world, others, self or relationships to others that is of special relevance to the individual... internal working models are a set of rules for obtaining or limiting access to knowledge of the self, attachment figures and the relationship between the self and attachment figures", many of which may be unconscious. The internal model will reflect not an objective picture of the parent, but rather a history of the attachment figure's responses to the child's actions or intentions toward that figure (Main et. al., 1985). Main et. al. suggest that these rules lead not only to variations in the organization of behavior and emotional experience, but also to differences in cognitive organizations of attention, memory and language. In psychoanalytic

theory, internal working models would be comparable to object relations, or mental representations of the self in relation to important others that evolve gradually through the process of internalization (Sandler & Sandler, 1978).

Attachment researchers adopted the term "Internal Working Models" of attachment, to refer to the dynamic state of the the child or adult's representations of specific relationships with important figures. However, most recently, Main and Goldwyn (1988a) have revised the use of this term, referring instead to a person's "state of mind with respect to attachment" (SMRA). They believe that this terminology most aptly characterizes an individual's cumulative relational experiences with important figures and their internal status of functioning at a given point in time. From here on, "state of mind with respect to attachment" will be used when referring to a person's overall state or classification of attachment, and the term "internal working models" will continue to be used to refer to mental representations of specific attachment relationships.

One's SMRA is thought to be used to appraise and guide behavior throughout life in a multitude of situations. SMRAs, once organized, tend to operate outside of conscious awareness and thus, are resistant to dramatic change (Bowlby, 1980). However, an individual's SMRA is open to revision during the rapid developmental periods of childhood and later critical developmental phases such as adolescence pregnancy and parenthood (Bretherton, 1985a). SMRA is also believed to be negatively altered (Secure--->Insecure) by traumatic life events, such as major separations from attachment figures (Bowlby, 1973; Bowlby and Robertson, 1952; Heinecke and Westheimer, 1966; Main et. al., 1985a). Similarly, gaining a stable attachment figure following a period of traumatic life circumstances and/or insensitivity by attachment figures, may lead to positive changes in infant attachment status (Weiss, 1982; Main et al., 1985a). Later in life, beginning in adolescence, Main suggests that such alterations of models, as discussed

earlier, may be due to the advent of the stage of formal operations (Piaget, 1945) and the utilization of new intellectual processes.

Attachment researchers (Bowlby, 1973; Bretherton, 1985a; Main et al., 1985a; Ricks, 1985) have postulated that an individual's attachment organization consists of two or more models of self and other which may operate simultaneously but are likely to differ in dominance and level of awareness. Bowlby has used this idea to explain defensive processes which result from incompatible models. When incompatible models exist, an individual may employ defensive dissociation and exclusion of particular models to avoid anxiety and painful emotions. Psychoanalysts would similarly refer to such defensive exclusion as resulting from conflict between incompatible ideas and/or emotions (A. Freud, 1936). At the same time, Bretherton (1985a) points out that when particular internal models are defensively excluded from awareness, crucial information is lost for negotiating accurate models of reality. She believes that when such information, concerning feelings and memories with respect to attachment is inaccessible, it reflects underlying incompatible or contradictory representations. The result is a rigid, inflexible attachment system which does not lend itself to optimal interpersonal functioning. This system is then unable to be revised and restructured during developmental transition periods such as adolescence, pregnancy and parenthood. Thus, adults who have been able to revise their SMRA to meet changing needs and circumstances over the course of development, would be more likely to be open and responsive to the emotional needs of their children. Such increased responsiveness by parents is then thought to result in greater security of attachment in their children, and the complementary formation and use of flexible, adaptive working models (Bretherton, 1985a; Main et al., 1985a; Ricks, 1985).

The nature of one's SMRA will determine how helpful it is in dealing adaptively with developmental transitions and life events. For example, a child who constructs a model(s)

of an attachment figure who has been available, responsive and supportive will have greater inner freedom, security and autonomy than one whose model(s) is of a figure who is unavailable etc. (Bowlby, 1980; Kobak and Shaver, 1987; Main et al., 1985a). In addition, a number of researchers now suggest that in the course of continuous interaction, individuals learn to internalize and represent both sides of a relationship (Sroufe and Fleeson, 1987). Such a notion has far reaching explanatory possibilities. In other words, even when representations of self and other are fully differentiated, one can only be understood within the context of the dyadic relationships from which these representations derive. Thus, if the child is continually rejected, he/she may not only develop an internal model of a rejecting parent but also a model of the self as unworthy. By the same token, a child whose parents are emotionally responsive and supportive would presumably develop a similar model of self, within which he/she has internalized that role. Presumably, these kinds of learning experiences within the context of primary attachment relationships would greatly effect the child's later enactment of the parental role. This could include as an adult, a woman's response to the experience of pregnancy and quality of attachment to her unborn child, in addition to the quality of her attachment to her children following birth (Kobak and Shaver, 1987; Main et al., 1985a; Main and Goldwyn, 1988b)

Research: Intergenerational Transmission of Patterns of Attachment

Mary Main and her colleagues (1985a) have replicated and extended Ainsworth's studies on security of attachment using the Strange Situation by investigating attachment relationships as experienced by the adult attachment figure. Until her work was published, research investigating adult attachment as well as patterns and stability of attachment relationships across generations had been methodologically limited. In 1980, Morris, a British investigator was the first to relate maternal history to children's security of

of attachment. In 1985, Main et. al. developed The Adult Attachment Interview (AAI—see Appendix A), a semi-structured comprehensive clinical interview which assesses individual differences in mothers' and fathers' earliest attachment relationships and degree of security in their overall SMRA. The interview questions revolve solely around attachment related issues, asking repeatedly for both "semantic" memories (overall generalized evaluations and descriptions of experiences) such as "Please pick 5 adjectives to describe your relationship with your mother", and "episodic" memories (specific biographical episodes) such as "When you were upset as a child, what would you do?", which exemplify the more specific descriptions of attachment relationships.

An important aspect of the interview as an assessment tool is that this semi-structured interview format (including set probes), elicits the subject's perceptions of his/her own experiences and capacity to integrate specific memories relevant to attachment, into a coherent, consistent understanding of the attachment relationship. The interview itself serves to activate the subject's attachment system, and thereby highlight his/her characteristic strategy for dealing with attachment thoughts and feelings. Analyses of verbatim adult interview transcripts have allowed Main to reliably classify parents as Secure/Autonomous (free to evaluate attachment), Dismissing of Attachment or Preoccupied with Attachment. This is done through a study of overall coherency (fluency of ideation and speech and/or internal consistency), with attention to contradictions, oscillations and incoherencies, as well as through attention to linguistic form (Main et. al., 1985a; Main and Goldwyn, 1985b; Main and Goldwyn, 1988b). For each attachment classification in Main's scoring system, there are a number of different subcategories. Each person that is classified based upon the AAI is also given a subcategory rating along with their overall attachment classification. Main has developed these subcategories as a way of acknowledging and further defining the wide range of individual variability that she has found to exist

within each attachment category. A separate scale is provided in the scoring manual which permits an additional rating to be given to those persons who, based upon a thorough analysis of their transcripts (looking at content, speech and ideation), are thought to be unresolved with respect to mourning of the loss of an attachment figure through death. The rationale behind the scale is based upon the notion that "loss of a primary attachment figure, especially during a period of vital dependence upon that figure is a naturally disorienting and disorganizing experience" (Main and Goldwyn, 1985b). The continued lack of resolution of mourning is thus believed to be similarly disorganizing and disorienting for as long as the person remains unaccepting with respect to the loss. Such effects of loss have been observed by Main in AAI transcripts, even in some subjects who are rated as basically secure, and can be used to explain the appearance of some disorganization in their transcripts, as well as additional variation among persons within an individual attachment category (see references for full classification system).

According to Main's classification system, Adults classified as Secure, are characterized by the ease with which they can access upsetting, anxiety provoking, or painful childhood experiences, by their sense of positive responsiveness by attachment figures in times of distress, and by their apparent valuing of attachment relationships, which they also view as impacting on their current personalities and functioning. Particular to secure adults is their capacity to realistically appraise their parents, regardless of the quality of parenting they received. If parents were not highly responsive to their needs during childhood, secure adults demonstrate evidence of having come to a current level of acceptance and/or forgiveness as a result of psychological changes that they facilitated. They further tend to be able to acknowledge and accept their own dependency needs while acknowledging and accepting the dependency needs of others. One of the hallmarks of those adults classified as Secure-Autonomous is the coherence and clarity with

which they articulate attachment related thoughts and feelings, accompanied by a high degree of thoughtfulness, understanding and insight.

Adults classified as Dismissing of Attachment, have difficulty recalling memories of distress while indirectly describing rejecting and/or unsupportive parental response to their distress. They also tend to downplay or devalue the importance and influence of attachment relationships, at times dismissing attachment thoughts and feelings completely from conscious consideration. At the same time, they frequently attempt to depict their parents as perfect, accompanied by an inability to support this view with specific memories. Those who are able to openly acknowledge and discuss disappointing and negative childhood experiences related to parental figures tend to demonstrate little understanding of the past or potential future impact of these experiences on their personalities and functioning. A further distinguishing feature of some Dismissing adults is their experience of fears of death or loss in the absence of actual loss. This is accompanied by a lack of awareness of the source or current impact of these fears. Since these are individuals who in varying ways "attempt to limit the influence of attachment relationships and experiences in thought, in feeling or in daily life" (Main and Goldwyn 1985b), their transcripts frequently are sparse, remote and/or abstract with respect to attachment thoughts and feelings.

Adults classified as Preoccupied with Attachment, exhibit continued lack of resolution concerning attachment related experiences. They appear to be preoccupied with childhood memories and/or engaged in a continuing adult struggle to please parents, marked by confusion and anxiety about the availability of attachment figures. While these individuals seemingly have ready access to past experiences and feelings, contradictions abound wherein they tend to portray a close parent-child relationship amidst descriptive memories of parental inadequacy. They tend to demonstrate ongoing difficulty separating themselves

from their parents, and thus experience problems functioning in relationships as separate autonomous adults. Some of these adults can appear highly pseudopsychological and analytical, but lack the genuine understanding and emotional insight characteristic of those adults rated as secure. A hallmark of the transcripts of those adults classified as Preoccupied is a vagueness, confusion, and lack of coherency, marked by an oscillation back and forth between a number of different competing thoughts.

Utilizing the AAI, Main and her colleagues (Main, Kaplan and Cassidy, 1985a) correlated adult SMRA with childrens' security of attachment at one and six years. They found significant correlations between a child's attachment with mother and with father at 12 and 18 months and the respective parents' conceptualizations of their own attachment relationships. They also reported that a child's representation of attachment at 6 years of age was predictable and stable in relation to the mother's attachment classification but not the fathers. This result lends support to the finding concerning a mother's greater impact upon attachment organization if she is the primary caregiver. Thus, mothers rated as Secure on the AAI were likely to have children who were rated as Secure in the Strange Situation. Similarly, mothers who were rated as Dismissing and Preoccupied had children who were rated as Insecure-Avoidant and Insecure-Resistant respectively. Main reported such correlations 76% of the time, while Eichberg (1987), who studied mother and child attachment concurrently, reported such correlations 85% of the time. In an intergenerational study, Ricks (1985) also found that a mother's reported acceptance by her own mother was strongly related to her infant's security of attachment in the Strange Situation at 12 months. This finding lends support to that of Main and Stadtman (1981) from an earlier study intended to gather evidence for the cross-generational transmission of actively abusive patterns. In that study, she found that a mother's apparent rejection of her own mother, as assessed through the AAI, was positively related to her

infant's avoidance of her in the Strange Situation, a pattern of infant behavior signifying rejection.

In the most recent study utilizing the AAI, Main and Goldwyn (1988b) report that mothers' capacity to remember, discuss openly, realistically appraise, reflect upon and integrate their earliest attachment relationships, no matter how negative or rejecting they were, in addition to valuing the importance of attachment relationships (qualities indicative of security in the mother), was strongly correlated with secure attachment in their children. In contrast, those mothers who recalled negative experiences with attachment figures but at the same time defensively discussed them and idealized these figures, had children whose attachment status was rated as insecure.

Two studies by Ricks (1985), support the results obtained by Main using different empirical measures. Quality of child attachment was assessed using the Strange Situation at one year, while mothers completed O'Brien and Epstein's (1981) Self Report Inventory and Epstein's (1983) Mother-Father-Peer Scale. The self esteem scores of mothers who had infants rated as secure were higher than those of mothers who had infants classified as insecurely attached. On follow-up, the latter mothers were idealizing of parental relationships and rated as defensive, while the former had greater access to childhood memories and were more understanding and resolved in their current appraisals. In the study noted above, Main and Goldwyn interviewed 35 fathers and 32 mothers using the AAI to determine the nature of the match between the infant's attachment to the parent and the parent's SMRA. Similar results have been obtained using a modified AAI in a cross-national replication study conducted in Germany (Grossman, Fremmer-Bombik, Rudolph & Veit, 1987).

In the Rick's studies, as in Main's, the actual events of the parents lives had little to do with the parents' current working models or with child attachment status. Main and her

colleagues, (Main et al., 1985a) in addition to Bretherton in a review (1985a), interpret these results to suggest intergenerational transmission of attachment patterns has to do with how the adult construes these past relationships and experiences, not with the experiences themselves, and in this way are reflective of the quality of underlying representational models. Since according to attachment theory and object relations theory, it is such internal representations of interactions with significant figures that seem to determine present and future experience, Main et. al. (1985) argue that researchers must move to "a level of representation". She further believes that this is the most germane way to study and understand individual attachment patterns and how they may be transmitted across generations. For this reason, Main et.al. (1985a), underscore the need for a unique tool such as the AAI, whose specific design provides illumination of an individual's cumulative operational mental representations or internal working models (how he/she construes past experiences and relationships), and how they are utilized in his/her current functioning.

Recently, a number of attachment researchers have initiated investigation into mothers' representations of their children during the first and second years of life (Slade and Aber, 1985; Bretherton, 1987; Zeanah, 1988). Based upon preliminary review of pilot data (from a Parent Development Interview), Slade and Aber's (1985) findings suggest that mothers of Secure children represent their relationship to their children in distinctly different ways than mothers of Insecure children.

Mothers of secure children demonstrate greater coherency, spontaneity, capacity for intimacy and depth when describing the relationship to their child. They are better able to describe and accept a breadth and depth of both positive and negative feelings in their relationship, and appear to better understand the child's complex attachment related needs (including simultaneous needs for increased closeness and independence), with a genuine willingness and desire to respond to these needs. These mothers are able to report feeling

angry with their children as well as the ability to communicate it directly to the child at the time of the anger in a constructive manner.

Mothers of insecure children are significantly less coherent in their interviews, finding it difficult to actually describe the relationship. They tend to be unable to express or integrate their affective experiences (both negative and positive), and thus have trouble tolerating the feelings of ambivalence and ambiguity that are inherent to parenthood. Based upon thorough analysis of the narratives, these mothers, despite their lack of overt affective expression, actually appear to experience more anger, guilt and anxiety as parents than do secure mothers. The differences in descriptions and quality of the affective experience of parenting are strikingly similar to the differences between how mothers of Secure and Insecure children speak about the relationships with their own parents in the AAI, as reported by Main and her colleagues (Main et al., 1985a; Main and Goldwyn, 1988b).

A most important finding suggested by Slade and Aber's data is that there appear to be differences in the way mothers use language to define their own and their child's affect states. This finding raises the possibility that not only does the child's attachment organization appear to develop in a parallel and complementary fashion to the parent, as suggested by Kobak and Shaver (1987), but that the parents' negotiation of emotion might affect the child's understanding of and ability to communicate affect states (Slade and Aber, 1985).

Thus far, the AAI has yielded significant correlations between a mother's SMRA and her child's pattern of attachment. Other researchers have begun examining the relationship between adult attachment and other representational interviews regarding parenthood. The present study will seek to relate AAI classification to the way women represent various aspects of their experiences of pregnancy, including representations of their relationships to their unborn children and their own mothers.

Theory: Relationship to Personality and Emotion Regulation

Kobak & Shaver (1987), have proposed that the 3 categories of attachment organization illuminated by the AA1 reflect "different strategies for maintaining felt security" during times of stress across the lifespan. They believe such strategies relevant to attachment, are one of a number of complex "self regulatory processes that maintain and perpetuate personality organization". Such self regulatory processes include beliefs about self and other, styles of emotional communication and styles of reappraising working models. They reason that since research has shown that working models of specific attachment figures do not necessarily correlate with an individual's organization of attachment behavior and feeling (Main et. al., 1985; Ricks, 1985), a distinction must be made between working models and aspects of personality structure which persist over development. Kobak makes a case for a relationship between the coherence of personality and attachment organization based upon recent research on child, adolescent and adult populations which reveal substantial continuity of attachment organization during later periods of development (Kobak and Shaver, 1987; Kobak and Sceery, 1988; Main et. al., 1985a).

Kobak's position was originally a departure from attachment researchers such as Main and her colleagues, who relied upon the construct of internal working models to study and explain continuity of attachment organization. However, Main and Goldwyn's (1988b) recent work which replaces "internal working models" with "state of mind with respect to attachment" (SMRA) is compatible with Kobak's theories. Main defines the construct as an internal organization with respect to attachment relationships, while Kobak takes it a step further to say that this organization specifically reflects the adult's strategies geared toward maintaining felt security, just as it does in childhood. However, in adulthood such strategies are much more complex, including both lifelong history of attachment experiences

and how they are currently construed, as well as the defenses developed in order to perpetuate a particular personality organization (Kobak and Shaver, 1987). Kobak agrees with other attachment researchers who conclude that an individual's SMRA or strategy for maintaining felt security will significantly influence the individual's flexibility in coping with stress and responding to change.

Kobak reasons that a parent's working model of his/her child evolves out of each individual's own long-term strategies for maintaining felt security. For example, a Secure mother will be able to tolerate negative feelings in her child because she inherently accepts and respects the child's attachment needs. For this reason, she will tend to represent her child in a balanced and realistic manner versus as overly angry, needy or difficult. In such a relationship, the child builds a model of the parent as responsive and available during times of stress. In contrast, a parent who is Dismissing of attachment might represent the child as a nuisance, and view bids for attachment as an intrusion on personal needs and goals, resulting in rebuff or punishment of the child. Anger on the part of the child would tend to be viewed as willful and rebellious while crying would tend to be seen as babyish or immature. In this case, the child would build a model of the parent as rejecting of attachment related needs and would eventually withhold expression of these needs. In the third case, a Preoccupied parent's working model of the child might portray the child as the primary source for meeting her own adult needs. A parent with the Preoccupied strategy would also tend to view increased exploration or expressions of autonomy as abandonment by the child. In this case, the parent's overriding need for comfort would interfere with the ability to respond consistently to the child's attachment needs. Due to the constant confusion and uncertainty about parental responsiveness, the child builds a model of the parent as inconsistently available. Thus, the child's working model of the parent appears to evolve in a complementary fashion or to accommodate to the particular style of emotional

communication associated with the parent's strategy for maintaining felt security (Kobak and Shaver, 1987). As referred to in the Strange Situation literature, this tends to have adaptive value for the child in that it minimizes overt feelings of anxiety and insecurity, despite its dysfunctionality in other respects (Ainsworth, 1978).

Research has shown that a child's security of attachment classification at one year is related to later social adaptation and success in peer relations (Sroufe, 1983), ability to modulate emotion in the service of social adaptation (Sroufe, Schork, Frosso, Lawroski and La Freniere, 1984), ego resilience and adaptability at ages 4 and 5 (Arend, Gove and Sroufe, 1979; Sroufe, 1983), ability to engage in peer affect sharing (Waters, Wippman and Sroufe, 1980), and to persistence in problem solving during the toddler period (Matas, Arend and Sroufe, 1978). In contrast, children with insecure strategies tend to demonstrate dysfunctional anger and dysfunctional anxiety toward parents (Sroufe, 1983; Sroufe et al., 1984) and in social relationships (Main and Stadtman, 1981).

According to Kobak, these findings suggest that strategies for maintaining felt security assessed by two different methods, the Strange Situation and the AAI, are coherently linked with styles of emotion regulation. These results also support the finding suggested by Slade and Aber (1985), linking attachment classification with variations in use of language defining parent-child affect states, which in turn may determine the child's developing capacity to regulate emotion. Furthermore, the results of the Main (Main et al. 1985a; Main and Goldwyn, 1988b) and Ricks studies support a notion of the centrality of affect, in that it was the degree to which mother's could recall and integrate the feelings associated with their early attachment relationships, particularly negative experiences, that was predictive of parent and child adaptation. Bowlby (1980) implies the same idea concerning affective links to quality of representations when he discusses defensive exclusion of particular internal working models that cause painful feelings. In her discussion of

representation, Bretherton (1985a) also calls attention to the need to consider affective components concomitantly with perceptual and cognitive aspects, as part of what becomes represented.

Kobak's work lends greater credence to notions of continuity of attachment organization over development as part of overall personality structure (Kobak and Shaver, 1987). In addition, his findings support the theories of Main et. al. (1985a), Bretherton, (1985a) and Ricks (1985) concerning the relationship between attachment organization and the capacity to cope with stress and respond constructively to life change through the revision and restructuring of ones' SMRA.

Since pregnancy is a major life change, these findings lead to the type of questions to be addressed in the present study such as, how do women with different SMRA's or "strategies for maintaining felt security" respond to and regulate their emotional experience during pregnancy in the service of reworking previous attachment relationships (specifically the mother-daughter relationship), and forming a new mother-child relationship.

Finally, it should be noted that attachment theory and the use of the AAI appears to make methodological sense for the measurement of the status and transmission of adult attachment patterns. However, attachment theory by no means is used in this study to take the place of valuable contributions of psychoanalytic and object relations theories to the study of mental representation of primary caregiving relationships and their effect on an individual's interpersonal functioning. In fact, attachment theory and the largely psychoanalytic theories of pregnancy have many points of convergence, and may be used simultaneously to explain observed phenomena.

PREGNANCY THEORY AND RESEARCH

This review of the pregnancy literature will be drawn from psychoanalytic, developmental, object relational and psychosocial theories of pregnancy, including studies/theory related to maternal-fetal attachment.

Psychoanalytic and Developmental Theories of Pregnancy/ Related Research

Pregnancy and childbirth represent a profound experience of physiological change, social reorganization and psychological upheaval. It is a critical transitional period for a woman, creating shifts on numerous fronts, such as day to day responsibilities, work, social role, self-concept and relationship to others, past and present (to name only a few). Dana Breen (1975) has written that a "first pregnancy is an important bio-social event in the life of a woman, accompanied, if there is to be a positive adjustment, by a reappraisal of her image of herself and her relations to important people in her life" (p. 191).

This view is consistent with widely accepted theories which characterize pregnancy as a normal developmental process in the adult woman's life cycle, during which certain tasks are ideally negotiated toward new levels of psychic organization and restructuring (Benedek, 1970; Bibring, 1959; Caplan, 1960a; Erikson, 1959). Within such a framework, which is a departure from earlier views equating turbulence with psychopathology, the emotional flux inherent to pregnancy may be seen as a positive normative phenomenon, reflecting conditions of apparent "crisis" and disequilibrium. Writers appear to differ as to whether they view this developmental process as one in which a mentally healthy woman demonstrates no sign of pathology, despite the psychological changes that take place, or as one in which even the most psychologically intact woman will experience and/or

manifest symptomatology. However, regardless of the viewpoint expressed, most writers on the subject seem to agree that the experience of pregnancy is accompanied by a degree of normal psychological regression as well as a resurgence of dependency related conflicts and anxieties, which tend to evoke feelings of ambivalence, anger and guilt (Benedek, 1970; Bibring, 1959; Deutsch, 1945; Leifer, 1980).

Much of the early work on pregnancy and motherhood has its origins in the psychoanalytic tradition, most notably stemming from the theories and studies of Helene Deutsch, Grete Bibring and Therese Benedek. Helene Deutsch (1945) was one of the first psychoanalytic writers to attempt an in depth explanation of the experience of pregnancy, which she viewed as central to a woman's life. She essentially shifted the emphasis from the girl's/woman's reparative wish for a penis postulated to underlie the urge in women for childbearing (Freud, 1933), to the consummation of her femininity. Motherhood could then be viewed as the fulfillment of the woman's most powerful and guiding wish. For Deutsch, fantasy is viewed as a common and essential aspect of the pregnancy experience which she believed to "fill the psychic life of children, especially girls, from their earliest childhood" (1944, p. 127).

Deutsch emphasizes the inevitable tendency in even the healthiest pregnant woman to feel some ambivalence about bearing a child. She goes on to say that for women in whom infantile conflict and ideas counter to the positive aspects of motherhood are excessive, the physiologic processes of pregnancy will lose their proper moderation. In turn, she postulates that only the psychologically healthy woman who has developed "motherliness", defined as a "willingness for emotionally positive identification and a readiness for masochistic giving", can go beyond this negatively charged biological experience to create a positive relationship to the child of the future. While Deutsch cites the importance of a developing maternal-child identification during pregnancy, she sees as even more crucial,

the pregnant woman's identification with her own mother. She relates the capacity for motherhood in every woman specifically to this identification." This idea is compatible with attachment theory, from which one would view security of attachment in adulthood (based upon the early mother-child relationship), as crucial for the development of a security inducing mother-infant relationship, and possibly a similarly healthy maternal-fetal relationship.

Benedek (1952) viewed pregnancy as the greatest biological and psychological integrative challenge that a woman ever faces. Following from Deutsch (1945), she wrote that "motherhood is not secondary, but rather the manifestation of the all pervading instinct for the survival in the child that is the primary organizer of the woman's sexual drive and by this also of her personality." (p. 132). Mahler (1968) supported these views when she later wrote that an integral part of this drive, is the longing for the symbiotic "good mother" (who was once a part of the self), which is an existential aspect of human life that remains with a woman throughout the life cycle. She believed that a woman can relive this intimacy with her own mother through becoming a mother herself.

Benedek (1952) believed, in agreement with Deutsch, that pregnancy physiologically facilitates a regression of the ego to the oral stage of development, (where she believed the steps toward motherhood began), marked by a resurgence of orally based conflict and passive dependent needs. While she conceived of the ego as being in a vulnerable state, she felt this to be a normal and necessary condition, providing the arena for psychological growth and development. However, she believed, as did Deutsch, that if the regressive pull and level of conflict toward her own mother and motherhood outweighs the emotional resources of the woman, then there will be pathological disturbance such as psychosomatic conditions and depression. She further postulated that if the woman is unable to establish a benign identification with the growing fetus, it can result in a disturbed

mother-child relationship (Benedek, 1970).

In her practice, Bibring (1959) observed psychological disturbances and disequilibrium in pregnant women with no other history of psychiatric pathology. She soon discovered that such disturbances had also been observed by other clinicians. Based upon her observations, she suggested that pregnancy be viewed as a normal maturational crisis with adjustive "developmental tasks", much like puberty and menopause. With this view, Bibring drew from the theories of Erik Erikson (1950), who conceptualized development throughout childhood and adulthood as a series of normal critical stages through which each individual must pass. Inherent and unique to each stage is its own psychological hurdles that must be worked through and mastered in order to successfully move forward to the subsequent stage. Bibring believed that the developmental processes of pregnancy center upon the physical and psychological changes experienced by the woman, and herald the beginning of early motherhood. Bibring (1959) summarized her theory as follows:

Pregnancy is a crisis that affects all expectant mothers, no matter what the state of psychic health of the individual, leading to acute disequilibria which under favorable conditions result in specific maturational steps toward new functions....Pregnancy, as a major turning point in the life of a woman, represents one of these normal crises, especially for the primigravida who faces the impact of this event for the first time. We believe that all women show what look like remarkable, far reaching psychological changes while they are pregnant. The outcome of this crisis, then, has profound effects on the early mother-child relationship (p. 119).

Unlike Deutch (1945) and Benedek (1970), who emphasized that one really only sees pathological manifestations during pregnancy in emotionally immature and psychosexually conflicted women, Bibring believed that even in normal women there could be serious psychological problems, increased conflict and pathological forms of regression.

As Bibring (1961) formulated it, based upon a longitudinal study of 15 primiparae (women in their first pregnancy), the developmental "crisis" involves a significant degree

of dissolution of the woman's previously achieved psychic organization as a specific response to pregnancy, "to allow for a corresponding recomposition to a new position not identical to that previously held". This entails the necessity to relinquish old needs and goals, reevaluate past and present object relationships, and to work through unsettled conflicts as they emerge, in order to reach more adequate solutions compatible with an attitude of mothering and its functions. Some of the signs of maturation would include changes in self image, extending to one's felt identity as "... interdependent... as adult rather than child, as mother rather than daughter, as woman rather than man, as wife and mother rather than one or the other." According to Bibring (1959), particularly crucial to a maturationally successful outcome would be to "develop a conflict free useful identification with the mother as a prototype of a parental figure." She strongly emphasized the need for the pregnant woman to come to a benign understanding of her relationship with her own mother in order to be freed to undertake the enormous task of mothering another. She was however, careful to point out that while crucial psychological work should take place during pregnancy, forming a parental identity is not over with the birth of the child. Rather, her findings suggested that rather than a maturational integration occurring by the time of delivery, there appears to be an incomplete intrapsychic reorganization which continues to shift and adjust within the context of the developing mother-infant relationship.

The fact that pregnancy is accompanied by an intense introversion or "turning inward", has been documented and agreed upon by psychoanalytic and psychosociological theorists alike (Benedek, 1970; Bibring, 1959; Coplan, 1961; Deutsch, 1945; Leifer, 1980; Rubin, 1984). The psychoanalysts such as Bibring (1959), Benedek (1970) and Deutsch (1944), described this increased self preoccupation or "primary narcissism" as the ego's "cathexis of the self", referring to the state of the self representation as the object

of libidinal cathexis. Bibring (1959) used the term "reflexive narcissism" to deal specifically with the way in which pregnancy and its tasks involve the ego's distribution and shifts of focus between self and object representations, in terms of the relationship of the woman to her sexual partner, to her self, to the unborn child and to her own mother as well." Deutsch (1944) theorized that pregnancy is the preparation for vast expenditures of libidinal energy, stating that, "possibly the most powerful source of maternal love lies precisely in the fact that the narcissism of pregnancy erases the boundaries between the I and you" (1944 p. 145). Benedek (1970) discussed the way in which increased "primary narcissism" becomes a "wellspring of motherliness" which in turn stimulates hopeful fantasies toward the unborn child. She believed that such fantasies can actually help diminish a pregnant woman's anxieties about her capacity to love and care for the child.

In the earliest theories about pregnancy, these authors suggested that pregnancy is a critical developmental period which generates the internal process of restructuring preestablished attachment relationships, particularly the relationship to one's own mother, and the formation of a new attachment relationship to the unborn child. By implication, they further suggested that the pregnant woman's increased inward focus is necessary to accomplish the tasks of pregnancy and to facilitate maternal-fetal attachment.

Contemporary Psychoanalytic Theorists

Contemporary psychoanalytic theorists have echoed and extended the widely held view that the procreative function is central to a woman's femininity and an organizer of her personality. They believe that this is especially true with regard to attachment relationships, particularly the pregnant woman's relationship with her own mother.

Pines (1979) has stressed that there is a "marked psychic distinction between the wish to become pregnant and that of becoming a mother". According to Blum (1981),

motherhood is a more encompassing wish than the wish to be pregnant, and relates to the fulfillment of the maternal ego ideal. Lester and Notman (1986) similarly emphasize that motherhood relates to the woman's identification with her own mother and is synonymous with the wish to bear a child. They conclude, based upon analytic case studies of pregnant women, that "the course of pregnancy is above all determined by factors pointing to the woman's earliest experiences with the maternal object". They go on to say that while oedipal conflicts might surface during pregnancy, they do not appear to alter the woman's fundamental inner experience. In this vein, Galinsky (1981) observes that the woman engages in an "image forming process", preparing for the unknown through the reworking of previously unconscious conflicts/identifications relating to her mother. In the ideal situation, the result would be the formation of a more mature, healthy identification with her. Moreover, Pines makes the related, essential point that especially in first pregnancy, the seminal task is to appraise and complete the lifelong process of separation-individuation from one's maternal figure.

In a longitudinal study of object relational issues during pregnancy, Judith Ballou (1978) sought to study the ways in which the pregnant woman alters her view and experience of specific relationships and representations in preparation for motherhood. Women were interviewed early in pregnancy to assess enduring object relational constructs and personality organization. They were then interviewed later in the pregnancy to assess pregnancy related effects on the woman's sense of herself and those around her. Her findings support the notion put forth by a number of theorists that, "the woman who has reconciled with her mother and who feels a sense of being well-mothered can tolerate the sense of neediness and anxiety that is aroused when responding empathically to a child" (p.104). According to Ballou, in preparation for a new intimate relationship with a child, the task facing the woman during pregnancy is to rework infantile conflicts around dependency,

autonomy and oedipal guilt, simultaneously reorganizing one's object relational structure. In agreement with the early psychoanalytic writers, Bellou believes that in order to have access to necessary unconscious material, some loosening of defenses and regression are required and are an integral aspect of the pregnancy experience.

In a study centering on the relationship between pregnancy and femininity, Dane Breen (1975) found that a more mature level of object relations is important to a healthy adjustment and an acceptance of the realities of motherhood. She emphasizes the importance of a benign or good mother image which is neither idealized nor devalued so that the woman "can modify her perception of herself and her relationships with members of her family in a way which is congruent with the new situation of having a child" (p. 59).

Trends in Affective Experience

A number of researchers have done studies which suggest that the affective experience of pregnancy is both a central component and the mediator of the stages and psychic processes which take place. Like the psychoanalysts, they have found that a heightening of both positive and negative emotions is normal and common and suggest that this is a facilitator of the developmental tasks to be accomplished.

Colman and Colman (Colman, 1968; Colman and Colman, 1971) studied groups of pregnant women, observing trends in their psychological experience, such as emotional lability (including a tendency toward overreaction to situations), concern with death and dying around the experience of labor, increased phobias, increased sense of vulnerability due to fears of internal and external unknown dangers, and the attachment of a symbolic meaning to food. They reported an increase in the overall surfacing of unconscious material concomitant to womens' increased openness to their emotional life. Dreams were noted to be rich in such effect laden content reflecting concerns with self, baby and husband, in addition

to themes of hostility and ambivalence toward the fetus. There appeared to be an increase in bodily concerns, accompanied by the bodily expression of anxiety as well as pleasant emotions.

Myra Leifer (1980), conducted an in depth, longitudinal qualitative, exploratory study of 19 white, middle class primiparas between ages 22-33. On the one hand, she observed a general trend toward negative affect accompanied by considerable perturbation and stress in response to the emotional changes of pregnancy. On the other hand, she found that her subjects also paradoxically experienced an "intensified sense of well-being". (1) Based upon her study Leifer suggests that observed and reported increases in emotional lability, increased anxiety, dependency and lack of control, may provide an opportunity for growth and adaptation as a woman enters the new developmental stage of parenthood. Since many of the womens' worries and concerns unfolded temporally, each becoming manifest in relation to different stages of pregnancy, Leifer concludes overall that such anxieties often reflect attempts to master pregnancy related developmental issues. She writes, that "the special fluidity of feelings and openness to one's inner life", that was so apparent in her sample, "permits a reassessment and reintegration of one's identity so that the woman will be able to provide the active nurturing required by maternity while maintaining an intact, solidified sense of self " (p. 56).

While these authors have reported about the importance of a woman's increased emotional openness during pregnancy as an integral aspect of the developmental processes

(1)

It should be noted that some studies have attempted to relate the emotional upheaval described during pregnancy to the enormous hormonal changes which take place. However, upon an extensive review of the relevant literature, Leifer concludes that while these factors certainly play a role in the affective state of the pregnant woman, hormonal effects must be viewed within the context of complex interrelating psychological and social variables/processes which occur simultaneously.

cited earlier, there has been little work concerning how women differ in the negotiation of their affective experience or about the potential sources of these differences. The attachment literature suggests that women with different attachment classifications, or different personality related styles of maintaining felt security, vary in the way they attach to their infants (Main et. al, 1985a etc.) and regulate emotion (Kobak and Shaver, 1987). The pregnancy literature suggests that women with higher levels of ego development (Leifer, 1980) or more mature levels of object relations (Breen 1975) better adapt to the changes incurred by pregnancy. There is clearly a relationship between these two approaches to the study of emotion, namely the approaches of attachment and object relations theory. A critical aspect of the present study will be the examination of this relationship; specifically, how do women of different attachment classifications differ in their openness to affective experience, their tolerance of emotional extremes and their ability to integrate feelings about becoming a mother.

Maternal-Fetal Attachment: Historical and Psychoanalytic Correlates

To date, there have been few theorists who have attempted to define and operationalize maternal-fetal attachment as a discrete entity, and/or to document its occurrence as an integral aspect of the pregnancy process. The idea of maternal-fetal attachment, though only recently conceptualized, has been alluded to historically. Hippocrates, in 400 BC, and Serenus, in the first century AD expressed the belief that the pregnant woman influenced her fetus (Macfarlane, 1977). Over 1000 years ago, the Chinese operated prenatal clinics, specifically for the purpose of ensuring well being in the fetus through a fostering of a sense of tranquility in the mother (Macfarlane, 1977).

Similarly, while the early psychoanalysts did not directly address maternal-fetal attachment as a construct, many of the writings indirectly infer the formation of a

relationship between the pregnant woman and her fetus as part of the developmental process and intrapsychic work of pregnancy. Helene Deutsch (1945) addressed the way the pregnant woman creates an entirely internal relationship with the unborn child. In other words, the mother-child attachment, which like all relationships is anchored in a complementary mutuality of two partners (Leifer, 1980; Rubin, 1984), must logically be developed by the mother in fantasy in such a way as to imagine the unborn partner in a dynamic interactive state. Deutsch (1945) wrote of the pregnant woman, "the fact that her emotional interest is more or less exclusively turned toward an object that will be real only at some future date, gives the process the character of a partly dreamlike experience.... the woman's interest turns toward a fantasy that as a preliminary stage of an imminent realization, is also the preliminary stage of emotional motherliness.... the child itself still remains a fantasy product in the mother's psychic life, differing from other fantasies only in the certainty of its realization..." (p. 138-139). It can be inferred from Deutsch that this certainty allows the woman to maintain an intensified inner focus. It also enables her, through fantasy, to do the internal work of forming an emotional relationship to her unborn child.

Bibring (1961) too, indirectly dated the incipience of the maternal-child relationship to the pregnancy period, actually implying that it is the major developmental task to be accomplished. Bibring viewed pregnancy as a process of moving toward appropriate identifications, involving a shift from projective introjective mechanisms toward an identification mode of functioning. The psychological work is for the woman to make the essential emotional investment in the child as a separate object. According to Bibring (1961), the quickening experience initiates the woman's awareness of the fetus as a separate object within the self. Following this experience, the woman must begin to establish a relationship to the future offspring on a fantasy level, in preparation for

delivery and anatomic separation. Bibring wrote as follows: "The relationship, if it fulfills the maturational requirements, will have the distinctive characteristic of a freely changeable fusion... varying in degree and intensity... of narcissitic and libidinal strivings, so that the child will always remain part of herself, and at the same time will always have to remain an object that is part of the outside world and part of her sexual mate" (p. 15-16). In the above quote, Bibring appeared to refer to the prior establishment of the relationship between mother and child during pregnancy.

Winnicott (1956) coined the term "the primary maternal preoccupation" to refer to the intense inner focus of pregnant women. He wrote that in order to understand the functioning of the mother at the beginning of the infant's life, one must see that "she must be able to reach this state of heightened sensitivity, almost an illness in order to recover from it... some women are not able to become preoccupied with their own infant to the exclusion of other interests in a way which is normal and temporary". In such cases, there is an unhealthy "flight into sanity" (1958, p. 302). Winnicott defended his use of the word "illness", arguing that only a mother in a state of relative psychological health can flexibly negotiate the necessary emotional upheaval and regressive pull inherent to pregnancy and make use of them, while maintaining an intact, yet slowly changing sense of self. Winnicott suggested that a state of "primary maternal preoccupation", especially near the end of pregnancy, creates the necessary preconceived conditions for ego establishment in the infant by preparing the woman to provide ego functions for the infant early in their relationship. By implication, he also referred to the maternal-fetal relationship already established when he wrote, "only if the mother is sensitized in the way I am describing", within which she has "some capacity for identification with the baby..., can she feel herself into her infant's place, and so meet the infant's needs...., and there comes into existence an ego relatedness between mother and baby, from which the mother recovers and out of which the infant

may build an idea of a person in the mother" (1958, p. 304). Winnicott (1960) appeared to describe the early development of maternal empathy as an aspect of the attachment process when he further states, "mothers by and large do in one way or another identify themselves with the baby that is growing within them and through this process which is a 'projective identification', achieve a very powerful sense of what the baby needs" (1965, p.53). It was Winnicott's belief that the giving of self required by the mother early on is made possible by a woman's capacity for a healthy idealization and narcissistic identification with the baby, as well as with her own benevolent, somewhat altruistic mother.

In his writings, Winnicott implied that the processes of fantasy and unconscious identification used to bring the child into the mother's internal world are based upon her own experience of attachment relationships. An intimate, affective communication with the fetus during pregnancy, then enables her to meet its complex physical and emotional needs after birth. The early provision of a healthy experience in the mother-infant arena, would in turn facilitate the child's subsequent quality of attachment and internal representations of primary attachment relationships. Furthermore, Winnicott appears to suggest that mutual and reciprocal processes (Sroufe and Fleeson, 1986) between mother and baby are an integral aspect of maternal-fetal attachment, just as they are to all two-way relationships.

Maternal-Fetal Attachment: Contemporary Literature

Rubin (1972, 1984) is one of only a handful of authors who has attempted to characterize and articulate an actual internal process of maternal-child attachment during pregnancy. She begins by defining four articulated and interdependent developmental maternal tasks, all of which relate to both becoming an attachment figure and to maternal-fetal attachment. They are as follows: "1) to ensure safe passage for herself and her baby through pregnancy and childbirth, 2) to ensure social acceptance for herself and

her child (ideally within supportive marital relationship and family or other support network), 3) to increase the affectional ties in the construction of the image of the "I" and the "you" and, 4) to explore in depth the meaning of the transitive act of giving/receiving.

She contends that although all four tasks are progressively advanced during the course of pregnancy, the blocking of either of the first two tasks arrests the pursuit of the third and fourth. She believes that within the context of a supportive relationship/environment the woman is free to engage in the third task, that of beginning a relationship with an "unknown and unknowable individual". There is a progressive incorporation and elaboration of the idea of a child and idea of a self as mother of this child into the woman's self system. At the same time, there is a loosening of established relational bonds as well as a distancing of the self from the bonds of a former identity, in order to incorporate the new bond and the new personage. There is much silent review in thought of who and what the woman has been, constituting a process of disengagement from aspects of the self and ideal imagery that are no longer relevant to becoming a mother. According to Rubin, ideally there should be a release and acceptance of self which has a therapeutic effect. Disengagement, in turn, also accommodates and promotes binding-in in fantasy, in planning, and in action.

Rubin (1984), defines a developing "unity of identification" between the pregnant woman and unborn child, or the woman's sense that what happens to child happens to self and vice-versa. She, like Winnicott (1960) suggests that such identification ideally develops during pregnancy and perseveres beyond in what comes to be the special empathy of mother with child that is characteristic of motherhood.

Rubin (1984) places great emphasis on the mutuality of the maternal-child relationship as cited by many theorists, contending that no maternal behavior that exists unrelated to the child. She believes that without the responsiveness and feedback from the child as a partner, maternal feelings and behaviors are uncertain and subject to

dissolution. She suggests that the firmer the attachment bond, the more resistance there is to such dissolution. However, at the beginning of the childbearing experience there is no object of attachment, no relationship with another with whom to form affiliative ties. She contends that until childbirth, the bonds with the child are those mediated by the pregnancy experience, a fantasy of what the child will be. In agreement with the early psychoanalysts (Deutsch, 1945; Bibring, 1959), she postulates that internalization is transacted in fantasy, which is a projection in imagery of the mother and her child into the future of how it will be. She suggests that such fantasies during pregnancy are instrumental in the binding-in to the child and to the self as mother.

Leifer (1980) was the first researcher to trace the development of maternal feelings and explicate the relationship between attachment to the fetus and actual maternal behaviors. Her findings seem to support the notion that this very intense attachment process is most fully set into motion following the first trimester after the experience of quickening. The women in her sample unanimously expressed relief and a "sense of concrete gratification" with the movements that signified to them that there was a real separate living being inside. At the same time, despite the increased psychological stress, they reported a high degree of feelings of joy, pride, and a sustained sense of purposiveness, particularly in the second trimester, which was noted as the "high point". While some women reported an increase in physical discomforts during the third trimester closest to birth, accompanied by a decrease in intensity of feelings of well being, most experienced sustained feelings of renewal and fulfillment. Such positive feelings appeared to reflect the prominence of mothers' growing attachment to their unborn babies.

Caplan (1960), reported that a developing mother-child relationship could be traced, and that quickening is the point when the fetus first becomes real to the pregnant woman. He interviewed women from lower-middle and upper-low socioeconomic backgrounds, finding

that 80% rejected the pregnancy when they first became pregnant. However, in all but 15% of these women, feelings of rejection dissipated and resolved after quickening, when the infant's presence was confirmed. Caplan differentiated between feelings toward being pregnant and feelings toward the fetus, and believes that his studies suggest that mother and fetus exchange perceptual cues during pregnancy which are important in the beginning of the mother-child relationship.

Colman and Colman (1973) have written that quickening is "the most overwhelming experience of the second trimester. Following this event, they suggest the presence of the kind of protective feelings commonly expressed by an attachment figure toward a child when they note that women tend to feel a fear of injuring the fetus rather than themselves, as they begin to realize the individuality of the fetus.

Rubin (1984) similarly has found that it is the child itself who actualizes the relationship. She writes that beginning early in the fourth month of pregnancy, the sporadic fetal movements and the visible prominence change the abstract sense of a child into a "specific" child. This specific child now communicates, surprises, responds and makes the woman feel good about herself, which supports the findings in Leifer's sample during this period. Beginning in the fourth month, Rubin identifies changes in styles of dressing, eating, activities and socializing that recognizes and considers the child and the unity of the relationship. She cites a peaked interest in learning about the "you" and an elaboration of the scope of maternal protection and nurturance.

A popular image of the pregnant woman is that she exists in a state which resembles the elation, high self esteem (Freud, 1933) and fulfillment inherent to being in love and forming a new relationship. It seems that the widespread reports of sustained happiness and pride during pregnancy (Leifer, 1980) do bear a strong qualitative resemblance to being in love. A quote from a woman in Leifer's study strikingly highlights this point: "I've had a

lot of ups and downs lately, but throughout it all, there is a high feeling that keeps coming back. It's like falling in love all over again, a great feeling of exhilaration " (p. 57). Since falling in love is a two way process reflective of the formation of a very unique libidinal attachment, this experience alone strongly supports a notion of the primacy of the development of an emotional relationship to the unborn child during pregnancy. Leifer presents convincing evidence which supports such a conclusion. She writes of the women in her sample, "The peak experiences of pregnancy centered on the unique relationship developed with the fetus", and notes that while in the beginning of pregnancy, the affective attachment to the unborn child and the sense that it was a separate entity was expressed tentatively, the emotional bond deepened considerably after quickening and as delivery approached. (p. 76) Leifer noted that as time progressed and the attachment intensified, the womens' images of and fantasies about the fetus shifted to those of a newborn baby. Other indications of the development of an already interactive working relationship were revealed in the mothers imbuing the unborn child with characteristics, feelings and temperamental attributes, frequently in response to its communicative movements. By the third trimester, they began to have "playful conversations" with the fetus in which their husbands were often participants as well.

During mid-pregnancy, more than half the women in Leifer's sample reported that their dreams and daydreams had increased dramatically, and that the majority of them centered on the baby. In a study about the dreams of pregnant women, Gillman (1968) obtained similar results, reporting that 40 percent of the dreams of women in his sample were about their babies, compared with one percent of college women in the same age range. The temporal evolution of the strengthening bond to the fetus was similarly revealed in the content of the womens' dreams over time. Early on, images were vague with a sense of the unreality of the fetus and/or concern with the baby's normality. Following quickening,

dreams reflected the reality and sense of separateness of the fetus, while late in pregnancy they revealed fears for the infant's well being during and after birth, the need to protect it, and quite strikingly the need to be with the baby, as indicated by fears of separation from it.

In general, Leifer's (1980) findings overwhelmingly revealed that most women, by the end of pregnancy, had established strong feelings of identity with the fetus, accompanied by a new readiness and eagerness to relate to the actual baby. However, individual differences in the intensity and nature of the attachments formed are of particular note. She found a relationship between the degree of emotional attachment to the fetus and the degree of activities that served to heighten the reality of the baby, the degree and quality of feelings expressed about and toward the baby, as well as the level of preparation for the baby. In addition, she found that women who expressed anxiety through concerns about the well-being of the fetus were the ones who formed a significant, identifiable emotional attachment to it, while women who were predominantly self concerned and expressed little anxiety formed less intense attachments.

Leifer identified three categories of women in her sample; high, moderate and low functioning. She found that women with relatively high levels of personal integration and maturity achieved prior to pregnancy were likely to cope more actively with pregnancy and make better psychological use of this period. They tended to be less threatened by the pregnancy and thus able to focus on the formation of an emotional bond to their unborn children. They also developed deeper, more intense emotional attachments, and consequently also showed greater ease and a more pronounced sense of continuity in initiating an intimate relationship with their infants after birth.

Leifer's study, though small and exploratory, was a major step toward delineation of a process of maternal-fetal attachment and a demonstration of a connection between maternal-fetal and maternal-infant attachment. Her results overall also lend support to

views stressing the importance of psychosexual maturity (Bibring, 1969; Benedek, 1970; Caplan, 1961) and level of ego development/object relations (Winnicott, 1958) achieved prior to pregnancy as being the best predictor of a woman's response to childbearing and the capacity to develop an emotional relationship with her unborn child. The attachment literature suggests that security of attachment in adulthood reflects a high level of psychological maturity and integration, particularly with respect to the negotiation of relationships (past and present), and the formation of new relationships. This raises questions (addressed in the present study) as to whether adult attachment classifications can similarly predict how women negotiate attachment related processes during pregnancy.

Maternal-Fetal Attachment: Further Studies

Peppers and Knapp (1980a, 1980b) found substantial evidence of maternal-fetal attachment in the grief and loss felt by women experiencing miscarriages and stillbirths. They interviewed over 100 women who had sustained a fetal loss. They found no difference in the extent of grief between women having a stillborn or neonatal death, and found that strong feelings of loss remained in some women for many years following the actual loss. Best (1981) interviewed 38 subjects one month after they experienced prenatal loss. The results indicated that the longer a pregnancy had progressed prior to fetal loss, the greater the symptoms of grief. This finding lends support to notions of a developmental progression of maternal-fetal attachment over the course of pregnancy.

Mecca Cranley (1981a, 1981b) is one of only a handful of researchers who have attempted to empirically study the existence of maternal attachment behaviors toward the unborn child by operationalizing maternal-fetal attachment as a construct. She defined maternal-fetal attachment as the extent to which women engage in behaviors which represent an affiliation and interaction with their unborn child. She developed a 24-item

scale which was divided into five subscales, representing aspects of the relationship between the mother and the fetus as identified from the literature. The five subscales are: 1) Differentiation of self from fetus, 2) Interaction with the fetus, 3) Attributing characteristics and intentions to the fetus, 4) Giving of self, and 5) Role taking. Cranley undertook two studies of 30 pregnant women between 35 and 40 weeks gestation (during third trimester), to determine the degree to which they engaged in attachment behaviors toward their fetus.

Results of Cranley's studies supported the hypothesis that women demonstrate attachment to their unborn children during pregnancy. Seventy eight percent of the sample designated that they engaged in behaviors or attitudes depicted by the dimensions of the scale. Thirty two percent noted that they did so most of the time.

While Cranley's data is very useful in an area where there is little empirical research, her definition of maternal-fetal attachment and measures utilized focus solely on behaviors. Thus, she does not fully take into account or attempt to explain the complex intrapsychic and emotional correlates that appear to be involved in the attachment process. Further, it is possible that some behaviors are engaged in by all pregnant women and are not related to level and quality of attachment. The present study looks at the quality of womens' developing relationships to their babies (as an integral aspect of the pregnancy experience as a whole), based upon a combined examination of internal processes and external manifestations of a relationship.

Summary

The literature strongly supports the notion that the extent to which the pregnant woman is able to reconcile old conflicts, anxieties and feelings of ambivalence toward her own mother, and to identify with benevolent, nurturant aspects of her mother,

is related to the development of a healthy mother-infant relationship. The attachment literature similarly suggests that the extent to which a woman has been able to come to terms with primary caregiving relationships (particularly mother), and move toward a secure state of mind with respect to attachment, directly effects her capacity to provide a security inducing environment for her child. Recently, researchers have begun to document the beginning of mother-child attachment during pregnancy, and have suggested that a mother's ability to identify with her baby in the womb is a necessary prerequisite for healthy mother-infant attachment.

The ideas and research presented demonstrate the interface and compatibility between attachment theory and psychoanalytic theories of pregnancy. For example, the establishment of an emotional attachment to the unborn child can be viewed as a necessary part of fulfilling the wish to have a child (postulated by psychoanalysts), along with wishes to protect and nurture which also insures its subsequent survival. The motivation to take on the role as an attachment figure can in turn, be viewed as an aspect of the woman's nostalgia for her own mother (touched off by pregnancy), and her consequent desire to reexperience the original mother-infant relationship through her attachment to and mothering of her own child.

The importance of studying adult attachment relationships has been highlighted by research findings suggesting that patterns of attachment are transmitted across generations. Based upon the work of current attachment researchers, it would be expected that the way in which a woman currently views and has integrated her past relationships with primary caregivers, would have a major impact on the way that she negotiates the tasks of pregnancy. Hence, it has been suggested that one's "state of mind with respect to attachment" (Main and Goldwyn, 1988b) at any given time, is reflective of internal representational constructs of past and present relationships. Such relationships may have undergone change with

incorporation of new experiences over time, giving way to revised representations. It is for this reason that attachment researchers strongly recommend the study of adult attachment relationships on a representational level.

It is therefore reasonable to suggest that the level and quality of current internal representations of significant relationships in the adult (one's SMRA), will not only determine the woman's emotional experience and functioning after birth, but would likely influence the course of the pregnancy experience. This would include: her capacity to accept the enormous life changes represented by pregnancy and imposed by parenthood; her capacity to accept the baby's individuality and separateness in addition to its enormous dependency needs, marked by a desire and willingness to meet these needs; her capacity to respond to and integrate past and present feelings, conflicts, anxieties etc. concerning her relationship to her own mother; and the quality of her developing attachment to and identification with her unborn child. An assessment of these areas could then provide an indicator of her readiness and willingness to enter into a period of extreme self sacrifice in order to meet the extraordinary needs of the helpless infant during a stage of "absolute dependence" (Winnicott, 1959).

Hence, in attempting to examine the relationship between pregnant women's quality of attachment and differences in how they negotiate these central tasks of pregnancy, it seemed particularly fruitful in the present study to look at these processes within a representational context. The present study employs interview measures which were designed to elicit not only content, but the qualitative aspects of the way in which the pregnant women relate their experiences, access feelings and memories, talk about their relationships to their own mothers, and to their babies in the womb. Such qualitative data appear to be crucial to understanding individual differences among women in response to pregnancy.

Statement of Hypotheses

Primary Hypothesis - Security of Maternal Attachment measured during pregnancy, will correlate with a women's capacity to negotiate the psychological tasks of pregnancy.

Sub-Hypothesis A - It is expected that women who are Secure-Autonomous will: A) demonstrate greater recognition of the baby as a highly dependent yet separate individual with its own needs and feelings, and thus be able to foresee the possibility of conflict; B) demonstrate a balanced awareness, integration and acceptance of positive and negative feelings about the pregnancy experience; C) demonstrate having taken steps to insure the well being of the pregnancy and fetus without experiencing this as an imposition or sacrifice, and tend to view such steps as an aspect of nurturing or giving to the fetus; D) demonstrate a recognition of the importance of their relationships to their own mothers and its effect on their becoming a parent, as well as demonstrate a developing understanding and acceptance of this relationship for what it is; and E) experience and be able to articulate a strong sense of attachment to their unborn children and demonstrate a high number of complementary manifestations indicative of a maternal-fetal relationship.

Sub-Hypothesis B - It is expected that women who are Dismissing of attachment will: A) demonstrate little or no awareness of the baby's needs and feelings as a highly dependent yet separate individual, and thus would be expected to deny or minimize the possibility of conflict; B) demonstrate a tendency toward emotional constriction with respect to feelings about pregnancy and relationships, which may at times be manifest by an overly positive or idealized stance; C) demonstrate having taken steps to insure the well being of the pregnancy and fetus, but either view this as more of a sacrifice, and/or do not value this as a way of nurturing/giving to the fetus; D) demonstrate minimal or no awareness of the importance of their relationships to their own mothers and its effect on becoming a parent, and demonstrate a lack of developing understanding of this relationship which will be

directly or indirectly portrayed as highly negative and destructive; and E) be unable to articulate a strong feeling of attachment to the baby in the womb, and show few or no external manifestations of a maternal-fetal relationship.

Sub-Hypothesis C - It is expected that women who are Preoccupied with respect to attachment will: A) demonstrate difficulty separating baby's needs from their own needs, and thus demonstrate confusion and anxiety about the baby's dependency and individuality; B) tend to be highly anxious, fearful and/or negative about upcoming parenthood, with an inability to tolerate and integrate simultaneous positive and negative affect states (feelings of ambivalence); C) demonstrate having taken steps to insure well-being of the pregnancy and fetus but may go overboard and be anxious about doing what is right or enough; D) demonstrate confusion, anxiety and ambivalence, accompanied by minimal understanding about their relationships to their own mothers and its effect on becoming a parent; and E) demonstrate vague and poorly elaborated attachments to their unborn children, with manifestations of a maternal-fetal relationship tending to be few and/or tentative.

Secondary Exploratory Correlations - There is some evidence to suggest that a strong and supportive marital relationship as well as a strong network of supportive relationships is positively correlated with pregnancy adaptation (Barnard, 1981; Nuckolls, Cassel and Kaplan 1972; Zachariah, 1984). Thus, measures of marital adjustment and social support will be included in an exploratory fashion to examine their correlation with the adult attachment classifications and with the pregnancy interview coding scales. By controlling for whether subjects are equated in these areas, it can be determined whether the AAI and the Pregnancy Interview measure separate constructs.

CHAPTER TWO

Method

Subjects

The sample consists of 17 middle class, married primiparas between the ages of 25 and 35. These subjects constitute a subsample of subjects collected as part of a longitudinal study of pregnancy and early childhood, directed by Arietta Slade, Ph.D (Principal Investigator), and conducted at the City College of New York. No high risk pregnancies were included in the present sample, although a proportion (5) of the subjects had had one miscarriage prior to their carrying to term. Mothers were recruited through private obstetricians and Lamaze classes. Flyers describing the project were distributed to interested parents by physicians, midwives and Lamaze instructors who agreed to participate in the recruitment effort (Slade, 1989). The present study consists of a small subsample (18) of the anticipated total of eighty subjects.

Facilities

All interviews were carried out at the Psychological Center of the City College of New York, located in the North Academic Center. Mothers were interviewed in carpeted comfortable rooms with dim lighting, which are especially designed for interviewing. Interviews were transcribed on computers located at the City College campus.

Description of Measures

The Adult Attachment Interview: (George, Kaplan & Main, 1985) This interview was developed by Mary Main and her colleagues at the University of California at Berkeley. It is a structured interview consisting of 18 questions that takes approximately an hour to an

hour and a half to administer (see Appendix A for the complete interview). On the basis of analysis of the full transcript, and an integration of scale ratings with more general patterns of experience, women are classified as Secure-Autonomous (F), Dismissing (D), or Preoccupied (E). Each woman is also given a subcategory rating within each attachment classification that gives greater specificity to individual characteristics, and accounts for individual variation within each classification. If a reading indicates that a woman is unresolved with respect to mourning the loss (through death) of an attachment figure, an additional U rating is also given. The subcategories for each attachment classification are as follows:

Secure-Autonomous (F) - F1. Autonomous: Some setting aside of attachment
 F2. Autonomous: Somewhat detached
 F3. Autonomous
 F4. Autonomous: Somewhat incoherent or dependent
 F5. Autonomous: Somewhat resentful/conflicted

Dismissing (D) - D1. Dismissing of attachment
 D2. Dismissing: Devaluing of attachment
 D3. Dismissing: Restricted in feeling
 D4. Dismissing: Cut off from fear of loss

Preoccupied (E) - E1. Preoccupied: Passive
 E2. Preoccupied: Conflicted and ambivalent
 E3. Preoccupied: Fearful

A complete scoring manual has been compiled by Main and Goldwyn (1985b). For an overview of the three classifications and scoring, refer back to Literature Review pages 13-16. It should be noted that the scoring manual is quite extensive (classifications, sub-categories, U rating, and additional instructions for scoring are described in depth), as is the training required to become reliable in the AAI. Hence, the outline for scoring presented here is necessarily limited (Slade, 1989).

The Pregnancy Interview: (Slade, Grunebaum, Haganir & Reeves, 1986) The Pregnancy Interview is a semi-structured interview developed by a group of researchers

at The City University Clinical Psychology Graduate Department on the basis of pilot interviews with a small number of women and a thorough reading of the literature (see Appendix B for complete interview). It consists of 39 questions designed to elicit data reflecting the major areas of concern and emotional significance for the pregnant women. These include her fantasies about the child, her ideas about herself in the changing role of becoming a parent, the degree to which she feels an attachment to her unborn child internally, the degree to which she demonstrates ability to make changes in lifestyle/habits for the well-being of the fetus, and her feelings about her relationship with her own mother and with her spouse. The interview takes approximately one hour to administer.

Using pilot data, a coding system was developed (see Appendix C) to assess the following aspects of pregnancy:

- I. The degree to which the mother recognizes that her baby is highly dependent but will also be separate from herself with its own needs and feelings; this includes the degree to which she can use her awareness of separateness to anticipate the potential for conflict between herself and baby.
- II. How the mother negotiates the effective experience of pregnancy, including the degree to which she is able to recognize integrate and accept both positive and negative feelings about pregnancy and parenthood.
- III. The degree to which she has made changes in lifestyle/habits and/or self sacrifices in order to insure the well-being of the pregnancy and fetus (including her feelings about actions taken).
- IV. The degree to which the woman recognizes the importance of her relationship to her own mother in becoming a parent, and the degree to which she has been able to come to a benign understanding or acceptance of this relationship.
- V. The degree to which the mother demonstrates attachment to her fetus both through her ability to articulate these feelings and through external manifestations indicative of a maternal-fetal relationship.

Dyadic Adjustment Scale: (Spanier, 1976) This is a 32 item scale designed to assess an individual's overall adjustment within a dyadic relationship, in this case a marriage. An

overall adjustment score is derived in addition to subscores which tap specific aspects of the marital relationship such as, Consensus, Satisfaction, Cohesion and Affectional Expression. This scale is a pencil and paper measure which is easy to complete and has well established reliability.

Social Support Interview: (Crockenberg, 1981) For this measure, subjects are asked to list all individuals who provide them with support. They are then asked to indicate how often each of the persons listed actually helps them and to rate the quality of that support. The ratings of each support person are summed, yielding a measure of perceived social support. This scale has been increasingly used in attachment research (Slade, 1989).

Procedure

1. Data Collection

When mothers made contact with The Pregnancy Project at City College to indicate their interest in the study, the research was described to them in detail. They were notified that participation in the pregnancy phase of the project, for the purposes of this study, would require two two hour meetings. The initial appointment was scheduled between the 32nd and 36th weeks of pregnancy. During this visit, the details of the study were reviewed and consent forms signed, followed by collection of demographic and family data, including both parents' employment and educational history, income data, family history, history of mental illness and psychotherapy. The Pregnancy Interview was then administered and audiotaped (Slade, 1989). This time period during the end of the third trimester (specifically the end of the 7th through the end of the 8th month of pregnancy) was chosen for administration of the Pregnancy Interview because, in light of the literature cited, it appears to be the optimal time period for assessment womens' negotiation of pregnancy related psychological tasks, and particularly for assessment of

mothers' developing relationships to their unborn children. It is a sufficient amount of time after the quickening experience (which is believed to make the child a tangible reality to the mother and facilitate the attachment process), yet close enough to delivery so that central pregnancy related issues should be salient. It is also far enough from delivery that the women were not likely to give birth between the time of scheduling and the actual interview, and should not have been as preoccupied with the delivery experience, nor as physically uncomfortable as would be expected in the 9th month.

After answering any questions the mother may have had concerning the interview, the interviewer administered the Vocabulary subtest of the WAIS-R and the Hopkins Symptom Checklist-90 [HSL-90] (Derogatis, 1979). They were given the Dyadic Adjustment Scale (Spanier, 1976) and the Loevinger Sentence Completion measure of ego development (Loevinger, 1976) to take home and fill out. The HSL-90 and the Loevinger Sentence Completion were not used for the present study but will be analyzed as part of the longitudinal Pregnancy Project. Within two weeks of the initial visit, a second visit was scheduled, during which The Adult Attachment Interview (AAI) was administered and audiotaped. A Social Support Interview (Crockenberg, 1981) was administered following the AAI.

While an overall Project coordinator was responsible for scheduling the interviews and answering questions, subjects were assigned to different interviewers who are members of the research team for the two interviews. The interviewers were naive to the behaviors and/or responses of subjects in other visits to the laboratory.

2. Data Preparation

The Pregnancy and Adult Attachment interviews were transcribed by members of the research team other than this investigator. The AAI's were coded by two members of the

Pregnancy Project research staff. Project coders had all been trained by Dr. Slade and acceptance levels of reliability had been established prior to coding the interviews used in the present study. Disagreements in coding were resolved by Dr. Diane Benoit. All coders were naive to the aims of the present study. The Dyadic Adjustment Scale and Social Support Interview were scored by members of the research team. Scoring procedures for the Pregnancy Interview will be described below.

3. Establishment of Inter-rater Reliability

Two raters were recruited to be trained to use the pregnancy coding system scales. One rater has recently completed her doctorate in clinical psychology and the other is working on his dissertation toward completion of a doctorate in clinical psychology. Both raters were naive to the aims of the present study. The training consisted of an initial session wherein this investigator thoroughly reviewed the Pregnancy Interview and scales with the raters, and provided examples of the appropriate use of the different scale points for each scale. During this session, the raters were given one sample interview to rate followed by further questions and discussion. The raters were then instructed to code five pilot interviews on their own. This investigator (trainer) also coded these interviews to provide comparison with the raters and further examples of the appropriate use of the scales. Two more training sessions were conducted during which discussion of the pilot ratings took place in order to understand inter-rater disagreement and to come to consensus about these ratings. As a result of these meetings, the scales were modified to increase clarity. The raters were then instructed to code twelve pregnancy interviews on their own. The trainer again coded the same twelve interviews in order to test for inter-rater reliability between raters and trainer.

4. Reliability Figures

Pearson - r correlations were used to assess inter-rater reliability. On the basis of the twelve interviews initially coded, inter-rater reliability was excellent (see Table 1), ranging from .61 to .87 for the individual scales, with an overall reliability score of .90.

Table 1

Inter-rater Agreement For Pregnancy Coding System Scales (N = 12)

<u>Scale</u>	<u>Rater 1 with Rater 2</u>	<u>Raters with Trainer</u>
Scale I	0.82	0.93
Scale II	0.66*	0.93
Scale III	1.00	0.82
Scale IV	0.61*	0.89
Scale V	0.87	0.96
All Scales	0.90	0.94

*p < 0.05; all other correlations p < 0.001

Inter-rater reliability between the two raters and the trainer ranged from .82 to .96, with an overall reliability score of .94. These reliability figures indicated that reliability between the two raters was slightly weak for scales II and IV. It appeared that Rater # 1 was overrating on these scales while rater # 2 was most consistent with the trainer. Upon review of Scales II and IV, revisions were made to increase both intrascale continuity and clarity for rating purposes. Scale IV was changed from a 5 point to a 3 point scale. The two raters were retrained through the process described above in the use of the two revised scales. New reliability figures were obtained (See Table 2) which revealed improved

reliability between raters on scales II and IV (above .7).

Table 2

Revised Inter-rater Agreement For Pregnancy Coding System Scales (N = 12)

<u>Scale</u>	<u>Rater 1 with Rater 2</u>	<u>Raters with Trainer</u>
Scale I	0.82	0.93
Scale II	0.89	0.93
Scale III	1.00	0.82
Scale IV	0.81	0.89
Scale V	0.87	0.96
All Scales	0.92	0.94

*p < 0.05; all other correlations p < 0.002

CHAPTER THREE

Results

Characteristics of the Three Attachment Groups

The 18 subjects in this study were classified into one of three attachment groups based upon coding of the Adult Attachment Interview. The results of the classification yielded six subjects each in the Dismissing of Attachment (D) group, five subjects in the Preoccupied (E) group, and seven subjects in the Secure-Autonomous (F) group. All subjects were Caucasian and the sample was homogeneous in education and socioeconomic level. The mean (\pm S.E.M.) age of all subjects was 29.9 ± 0.7 years with a range of 24 to 35 years. There was no age difference between the three groups ($p > 0.10$). The mean age of the D group was 29.5 ± 1.2 , while the E group was 29.2 ± 1.8 years, and the F group was 30.7 ± 1.2 years old. Although all of the subjects were expecting their first child, 28% had had one prior miscarriage. The rates of one prior miscarriage by attachment group were 33% for the D group, 0% for the E group, and 43% for the F group. Based upon these percentages, it would appear that there was a difference between the three groups such that subjects rated as Preoccupied tended to be those women who had not experienced a miscarriage. However, a Chi-Square analysis revealed no such difference between the three groups, Chi-Square = 2.81; $p=0.25$.

Pregnancy Interview Scales

The scores on the five pregnancy scales were summed to create a total Pregnancy Scale score. In order to obtain this total, the scores for Scales I and II which had midpoint scores to represent the highest level of functioning were adjusted. Scores of 4 and 5 were changed to 2 and 1, respectively. The correlations (Pearson's r) between the five subscales

and with total pregnancy score are presented in Table 3 (*Note that titles for the five Pregnancy Scales have been abbreviated for Table 3 below: refer to this page for use with subsequent tables; for brief scale summaries, refer to page 50 and for full scales refer to Appendix C).

Table 3

Correlations of Five Pregnancy Scales with Total Pregnancy Scale Scores

(Sep-Dep Issues) (Affect) (Ins. Well-being) (Rel. to Moth) (Rel. to Baby)

	<u>Scale I</u>	<u>Scale II</u>	<u>Scale III</u>	<u>Scale IV</u>	<u>Scale V</u>
Scale II	0.55				
	p< 0.05				
Scale III	0.45	0.59			
	p< 0.10	p< 0.01			
Scale IV	0.57	0.71	0.41		
	p< 0.01	p< 0.005	p< 0.10		
Scale V	0.49	0.70	0.44	0.48	
	p< 0.05	p< 0.005	p< 0.10	p< 0.05	
Total	0.71	0.58	0.54	0.78	0.66
	p< 0.001	p< 0.01	p< 0.05	p< 0.0001	p< 0.005

Cronbach's alpha = 0.03

Most of the scales were correlated significantly with each other. In other words, if a subject received a high rating on one scale then they were more likely to receive a high rating on the other scales. All of the scales were correlated significantly with the total

score. The correlations of the individual scales with the total score ranged from 0.54 for Scale III to 0.78 for Scale IV. Correlations between the individual scales ranged from 0.44 to 0.78. Internal consistency of the five subscales with the total score was tested using Cronbach's alpha (Cronbach and Furby, 1970), where alpha greater than 0.9 is associated with excellent internal consistency. The alpha value was 0.86 which showed evidence of good internal consistency among the individual scales.

Scoring Distribution of Pregnancy Scales

Table 4 (pg. 64) presents the distribution of scoring for each of the five pregnancy subscales, for each attachment classification group and for all subjects together. Note that the scores for Scales I and II are presented unadjusted (range = 1-5).

The distribution of scores highlights the finding that women classified as Secure-Autonomous tended to receive the highest scores on Scales I and V, with a trend toward higher scoring on Scale III, while subjects rated as insecure (Dismissing or Preoccupied) tended to score similarly to one another, and generally lower than the secure group on these scales (refer to Appendix C and/or pg. 50 in Method section for scales).

Since Scale II (Affect Tone) was a scale with a midpoint, the scores above and below the midpoint were combined for statistical purposes, changing this scale from a 5 point to a 3 point scale. In this form, subjects above and below the midpoint could not be distinguished statistically. However, looking at the frequency distribution, differences between the Dismissing (D) and Preoccupied (E) groups become apparent. The actual scores reflect a tendency toward greater negativity by the D group and a tendency to be overly positive with a constriction of negative affect by the E group.

The distribution of scores for Scale IV reflects the least difference among groups with the majority of subjects scoring in the middle range for each group.

Table 4

Scoring Distribution of Pregnancy Scales by Attachment Classification

<u>Scale</u>	<u>Score</u>	<u>Dismissing</u> n=6	<u>Preoccupied</u> n=5	<u>Secure-Autonomous</u> n=7	<u>Total</u> n=18(% scores)
Scale I	1	2	1	0	3(17%)
	2	2	3	3	8(44%)
	3	2	0	4	6(33%)
	4	0	1	0	1(6%)
	5	0	0	0	0(0%)
Scale II	1	0	0	0	0(0%)
	2	0	2	3	5(28%)
	3	1	1	3	5(28%)
	4	2	1	1	4(22%)
	5	3	1	0	4(22%)
Scale III	1	0	0	0	0(0%)
	2	4	1	1	6(33%)
	3	2	4	6	12(66%)
Scale IV	1	1	1	1	3(17%)
	2	4	3	3	10(56%)
	3	1	1	3	5(28%)
Scale V	1	1	0	0	1(6%)
	2	1	0	1	2(11%)
	3	1	4	0	5(28%)
	4	3	1	3	7(39%)
	5	0	0	3	3(16%)

Correlation of Attachment Classification with Pregnancy Scales

The overall multivariate analysis of variance (MANOVA) was not significant, $F(2,14)=1.35$; $p > 0.10$. This result reflects no difference overall between the three attachment groups in how they scored on the pregnancy scales. In view of the small sample size and the pilot nature of this study, the decision was made to analyze the five pregnancy scales separately using univariate statistics. Individual ANOVAs were performed as presented in Table 5 (below).

Table 5

Analysis of Pregnancy Scale Scores by Attachment Classification

	<u>Dismissing</u>	<u>Preoccupied</u>	<u>Secure-Autonomous</u>	<u>F Values</u>	<u>p values</u>
Scale I	2.0 ± 0.4	2.2 ± 0.5	2.6 ± 0.2	2.29	p < 0.14
Scale II	1.7 ± 0.3	3.6 ± 0.5	2.7 ± 0.3	2.02	p < 0.17
Scale III	2.3 ± 0.2	2.4 ± 0.4	2.9 ± 0.1	1.47	p < 0.26
Scale IV	2.0 ± 0.3	2.0 ± 0.3	2.3 ± 0.3	0.35	p < 0.71
Scale V	3.0 ± 0.5	3.2 ± 0.2	4.1 ± 0.4	2.32	p < 0.13

Based upon these analyses there were no significant overall differences by attachment group on any of the pregnancy scales. In view of these findings, and in light of the convention by a number of infant attachment researchers to consider the two insecure attachment classifications as a single category (Lamb, Thompson, Gardner, Chernov and Estes, 1984), a Contrast Test was performed (Winer, 1962) as part of the ANOVA's in order to assess whether the Secure-Autonomous group differed significantly from the Dismissing and Preoccupied groups combined. This test demonstrated that the Secure-Autonomous

group differed from the other two insecure attachment groups. In order to specify these differences, further analyses using contrasts of the secure group vs. the two insecure groups combined (Winer, 1962) were performed, showing that the Secure-Autonomous group did have significantly higher scores than the Dismissing and Preoccupied groups combined on Scale I, $F(1,15)=4.43$, $p < 0.05$, and Scale V, $F(1,15)=4.44$, $p < 0.05$. A trend was shown for Scale II, $F(1,15)=3.32$, $p < 0.09$, and a very mild trend for Scale III, $F(1,15)= 2.85$, $p < 0.11$. These findings are presented in Table 6 (below).

Table 6

Contrasts of Secure Versus Insecure Subjects (Dismissing and Preoccupied) Combined
for Five Pregnancy Scales

	<u>Secure-Autonomous</u>	<u>Insecure Groups Combined</u>	<u>F Values</u>	<u>p Values</u>
Scale I	2.6 ± 0.2	1.9 ± 0.2	4.43**	p < 0.05
Scale II	2.4 ± 0.2	1.8 ± 0.2	3.32 t	p < 0.09
Scale III	2.9 ± 0.1	2.4 ± 0.2	2.85 t	p < 0.11
Scale IV	2.3 ± 0.3	2.0 ± 0.2	0.70	p < 0.42
Scale V	4.1 ± 0.4	3.1 ± 0.6	4.44**	p < 0.05

** significant

t - trend

The Secure-Autonomous group, as hypothesized, demonstrated a greater recognition of the baby as a highly dependent yet separate individual with its own needs and feelings and were able to foresee and elaborate about the likelihood of conflict (Scale I); were able to articulate a greater sense of attachment to their unborn babies with elaboration about this

developing relationship, and demonstrates a greater number of direct expressions and complementary manifestations of maternal-fetal attachment (Scale V); and demonstrated a trend toward a more balanced awareness, acceptance and integration of positive and negative feelings about the pregnancy (Scale II).

Contrary to what was hypothesized, the Secure-Autonomous group did not have significantly higher scores than the Dismissing and Preoccupied groups on Scale IV, rating the extent to which the woman recognizes the importance of her relationship to her own mother in becoming a mother, and the extent to which she has come to a benign understanding and acceptance of this relationship.

Effects of a Rating Problem on Results

When the individual pregnancy scale ratings were examined, one subject stood out for the degree to which her pregnancy scale scores did not appear in accordance with the other subjects rated as Secure-Autonomous. Interestingly, this subject is someone about whom there had been considerable disagreement concerning her attachment classification. Due to disagreement between the two primary raters, the transcript of this subject had been given to a senior consultant for a final rating. The primary point of decision was whether to rate this subject as Preoccupied or Secure-Autonomous with a #4 (F4) subclassification. Of note is that the F4 rating is the only subclassification of the secure category which has many characteristics of the Preoccupied category.

Since a final rating had to be made, the senior consultant decided on the F4 rating. However, she made this decision with great uncertainty and agreed with the other two raters that the poor quality of this particular interview played a strong role in the scoring difficulty. In view of the question which remained about this subject's (to be referred to as Subject Q) attachment classification, the decision was made to run the analyses again, first

with Subject Q excluded and then with Subject Q classified as Preoccupied.

Correlation of Attachment Classification with Pregnancy Scales- Subject Q excluded and Subject Q as Preoccupied

The results of the overall MANOVAs for the two additional analyses again yielded no significant difference overall between the three attachment groups in how they scored on the pregnancy scales; $F(2,14)=1.40$; $p > 0.10$ (Subject Q excluded) and $F(2,14)=1.40$; $p > 0.10$ (Subject Q as Preoccupied). However, when individual ANOVAs were performed excluding Subject Q, there was a trend toward significant differences by attachment group for Scale I, $F(2,14)=2.6$ $p < 0.10$; and with Subject Q classified as Preoccupied, there were significant differences found between the three attachment groups for Scale I, $F(2,15)=4.79$, $p < 0.05$ and Scale III, $F(2,15)=3.71$, $p < 0.05$; with a trend toward significance for Scale V, $F(2,15)=2.79$, $p < 0.10$. In all cases, the Secure-Autonomous group had the highest scores of the three groups on these scales. These results suggest that the lack of overall significant differences found between the three attachment groups may be attributed to the small sample size.

Since the analyses with Subject Q as Preoccupied yielded the strongest results, contrasts were performed to see if differences could be shown between the two insecure groups. However, these contrasts did not yield a significant finding. When contrasts of the secure group vs. the two insecure groups together (Winer, 1962) were again performed, the primary finding was the same for all three analyses. This is to say that in this small sample, differences are most clearly distinguishable between the secure and the combined insecure groups, rather than between the three attachment groups.

For all three analyses, the finding that the secure group had higher scores than the combined insecure groups for Scales I and V was the same. This suggests that these two

scales appear to be the most sensitive to attachment related differences in the experience of pregnancy. At the same time, the secure group demonstrated a trend toward significantly higher scores on Scale II and significantly higher scores on Scale III in alternating analyses. This suggests that these scales may also be sensitive to differences in attachment classification (particularly secure vs. insecure), which can be seen in a larger sample. For all three analyses, contrary to what was hypothesized, the Secure-Autonomous group did not have significantly higher scores on Scale IV.

Marital Adjustment

Attachment Classification: The Dyadic Adjustment Scale (Spanier, 1974) was administered to 17 of the 18 subjects to assess whether marital adjustment differed as a function of attachment classification. Total scores as well as the scores on the four subscales of dyadic satisfaction, dyadic consensus, dyadic cohesion, and affectional expression, are presented by attachment group in Table 7 (below).

Table 7

Correlation of Marital Adjustment with Attachment Classification

<u>SubScale</u>	<u>Dismissing</u>	<u>Preoccupied</u>	<u>Secure-Autonomous</u>
Consensus	46.4 ± 4.9	45.0 ± 5.4	49.4 ± 2.0
Satisfaction	42.8 ± 2.3	40.0 ± 3.8	42.9 ± 0.9
Cohesion	16.4 ± 2.0	14.2 ± 2.5	18.0 ± 0.9
Affection	9.4 ± 0.2	9.2 ± 1.6	9.1 ± 0.7
Total	115.0 ± 9.0	108.4 ± 13.0	119.4 ± 3.8

The groups did not differ in marital adjustment as measured by the total score nor on any of the four subscales (p 's > 0.10). The MANOVA of the four subscales was not significant, $F(2,14)=0.95$; $p > 0.10$. These results were the same for all three analyses.

The mean (\pm S.E.M.) score for the whole sample on the dyadic consensus subscale (level of agreement on matters of importance to dyadic functioning, Spanier, 1974) was 47.24 ± 2.17 . This is more than one standard deviation below the mean score (57.9 ± 8.6 , SD) for married women in Spanier's study (1974). Although the secure group was nearly within one standard deviation of the standard mean (49.4 ± 2.0 , S.E.M.), the results indicate that the entire sample of pregnant women tended to report less agreement with their husbands on matters of importance to dyadic functioning than the general population with a similar educational and socioeconomic background. This finding suggests that something about the experience of pregnancy results in decreased feelings of marital consensus. The mean scores based on all subjects, based on the three attachment groups for the other three subscales and the total, were all within one standard deviation of the standard means reported by Spanier (1974).

Pregnancy Scales: The scores on the five pregnancy subscales and the total adjusted pregnancy scale scores did not correlate significantly with the scores on any of the four marital subscales or with the total marital adjustment scores (p 's > 0.10) for any of the data analyses. The correlations of the total adjusted pregnancy scale scores with the total marital adjustment scores was -0.09 . The correlations of the total adjusted pregnancy scale scores with the four marital subscales ranged from -0.14 to 0 , while the correlations of the five pregnancy subscales with the total marital adjustment scores ranged from -0.14 to 0 .

Family and Social Support

The subjects were given the Crockenberg Social Support Interview (Crockenberg,

1981) to assess the level of perceived family and overall social support during their pregnancies.

Attachment Classification: The level of social contacts according to attachment groups are presented in table 8 (below). Overall, the subjects reported an average of $7.94 \pm$

Table 8

Social Contacts by Attachment Classification

	<u>Dismissing</u>	<u>Preoccupied</u>	<u>Secure-Autonomous</u>
No. People Named	7.3 ± 1.3	7.4 ± 1.2	8.9 ± 1.4
No. Frequent Contacts	4.2 ± 0.7	3.8 ± 1.4	5.9 ± 1.2
No. Family Contacts	2.0 ± 0.3	2.2 ± 0.9	3.3 ± 0.6

0.73 people who support them in their pregnancy, with no differences found between the three attachment groups ($p > 0.10$). The mean number of people with whom the subjects had frequent contact was 4.72 ± 0.65 overall. Again, there was no difference in these reports based upon attachment group ($p > 0.10$) for all three analyses. Finally, the mean number of contacts with family members reported by the total sample was 2.56 ± 0.36 . The omnibus F test which was used to compare the means between the three attachment groups in order to assess for differences, was not significant ($p > 0.10$).

Pregnancy Scales: There were no significant correlations between the pregnancy scales and the measures of social support for all three analyses. Pearson r's ranged from -0.02 to 0.29 . The r values for Number of Social Contacts Named and Number of Frequent Social Contacts ranged from $.29$ to -0.02 . The r values for Number of Social Contacts Named, Number of Frequent Social Contacts, and Number of Frequent Family Contacts were 0 , -0.02 and -0.14 , respectively.

CHAPTER 4

Discussion

The overall results of this study appear to be an encouraging first step in attempting to enumerate the ways in which women differ in the negotiation of their experiences of pregnancy based upon their "state of mind with respect to attachment" (Main and Goldwyn, 1985). Despite the small sample size, the results both reflect some promising positive trends in the predicted directions, and raise provocative issues and questions which need to be addressed toward the improvement of future research in this area.

The General Findings

Pregnancy Scales: The Pregnancy Scales were developed for coding the Pregnancy Interview in order to measure the ways in which women deal with the varied emotional demands of pregnancy, and traverse the psychological tasks discussed in the literature. Two issues of validity were addressed through the piloting of the Pregnancy Scales in this study, and preliminary support for their validity was found. While a high level of internal consistency was found among the five Pregnancy Scales, the significance of this finding cannot be assessed in this small sample. Through the study of a larger sample, it can be determined whether the scales measure distinct aspects of a similar process or whether a high level of internal consistency reflects overlapping or redundant dimensions. In addition, scale revision suggested by the current findings may further distinguish the individual scales and aid in clarifying validity issues concerning internal consistency in future studies.

The second question addressed through the piloting of the Pregnancy Scales was whether these scales measure something different from constructs already identified in the literature, such as pregnancy adaptation; marital adjustment and/or social adjustment.

Neither the adult attachment classifications nor the Pregnancy Scales correlated with either of the control measures of marital adjustment (and its subscales) or level of social support during pregnancy. In other words, a greater level of marital adjustment or social support perceived by the subject did not correlate with a secure attachment classification or higher scores on the Pregnancy scales, nor did a lower level of perceived marital adjustment or social support correlate with an insecure attachment classification or lower scores on the Pregnancy Scales.

These findings suggest that the pregnancy scales in fact measure processes totally distinct and separate from the constructs of marital adjustment and social support. Furthermore, marital satisfaction and social support have been linked with level of stress during pregnancy and with pregnancy adaptation (Barnard, 1981; Nuckolls, Cassel and Kaplan, 1972; Zachariah, 1984). Hence, the present results would also suggest that the pregnancy subscales tap the more internal processes (the psychological and attachment related tasks) associated with pregnancy, rather than external processes (e.g. adjustment to the state of pregnancy and negotiations with the environment) such as adaptation. In order to substantiate such a finding, these measures will need to be analyzed using a larger sample.

Pregnancy Scales and Adult Attachment: There were no statistically significant differences between the three attachment groups in how they scored on the Pregnancy Scales when they were examined as a whole. In light of the small sample size, this finding cannot be considered as evidence of a lack of difference in the way the three groups negotiate the psychological tasks of pregnancy. In fact, the trends toward group differences found for a number of individual Pregnancy Scales suggest that differences based upon attachment classification do exist. Such differences may best be demonstrated by using only the most significant scales found in the present study with a larger sample.

Since one of the purposes of the present study was to test the validity of the Pregnancy Scales, the following discussion will consider the issue of revisions in light of future attempts to improve the validity of the scales for use in continued research.

Specific Findings

Pregnancy Scales and Adult Attachment – Scales I and V

The results demonstrate differences between those women classified as secure and those classified as insecure (Dismissing or Preoccupied), in the areas of pregnancy measured by Scales I and V. The adult attachment classifications are designed to look at differences in the way individuals think about and deal with intimate relationships and related issues. Scale I deals with issues of dependency and separateness as they pertain to the anticipation of being a parent actually in a relationship with the infant, while Scale V deals directly with the experience of attachment to the baby in utero. Hence, it is most interesting that Scales I and V prove to be the most sensitive to differences in security of attachment since they are the only two scales that relate directly to feelings about the establishment of a new intimate relationship. This finding suggests that these scales most directly tap salient attachment thoughts and feelings during pregnancy.

Scale I – Secure Group: On Scale I, the secure women clearly emerge as demonstrating the greatest capacity to recognize that their babies would be individuals with their own needs and feelings, while at the same time acknowledging and accepting their enormous dependency. These women do not appear to be threatened by either their babies' dependency or separateness, and express a desire to fully engage both aspects of their babies personalities. While they show a willingness to make self sacrifices as a parent, they also talk about the importance of continuing to meet their own needs. This appears to

demonstrate a strong valuation of both self and baby by secure women. Further, these women emerge as most able to discuss both the joys and difficulties inherent in being a parent. With this in mind, they are most able to recognize, anticipate and accept the potential for conflict between themselves and their babies. Secure women also tend to anticipate their roles as attachment figures with greater pleasure than insecure women. The following example illustrates the way in which one secure woman expresses the mixture of feelings she experiences concerning the realization of the separateness of her baby. She was asked how she felt when the baby first began to move, followed by a question about the things she would likely do as a mother that she wished she would not:

It was interesting. I had mixed feelings about it. It felt really exciting and it was also--I didn't like it. There was something and I realized that what I didn't like is that in the kicking and me identifying it as the baby, there was this separateness and I realized that if it was kicking me it was something separate from me and I had this feeling that it wasn't--that it wasn't me. I wasn't one with this entity and that the initial feeling without even realizing it was that I wasn't one with this being, you know. And so I felt sort of bad about it, and then I realized that I had always thought in terms of you need to let go of your kids and let them develop as their own people, and I think what I had to realize was that that begins very, very early, like before they are born.

I'm sure I'll lose my temper and I will be regretful. I'm sure there will be times when I'll be inconsistent and I won't want to be, or not pay enough attention...worrying whether I'll have enough time for my child, particularly if I have to work and be able to give it the comfort and attention that I want it to have.... I really feel strongly about wanting to deal with conflict with my kid in a way where I can talk it out with them and not just you know, meet out punishment without understanding. I guess that part of it means something different in the whole way you communicate with the child, treat them more as a thinking person at a younger age than I was probably treated.

Such examples from the secure group suggest that individuals whose state of mind with respect to attachment is Secure-Autonomous, appear more differentiated from their own primary attachment relationships. Having achieved a higher degree of separation seems to permit these women to see their babies as separate and anticipate conflict because they are

less threatened by the idea of differences between themselves and their babies.

The theorists cited in the literature unanimously concur that a more final degree of separation from the maternal figure is a central task of pregnancy (Benedek, 1970; Bibring, 1959; Deutsch, 1945; Ballou, 1978; Breen, 1975). Ballou (1978) specifically writes that those women who are able to rework infantile conflicts around dependency with primary attachment figures are better prepared to separately engage in a new intimate relationship with a child. Breen (1975) found that a more mature level of object relations is associated with the pregnant woman's capacity to healthfully adjust to and accept the realities of motherhood. The results of the present study would suggest that women whose state of mind with respect to attachment is secure are better able to use the pregnancy experience towards these developmental achievements.

Scale I - Insecure Groups: The women in the two insecure groups do not emerge as clearly distinct from one another. The qualitative results in the actual transcripts reveal characteristics which are prototypically Dismissing and Preoccupied, but the overall results reflect greater similarity between the two groups as opposed to differences on these two scales.

On Scale I, both insecure groups tend to demonstrate little awareness of the baby as a separate individual with its own needs and feelings. These women tend to indicate (directly or indirectly) that the baby's dependency makes them uncomfortable and that they will have trouble giving of themselves to the extent demanded. They also tend to experience less satisfaction from their anticipated role as attachment figures than the secure group.

An interesting finding for Scale I is that two distinct types of insecure subjects appear to emerge which are not differentiated by attachment group. The women in one group were rated as revealing some awareness of and distress about their own discomfort with the baby's dependency needs and its separateness. These women do not totally deny conflict but

cannot discuss it openly and realistically with a level of acceptance. In the following example the subject is asked how she feels about her baby's growing dependence upon her:

I never really thought about it like that. You know, in some ways I almost feel dependent on the baby, or sort of affected by the baby the fact that I'm affected by its movements and all its habits. I don't really see it as dependent on me at this point...Next year I'm going to feel like I just can't get up and go to school, ... I mean maybe I'm gonna feel like I don't want to leave the baby even for four hours.. every once in awhile I get that feeling which is I guess like you say, the baby's dependence, certain yeah, but yeah there is that reality.

The above example highlights how this group of insecure women tend to have difficulty reconciling their preoccupation with their own needs and their concern for the baby.

In contrast, women in the second group were rated as tending to deny conflict completely since the possibility of differences between mother and baby are also denied. They do not appear to experience the discomfort and distress of the former group, or if their discomfort surfaces it is immediately denied or taken back. Further, these women seem to anticipate using the baby as an object with the purpose of meeting their own needs for mirroring and self gratification, resulting in their inability to value the baby for itself. This is reflected in the following examples of two different insecure subjects in this group. The first woman was asked about her reason for wanting to have children, while the second subject was asked to imagine her most pleasurable moments with her baby:

- *1 Oh, to have the ability to experiment and watch another person grow and shape them and form them, all kinds of ideas I'd like to put into action.... When you have someone needing you very much, it's you have someone wanting you that much, the experience of being wanted is very pleasant. I mean that's what you have in a marriage basically. It's even a stronger level, a more primitive level, maybe....
- *2 Um, holding the baby, showing the baby off, taking him or her for walks outside. I plan to spend a lot of time outside, having my baby recognize me and coo for me.

The next example illustrates the types of contradictions which emerge in this second group of insecure women as difficult feelings associated with dependency are denied. This

subject was first asked how comfortable she felt about taking care of the baby, and then how she felt about her baby's growing dependence upon her:

I have to train myself, so I'm going to have no problems.

I'm going to be resentful to have someone so dependent upon me that I don't have any time to myself...but I think it's more rewarding. I've heard it depends on how you train the baby from the start in terms of degree of dependence on you, so I feel like I'm going to have some control in that. I think it will be rewarding then.

The differences in insecure subjects seen on Scale I which cannot be attributed to their specific attachment group suggest that Scale I is tapping something other than "state of mind with respect to attachment". One possibility is that it captures different personality traits which are not distinguishable based upon attachment classification. Another possibility is that it taps a similar personality trait in both insecure groups which occurs along a continuum with greater or lesser severity. In either case, this finding suggests that even if attachment classification is an aspect of personality organization (Kobak and Shaver, 1987), a limitation of classification of attachment in general, is its inability to account for personality features which may be common to both insecure groups.

Scale V – Secure Group: On Scale V, secure women clearly emerge as able to express the most differentiated feelings toward their babies. They communicate more with their babies (verbally and non-verbally), express more curiosity about, give more attributions to and relate more fantasies about their babies than the two insecure groups. Their fantasies of pleasurable moments with their babies tend to reflect a focus on mutual interaction versus the one-sided concerns more often expressed by the insecure groups.

The following example illustrates the more differentiated relationships found only in the secure subjects. This subject was first asked how it felt to have a baby growing inside

her at the time of the interview (approximately 8 months pregnant). Then she was asked if she felt as if she had a relationship with her baby yet and how she would describe it, followed by what things she imagined about her baby:

It feels good. It's hard to describe. I like it and it feels sort of amazing sometimes, you know I really think of it as a baby, as a person....sometimes I have these feelings of incredible curiosity and I wonder who this person is, so I have a lot of curiosity and lot of loving feelings.....

Yeah, I would say I do [have a relationship]. I would describe it from my point of view as I said, I have a lot of curiosity and I have a sense of this child becoming more and more aware of me, and it's fairly new. For example I have the sense that the child can hear me when I talk, so I talk to the baby and feel connected to the baby and I feel kept company a lot you know, and I also feel when there are long periods when the baby's not moving, I miss them. So there's a tangible feeling.

Well, I sometimes imagine what he's doing when he's moving around and I try to imagine where he is in my womb and that's getting easier and easier to figure out. You know, is his head up here or over here?, and I think what I'm mostly imagining and wondering is what he would be like, he'll look like and so on and so forth.

The finding that secure pregnant women tend to form and express deep emotional attachments to their babies is consistent with Slade and Aber's (1985) qualitative findings concerning the way secure mothers express their feelings about their relationships to their toddlers. It also appears to be consistent with Leifer's (1980) finding that pregnant women with a higher degree of emotional maturity tend to form the deepest attachments to their babies.

Scale V - Insecure Groups: Overall, it can be said that subjects rated as insecure when compared to subjects rated as secure emerge as: less able to articulate or elaborate their feelings and fantasies regarding a relationship to their babies, able to give fewer and less specific examples of communication with their babies, and unable to give examples of imagined interaction with their babies that are mutually oriented.

The most interesting and surprising finding however, is the wide variation among insecure subjects ranging from evidence of a strong maternal-fetal relationship to little or

no experience of a relationship with baby. The within group variation is most striking in the Dismissing group. On this scale, many of the Dismissing subjects do not score as would be expected given their detached and/or devaluing stance with respect to attachment (Main and Goldwyn, 1985b). In fact, half of the Dismissing subjects directly acknowledge feeling as if they have a relationship with their babies at the next to highest rating. The finding that a surprisingly high number of Dismissing subjects do not appear Dismissing on this scale seems to account for the difficulty in statistically distinguishing the two insecure groups.

The following examples illustrate the extreme variation in Dismissing subjects. Both subjects are asked the same set of questions mentioned earlier.

- *1 It made me feel more feminine. It [the movement of the baby] made me feel more whole as a person. I was very happy about it. Yes [has a relationship]. I talk to my baby. Sometimes when I'm lying on the couch watching T.V. or just reading, I feel the movements and kicks... I talk to my baby and pat it you know and I even imagine holding the baby, you know what it will look like. I can feel its head sometimes and I try holding its head, and when it moves around a lot I just try holding it to let it know his or her mommy's there.
- *2 It feels strange that there's actually something in there. I mean you know it moves around and there's something in there. It's incredible actually that we carry a baby inside of us and it breathes and I mean it's weird." No. [Does not have a relationship] No. No I don't think about the future [in reference to imagining about the baby] I just wait. I mean that's how it's always been. I just wait for it to happen and see what happens. You know once the baby's born then we'll see what happens but I don't have, you know, the hope that it's going to be this or she's going to be this, you know no.

The first subject scored the next to highest rating indicating a high degree of attachment to her baby accompanied by an unusual expression of positive affect for the Dismissing group. The second subject scored the lowest rating wherein she indicated no feeling of connectedness to her baby or desire to establish a relationship. The defensive self protection against hurt and disappointment in relationships which is evident in the latter

example is one of the hallmarks of Dismissing individuals (Main and Goldwyn, 1985b). Yet this level of detachment specifically in relation to the baby, is not seen in the former example nor in any of the other Dismissing subjects.

An interesting qualitative finding for Scale Y is that some insecure women specifically seem to have difficulty acknowledging the experience of a relationship to their babies. However, it is usually evident that there is a connection that these women are yet unaware of, and/or they express a desire to establish a relationship. It is noteworthy that when the transcripts are examined closely, this pattern of difficulty specifically around attachment to the baby occurs only in Preoccupied subjects, making them appear more homogeneous on Scale Y than is reflected by the ratings. The transcripts of these subjects reveal that they tend to indicate particular discomfort with the idea of their babies' independence from them. This type of reaction is consistent with a fear noted by Main and Goldwyn (1985b) to be most characteristic of Preoccupied subjects, that of functioning as autonomous adults separate from their parents. It could thus be cautiously speculated that the difficulty Preoccupied women experience in acknowledging a relationship to their babies relates to fears of the implicit demand to function as a parent (an autonomous adult) instead of a child.

The apparent greater homogeneity among Preoccupied subjects lends support to the idea put forth above, that it is the variation in the Dismissing subjects which make the two insecure groups statistically indistinguishable on Scale Y.

Dismissing and Preoccupied Groups:

Further Comments About Indistinguishability for Scales I and Y

The lack of clarity between the two insecure groups is an interesting finding which has a number of possible explanations. One is simply that the sample size was too small to differentiate between the Dismissing and Preoccupied groups which tend to have a number of

fundamental similarities. Another, is that the scales as they are currently designed, cannot discern the more subtle differences between the two groups, and that scale revision is necessary in order to make such distinctions (See scale revision below).

The most provocative explanation however, would be that despite the two different types of insecure internal organizations of attachment defined by Main and Goldwyn (1988), and their different modes of functioning in the interpersonal world, they tend to respond to aspects of the pregnancy experience in a similar fashion. In other words, there may be something about the experience of pregnancy which blurs their characteristic "strategies for maintaining felt security" (Kobak and Shaver, 1987). This may be explained by the loosening of defenses which is believed to be caused by the experience of pregnancy (Ballou, 1978; Benedek, 1970; Bibring, 1959; Deutsch, 1945) in order to make room for the establishment of a relationship to the baby, and to allow for internal reorganization concerning the new role as parent. If, as a result, some women become more aware of or involved in their attachment related thoughts and feelings, then they might appear less characteristically Dismissing or Preoccupied in certain areas.

In light of the findings concerning the variation among women in the Dismissing group and the greater similarity among women in the Preoccupied group on Scale V, it would appear that those women classified as Dismissing are most affected by the loosening of defenses. According to Main and Goldwyn (1985b), the defenses of these individuals are organized around preventing the surfacing of strong feelings of attachment. Hence, pregnancy seems to permit these women to have greater access to attachment thoughts and feelings. In other words, the combination of the loosening of defenses and the presence of the baby itself may make some women who are generally detached from and/or devaluing of attachment relationships, become less so in response to attachment feelings evoked by pregnancy. This would explain both the awareness of feelings of attachment to the baby and

the experience of a developing relationship that is seen in many of the Dismissing subjects.

Revision of Scales I and Y

Scale I: These results demonstrate the strength of Scale I in making some important distinctions among pregnant women in how they deal with issues of dependency and separation during pregnancy. Furthermore, these issues appear to be related to differences between secure and insecure attachment classification. In view of the fact that only one subject received a score above the midpoint (mother indicates that she will more often or always deny her own needs to meet her baby's needs), a study of a larger sample would be necessary in order to assess whether these are valid and/or useful distinctions to make among pregnant women.

The results from this sample suggest that most women during pregnancy are concerned about anticipated loss of autonomy and the inevitable sacrificing of some of their own needs, making it difficult to use the ratings above the midpoint. Examination of excessive denial of one's own needs may in fact be more applicable to how women negotiate actual parenthood. Hence, Scale I might be made most effective by eliminating the upper two ratings and changing it to either a 5 point or 3 point (high to low) scale.

Scale Y: Scale Y overall appears to tap some significant qualitative distinctions between those subjects classified as secure and those classified as insecure in their capacity to form and express deep emotional attachments to their babies. This is again consistent with Slade and Aber's (1985) qualitative findings concerning the way secure mothers describe their relationships to their toddlers. Attachment patterns which may be unique to the Preoccupied group were suggested by the qualitative results and merit further investigation using a larger sample. However, the uncharacteristic and highly variable ratings of Dismissing subjects regarding feelings of attachment to their babies, suggests that there is much more

to be understood about how the experience of pregnancy might temporarily alter characteristic strategies for dealing with attachment thoughts and feelings.

The strength of Scale V is that it is a 5 point scale with a high degree of specificity. Despite the difficulty in distinguishing insecure subjects, the results reflect a capacity to make fine distinctions among subjects' varying expression or lack of expression of attachment to their babies. Of all the scales, Scale V would appear to require the least revision for continued research. It would however, be useful to think about ways in which the scale can be revised so that the two insecure groups might be distinguished statistically.

Pregnancy Scales and Adult attachment - Scale II

This scale is used to make an overall rating of the subjects' affect tone in relation to their experience of pregnancy, including feelings about the baby and impending parenthood. The statistical results again demonstrate a trend toward significant differences between secure and insecure subjects in the way they negotiate affect during pregnancy. Of even greater significance, is that Scale II appears to reflect specific differences between the Dismissing and Preoccupied groups which could not be picked up statistically due to the inability to distinguish subjects below and above the midpoint. Hence, the following discussion of Scale II, rather than considering the actual statistical findings, will address the important differences suggested by the specific scoring of the three attachment groups and supported by the qualitative data.

Scale II - Secure Group: The secure group emerges as capable of articulating the most balanced range of positive and negative affect with the most flexibility and tolerance for mixed and/or ambivalent feelings which are noted to be a part of every pregnant woman's experience (Deutsch, 1945). This is consistent with Slade and Aber's (1985) findings that secure women express more varied and balanced affect about their toddlers and about being

parents of toddlers.

The following examples are indicative of the types of affective responses found throughout the transcripts of subjects rated as secure, illustrating the extent to which they are able to comfortably and openly discuss their broad range of feelings. The first subject is asked about her baby's growing dependence upon her, and the second subject is asked to imagine the most pleasurable times anticipated with her baby versus the most difficult times:

- #1 ... I have felt very strong, maternal feelings protective feelings and a desire to mother this infant and some trepidation that it might be overwhelming, the needs of an infant, and I've talked to people about the first couple of months and how really absolutely absorbing it is and it scares me... it's more the fatigue I worry about, I feel very comfortable about my emotional capacity to provide...
- #2 When the baby's awake and playful, like at bath time, and alert, being able to see the baby awake and more aware of what is going on will be most pleasurable.
- When the baby's in pain for some reason and I didn't understand and I can't figure it out and nothing seems to work and I can't get the baby to stop crying. To me, it's just like I don't even know this child yet but it's like it wrenches my heart to think that there's going to be something wrong and I'm not going to know what it is,.. that to me is the most difficult.

Those secure women who did not receive the highest rating on this scale tend to be mildly overly positive rather than negative. Theorists such as Winnicott (1956) have written that pregnancy is a powerful experience within which some healthy idealization is inherent and necessary in order to immerse oneself in a "primary maternal preoccupation" which insures the well-being of the pregnancy and the development of the maternal-fetal relationship. It is then possible that an overly positive attitude which constricts some of the more realistically difficult aspects of parenthood may be adaptive during pregnancy. This could represent an effort by some secure women to preserve the idealized state until the reality of the birth. On the other hand, an overly positive attitude in an insecure women

may represent an insecure "strategy for maintaining felt security" (Kobak and Shaver, 1987) and a defense in response to the threatening nature of the kinds of ambivalence evoked during pregnancy. In light of the two possibilities, greater distinctions would have to be made within each rating point in order to differentiate adaptive from maladaptive idealization.

Scale II - Insecure-Dismissing Group: The most striking finding for this scale is that women classified as Dismissing emerge as manifesting either moderate or extreme levels of negative affect and anxiety. Furthermore, no subject in the Dismissing group was rated as overly positive. Examination of the transcripts of the Dismissing group also reveals evidence of a tendency toward depression.

The characteristics commonly attributed to Dismissing subjects on the AAI is that they tend to be idealizing of relationships and that the more negative underlying feelings do not tend to surface (Main and Goldwyn, 1985b). Hence, the findings concerning a high degree of direct expression of negativity and anxiety by these subjects is inconsistent with what was hypothesized and expected for this group. Such inconsistency also supports the idea put forth that the surfacing of negative affect is directly related to the experience of pregnancy itself and to the accompanying loosening of defenses that has been described in the literature (Benedek, 1970; Bibring, 1959; Deutsch, 1945; Ballou, 1978). The fact that this is seen in the Dismissing group so prominently offers support for the idea that pregnancy related loosening of defenses has a more dramatic impact on these individuals.

It should be noted that while a high degree of negative affect has been found to be prevalent in normal pregnancy by Leifer (1980), the negative affect found in these subjects is not balanced by positive feelings and tends to be unmodulated. Examination of the transcripts further suggests that the excessive negative affect that surfaces during pregnancy in these individuals tends to be dysfunctional, in that these women are not able to

use these feelings in the service of a developmental achievement (Leifer, 1980).

The following examples from two different Dismissing subjects are illustrative of low self esteem and depressive affect which appear to occupy these subjects' thoughts to a large extent and interferes with the experience of more positive aspects of the pregnancy. The first subject is asked if the way she views herself has changed since she has been pregnant.

Well since I've been pregnant, I really haven't well um I haven't worked and sometimes I feel worthless because I'm not in an intellectual or challenging environment. I'm just home all day, and there are days when I just sit home and I'm wasting my time. Why don't I do something good like write a short story or volunteer. And I've never done that while I was pregnant or written anything and it's because I'm not that motivated enough to do it. I feel um as a person a little bit worthless at times because I'm not doing anything productive or constructive.

In response to this same question, secure subjects tend to talk about their awe inspiring changing roles in relation to their husbands, to their parents, and in society, moving from daughter, wife and worker or professional, to wife, mother and possibly working mother. These are exactly the kinds of thoughts and feelings about changes in self that Bibring (1959) notes as a hallmark of the pregnancy experience. In contrast to secure women, Dismissing women spoke of changes in self in a negative and/or self deprecating manner.

Kobak and Shaver (1987) have linked attachment classification to styles of emotion regulation. They have also said that the extent to which emotion can be regulated and integrated will determine the extent to which individuals are able to respond flexibly and constructively to developmental changes during the life cycle such as pregnancy and parenthood. While Dismissing individuals are thought to detach themselves from attachment thoughts and feelings on the surface, it is believed that they harbour a significant degree of negative affect and anxiety related to early attachment experiences (Main and Goldwyn, 1985b). Insecure children have been noted to express a high degree of dysfunctional anger and anxiety in relationships (Main and Stadtman, 1981; Sroufe, 1983; Sroufe et al.,

1984). According to Kobak and Shaver, the Dismissing attachment strategy would evolve out of the inability to regulate emotional experience, particularly negative affect and anxiety. Thus, the loosening of defenses provoked during pregnancy would tend to unleash anger and anxiety related to early attachment experiences in Dismissing individuals. These women have few resources for coping with their affect life and cannot integrate these emotions in a way which is developmentally productive. This may explain why the evidence of depression is so common in these women during pregnancy.

Scale II - Insecure-Preoccupied Group: The Preoccupied group emerges overall as tending to express an overly or unrealistically positive affect with strong evidence of denial and/or constriction of negative affect. The transcripts of these subjects also tend to have a somewhat superficial quality. At the same time there tends to be a quality of underlying discomfort and anxiety which seems to pervade their interviews but is somewhat intangible.

In the following example, the subject is asked what she expects her relationship with her husband to be like after the baby is born and then what she imagines about her baby:

Oh god, I don't know (laughs). Um I think it will be even better. I really don't think it will have any negative effects cuz I know we really enjoy spending our time together... You know in spite of all our problems, whenever we did anything, we always had a good time being with each other. And I know that the three of us will have a lot of fun together.

Oh I just imagine that it will be a healthy and happy smiling and good natured baby. Those are the things that I want.

The example above illustrates both the overly positive stance and the superficiality that is seen in many Preoccupied women in the sample. These findings suggest that women classified as Preoccupied are threatened by negative affect and tend to ward off such feelings. This is consistent with characteristics of this group noted by Main and Goldwyn (1985b). They describe these individuals as holding in difficult feelings and oscillating to a more

positive stance when something negative with respect to attachment relationships emerges.

Scale II – General Conclusion and Revision

The view has been put forth by a number of attachment theorists that memory of affect is central to attachment related experiences and to what gets transmitted in the parent-child relationship (Bretherton, 1985a; Kobak and Shever, 1987; Main and Goldwyn, 1988b; Ricks, 1985; Slade and Aber, 1985). It is also believed to be central to the negotiation of developmental milestones such as adolescence, pregnancy and parenthood which arise during the life cycle (Bretherton, 1985a; Kobak and Shever, 1987). The results for Scale II suggest that the two insecure groups (Dismissing and Preoccupied) can be most differentiated according to their affective experience. This finding is consistent with notions concerning the centrality of affect in terms of examining an individual's core experience.

In adjusting to the midpoint, statistical analyses were not able to capture the group differences which relate to extremes in the experience of positive versus negative affect. In view of the differences found to exist, it seems to make the most sense to rate positive and negative affect on entirely separate scales so that data analysis can capture these important distinctions.

The results further suggest that there are areas of affective experience which are important to pregnancy but are not easily separated out because affect is such a complex concept to measure. Specifically, the dimensions that were raised in relation to affect which were not included in Scale II are superficiality, idealization and depression. While anxiety was included, the scale is designed so that ratings for a high level of anxiety are paired with negative affect. Hence, the anxiety present in subjects rated as overly positive was not captured in the scoring. Revision is needed in order to be able to score for anxiety independent of affect tone on this scale. In addition, since a scale including all of the

dimensions raised in the results would be too cumbersome, a decision would have to be made concerning which dimensions to focus on. Alternatively, a separate scale might be developed to address these other important dimensions.

Pregnancy Scales and Adult Attachment – Scale IV

Secure and Insecure groups

One of the most surprising trends found in the present study was that all three attachment groups appeared more similar than different in their ratings for scale IV (the extent to which a woman recognized the importance of her relationship to her own mother in becoming a mother, and was able to come to a benign understanding and acceptance of this relationship). While the two insecure groups have generally appeared more similar to one another than different throughout the study, it is puzzling that the secure group should tend to look more insecure on this one scale.

The majority of subjects scored in the middle range, wherein they demonstrated some awareness of the issues relevant to their relationships with their mothers, but remained unable to integrate their range of positive and negative feelings as well as to make meaningful connections about their mothers' effect on their ability to parent. Many subjects indicate (directly or indirectly) a high degree of ambivalence and continued struggle with regards to the mother-daughter relationship. Others are just vague and less able to clearly identify or elaborate upon significant issues and feelings related to their mothers.

The theorists cited in the literature (Ballou, 1978; Benedek, 1970; Bibring, 1959; Breen, 1975; Deutsch, 1945; Pines, 1979) unanimously agree that the most important psychological task a woman faces during pregnancy is to be able to come to terms with her relationship with her own mother. Ideally this results in the pregnant woman's benign identification with her mother which then frees her (through a higher degree of

psychological separation) to parent her own child. These theorists further agree that pregnancy is a powerful catalyst which dramatically brings many mother-daughter conflicts to the surface.

Bibring (1959) concurred that a heightened process of struggle over the mother-daughter relationship tends to be set into motion by the pregnancy experience accompanied by a new and pressing need to come to some resolution. However, she specifically contends that while this process begins during pregnancy, it most often cannot be resolved by the end of pregnancy. Rather, since she defines this kind of working through of issues with one's own mother as a process, she believes strongly that it is something that continues through at least early parenthood and possibly longer. She believed that even the most psychologically healthy women can take a considerably lengthy period to reach a comfortable resolution with respect to their mothers. Most importantly, Bibring proposed that pregnancy can evoke a powerful degree of emotional upheaval and instability, such that psychologically healthy women can be seen to demonstrate uncharacteristic evidence of perturbation, confusion, and even pathology.

The finding that some secure women appear less secure and more confused only when talking about their relationships to their own mothers suggests that the feelings which emerge specifically around this most significant primary attachment relationship are capable of causing the uncharacteristic confusion noted by Bibring (1959). The results for Scale IV further support Bibring's contention that women's relationships to their own mothers are so highly emotionally charged that many of the complicated issues evoked by pregnancy cannot be satisfactorily dealt with during this period, even by those women classified as secure. Further research needs to determine whether this trend observed in some secure women in the present study will be significant in a larger sample.

In the two insecure groups, subjects demonstrate a greater struggle with mother-

daughter issues than would have been expected. This is particularly surprising for the Dismissing subjects who were expected to cut themselves off from such highly troubling issues with their mothers. These results point to the power of the experience of pregnancy in the way it causes women to examine their feelings about the quality of their own mothering, their capacity to mother, and how they will be similar and different to their mothers as parents. In fact, it is possible that women are almost unable to avoid some examination of these issues due to their persistent appearance in women's consciousness. In support of this notion, only two subjects in the sample received the lowest rating, wherein they demonstrated minimal or no ability to acknowledge feelings toward their own mothers in relation to their pregnancies and impending parenthood.

The loosening of defenses which is believed to occur during pregnancy (Ballou, 1978; Benedek, 1952; Bibring, 1959; Deutsch, 1945) can again be used to explain the extent to which conflict over women's relationships with their own mothers is allowed to surface, and may offer further explanation for the increased struggle with these issues apparent particularly in the Dismissing group.

Scale IV - Qualitative Findings

Despite the similarity of scoring noted among the secure and insecure groups, examination of the transcripts reveals some interesting qualitative findings. One is that the secure women overall tend to demonstrate a greater level of awareness and clarity about their feelings and conflicts concerning their mothers. Their conflicts also tend to be less anger ridden with a balance of highly positive feelings expressed in addition to negative. They also tend to express the sense that despite whatever difficulties they experienced in relation to their mother, they always knew they were loved as a child. The following example illustrates the way in which secure women rated the highest tend to feel a greater

sense of empathy and identification with their mothers. The level of clarity and specificity seen here is not seen in insecure women. This subject was asked about the kinds of feelings she had about her mother during pregnancy:

I've come to an understanding of my mother in different ways but I don't know if that's because I'm pregnant or because I've been in therapy, and it's just been this evolution over the last few years towards my mother so I don't know whether it was the pregnancy but it seems like I've been a lot more forgiving of her in the last year or so than I was---just things that I understand more clearly and the difficulties that she had and what she was up against, just it seems, I seem to have softened my outlook on her and I don't feel as critical of her.

A second interesting finding is that those secure women who appear more insecure on Scale IV tend to resemble the Preoccupied group rather than the Dismissing group. That is to say that they tend to demonstrate vagueness and confusion in their verbalizations about their mothers but do not express a high degree of overt anger. This finding suggests that secure women do not tend to become dismissing or devaluing of attachment relationships, or detached from attachment thoughts and feelings even in response to increased psychological stress.

Qualitative examination of the transcripts of women in the Dismissing group reveals their tendency to express a high level of unproductive negative affect toward their mothers (consistent with their overall higher level of negative affect noted in Scale II), and frequently indicate their doubt that they were loved as children. This is illustrated in the following example where the subject is asked the same question noted above:

... there's been a lot of negative feelings toward my mother that I should not be feeling and I do--I can't-- wish--they're personal in nature-- they go back to when I was growing up and before I got married and the tension that I had between us then and it's just, now when I know that she needs me for the baby-- she wants to come for the baby, I have this weapon to use against her-- and I use it sometimes. I don't want to but I feel like going ha, ha, mother, look at all this pain you caused me-- now I can cause you pain-- I don't want to do that to her but sometimes she taught me to be spiteful.

The Preoccupied group seems to have the least sharply distinguishing characteristics as a whole on Scale IV of the three attachment groups. This observation, however, is consistent with Main and Goldwyn's (1985b) description of the Preoccupied group as having the most within group differences.

Scale IV - Revision

The findings for Scale IV suggest that it is not sensitive to important qualitative differences which may distinguish between the three attachment groups in this area. The scale was initially designed as a five point scale. However, problems with interrater reliability resulted in collapsing this into a three point scale. This seems to have resulted in a loss of ability to make finer distinctions among the subjects. As a result, many subjects received the middle rating.

The results suggest that Scale IV might best be revised as a 5 or 7 point scale which would be more reflective of Bibrings' (1959) theory of a gradual working through of mother-daughter issues which continues into early parenthood. In light of the degree of conflict which all women seem to experience in relation to their mothers during pregnancy, a revised scale might also include ratings of qualitative and organizational features concerning the way women talk about struggles over their relationships to their mothers. Furthermore, the findings suggest that the mother-daughter relationship during pregnancy is such a complex and rich area of inquiry that it may require separate study as an entity unto itself.

Pregnancy and Adult Attachment - Scale III

Secure and insecure women score most similarly and at the highest rating on Scale III. Scale III differs from the other four scales in that one aspect of the rating is purely the

extent to which the women has made changes in her lifestyle and habits specifically for the well-being of the pregnancy and baby. Unlike the other scales, such changes are external and more behavioral in nature versus internal and psychologically based. At the same time, part of the rating for Scale III is the subject's feelings and attitudes about making such changes, including the extent to which she feels resentful about taking these actions.

In light of the finding that women at this educational and socioeconomic level all tend to make changes for the good of the pregnancy and baby, the feelings concerning these changes appear to be the most important aspect of this scale. The findings suggest that strong feelings of ambivalence or resentment about meeting the demands of an infant which are seen in the insecure group (e.g. when they are thinking about the infant's dependency and the actual parental role), are less salient to taking these external actions. This may be explained by the fact that the questions for this scale relate to pregnancy itself and not to anticipation of parental responsibilities or the powerful influence that the actual baby will exert.

The transcripts further indicate that many women use pregnancy as a way of allowing themselves to slow down, to take a break from some of the professional and personal demands that they generally place upon themselves. In this way, they experience pregnancy as a time where they are allowed to indulge themselves and give more to themselves. Hence, the feeling that they are making changes for themselves might minimize feelings of self sacrifice and resentment. The feeling of being nourished may actually lead to more positive feelings in some women about giving to their babies. This would offer further explanation for why subjects appear more similar overall on this scale.

An interesting finding is that the Secure-Autonomous and Preoccupied groups scored the most similarly on Scale III with all of the secure subjects receiving the the highest rating and all but one Preoccupied subject receiving the highest rating. Examination of the

transcripts however, reveals that secure women qualitatively appear to experience a greater level of pleasure and satisfaction in giving to their babies during pregnancy with the least feelings of resentment when compared to the Preoccupied group. This is remarkably similar to the preliminary findings reported by Slade and Aber (1985) using a Parent Development Interview with the AAI, wherein secure mothers demonstrate the most genuine desire to meet the dependency and attachment related needs of their infants.

In contrast, two thirds of the Dismissing subjects received the middle rating. These women made changes and took actions that are recommended during pregnancy but have less awareness of their babies' needs in utero and do not articulate a strong experience of pleasure and satisfaction. Rather, they express more discomfort and feelings of resentment about self sacrifice. Such a finding is consistent with the greater overall negativity and resentment noted for the Dismissing group on Scales II and IV. From a clinical standpoint, it is also consistent with a decreased ability of those subjects with greater depressive features to nurture themselves, and, in turn to experience the desire to nurture their babies in utero.

Scale III – Conclusion and Revision

The similarity in scoring among the three attachment groups noted for Scale III would suggest that it is the least significant scale in relation to security of attachment. However, the qualitative findings suggest that Scale III is not sensitive enough to the feeling dimensions which may be able to distinguish the three attachment groups in a larger sample. It is likely that the ratings of these dimensions were skewed by being combined with ratings of whether women made changes at all. The mild trend toward significance noted statistically suggests that value of this scale merits further investigation following revision that eliminates the behavioral ratings and clarifies the feeling dimensions.

Miscarriage and the Psychological Tasks of Pregnancy

The fact that three out of six subjects classified as Secure-Autonomous had had a prior miscarriage suggests that even a traumatic loss does not change an individual's more enduring overall "state of mind with respect to attachment" (Main, 1988b). However, the results do suggest that prior miscarriage may alter the way in which secure women negotiate particular tasks of pregnancy.

The results reveal that two out of three secure subjects who had experienced a prior miscarriage scored lower on a number of scales than was characteristic of other subjects classified as secure. Further, the subject who scored lowest on all of the scales was given the additional Unresolved Loss rating along with her secure classification, specifically pertaining to her miscarriage. It is especially noteworthy that this subject was the only secure woman to feel as if she did not already have a relationship with her baby. It makes sense that of all the scales, Scale V which measures mother's attachment to her baby would be most effected as a result of the loss of a baby.

It is also interesting to note that these two secure subjects also were rated as overly positive with constriction of negative affect (Scale II). From a clinical standpoint, such a response could represent a reaction to loss, wherein an individual takes on an overly optimistic attitude as a protection against fears of another loss. While such a response makes intuitive and clinical sense, whether having a prior miscarriage causes an alteration in overall affective response to pregnancy can only be determined by studying a larger sample.

The other subjects who had experienced a prior miscarriage were from the Dismissing group. Any effects of this loss on their handling of pregnancy related tasks could not be gathered from this data, since their scores tended to be consistent with the scores of the other Dismissing subjects in the sample. However, it would be interesting to assess more specifically with a larger sample how individuals who characteristically detach from

relationships and defensively protect themselves from disappointment and feelings of loss handle such experiences.

While the finding that 0% of the Preoccupied group had had a prior miscarriage may be a random one, it raises the possibility that Preoccupied women who have had a prior miscarriage self select out of this type of study. In other words, those pregnant women who are already somewhat flooded with troubling attachment thoughts and feelings might be less inclined to join a pregnancy related study as a result of a traumatic loss of an attachment relationship. If this hypothesis can be substantiated in a larger sample, it could provide important information about this attachment group.

Limitations of the Present Study and Need for Further Research

The major limitation of the present study is the small sample size. A greater number of subjects will need to be studied in order to substantiate any of the suggested trends and findings. Another limitation is that these findings cannot be generalized to more culturally and economically diverse populations.

There are a number of limitations and additional issues raised by the findings within the study itself which could be addressed in future research. The fact that such a large percentage of the sample had had a prior miscarriage speaks to the need to further document the effects of miscarriage on the negotiation of pregnancy. Future studies will need to examine two groups of primigravides, those with and those without the experience of prior miscarriage, in order to determine miscarriage-related effects within different attachment groups.

Specific changes in self and in the role of the self with respect to one's family marriage and in society, are typically experienced by women in response to pregnancy (Benedek, 1970; Bibring, 1959; Rubin, 1981). The present study did not include a pregnancy scale

designed to rate subjects' responses to perceived changes in self that have occurred over the course of pregnancy. In response to the Pregnancy Interview, some subjects said that they already felt like mothers while others did not. It could be important to see whether those subjects who already felt like mothers had the strongest attachments to their babies, and if there is any correlation between perceived changes in self and attachment classification.

One woman in the study mentioned having been in therapy, thus raising the issue of the effect of prior therapy on response to pregnancy. Since attachment theorists have noted that psychotherapy can alter attachment classification, it would be important to attempt to document the effects of psychotherapy on the pregnancy experience.

Finally, the present study was geared toward the normal experience of pregnancy in a non-psychiatric sample. The study of psychiatric populations would appear to be warranted in light of the difficulties apparently experienced by "normal" women, and the potential for profound consequences in the mother-child relationship.

Conclusion

The results of the present study represent a first step toward the delineation of differences among pregnant women in how they negotiate the psychological tasks of pregnancy. These findings also demonstrate that the Adult Attachment Interview can be used to predict differences between secure and insecure women in their psychological response to pregnancy in a number of significant areas. It is remarkable to find that the way in which women talk about their history of attachment experiences will actually predict such things as: their affective experience during pregnancy, the way they feel about their babies in utero, or how they feel about issues of dependency and separateness in relation to their babies before they are born.

These findings support recent research into the ways in which patterns of attachment

can be transmitted across generations (Bretherton, 1985; Main et al, 1985a) through parent-child relationships. Some of these patterns (secure) are believed to have greater adaptive characteristics and potential positive consequences for the mother-infant relationship than others (insecure) (Kobak and Shaver, 1987; Main and Goldwyn, 1988b; Slade and Aber, 1985). We have been alerted to the ways in which mothers' emotional constrictiveness concerning their own life histories and relationships significantly impair their ability to form a healthy intimate connection with their infants based upon empathic relatedness (Freiberg, 1969). Such problems can also decrease womens' ability to respond sensitively and willingly to their infant's needs (Ballou, 1978). It follows that assessment of the women's state of mind with respect to attachment as it relates to negotiation of pregnancy related psychological tasks presents a golden opportunity for prenatal therapeutic intervention. If women can be helped to cope with problems that are identified during pregnancy then it might be possible to alleviate attachment difficulties that would arise later in the mother-infant relationship. Continuing this type of research would be valuable to expanding our understanding of female adult development and to developing tools for pregnancy assessment and clinical intervention.

APPENDIX A**Adult Attachment Interview****Carol George****Nancy Kaplan****Mary Main**

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March, 1985

**PRIVELEGED COMMUNICATION:
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U·M·I

1. Oriented re family, where you lived, moved much, what family did for living? ---- Grandparents all known, or died when parents young (what age--know anything about this grandparent?) ---- Other persons living in family household? ----Sibs now scattered or nearby?
2. I'd like you to try to describe your relationship with your parents as a young child...if you could start from as far back as you can remember?
3. Five adjectives mother. Pause to think. Memories, incidents for each.
4. Five adjectives father. Pause to think. Memories, incidents for each.
5. Closest parent, why? Why not same other parent?
6. When upset as child, what do? Pause. (a) Emotionally? --incidents? (b) Physically hurt---incidents? (c) When ill-- what would happen?
7. First separation? Others?
8. Felt rejected as child? How old? How felt? What did? Did parent realize she/he was rejecting you?
9. Parents ever threatening--for discipline, jokingly? Some of our parents have memories of some kind of abuse in family. ---happen to you or in your family?---how old, how severe, how frequent?---this experience affect you as adult?---affect approach to child?
10. Effect experiences on adult personality? Any aspects experiences a set-back to your development?
11. Why do you think your parents behaved as they did, during your childhood?
12. Other adults close like parents as a child? Or other adults especially important though not parental? (Ages--live in household--caregiving rsponsibilities--why important).
13. Loss of parent, other close loved one (sibs) as child? ---age? ---circumstances? ---how respond at time? ---sudden or expected? ---feelings at time? ---feelings regarding this death changed over time? ---funeral? ---effect on remaining parent? ---effect on adult personality? ---on,approach to own child?
- 13a. Other losses in childhood. Queries as above.
- 13b. Important losses in adulthood. Queries as above.
14. Have there been many changes in your relationship with parents since childhood?
15. What is relationship with parents like for you now as an adult?
16. Feel now when separate from child?---Ever worried about child?
17. If 3 wishes for child 20 years from now, what? Thinking of kind of future you'd like to see for child. Minute to think.
18. Any one thing learned from own childhood experience? What would you hope child learned from his experience of being parented?

APPENDIX B

**THE PREGNANCY PROJECT:
PREGNANCY INTERVIEW**

Arietta Slade

Laurie Grunebaum

Linda Haganir

Mary Reeves

**The City College and Graduate Center
of the City University of New York**

March, 1987

Revised October, 1987

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Introduction: This is the interview that is going to be about the emotional experience of your pregnancy. As you probably know, very little is known about what women think about and feel during the course of their pregnancies and our lab is very interested in finding out more about what this experience has been like for you and what kinds of changes you've been through. The whole interview will probably take us about an hour.

Questions:

1. Can you start by telling me why you wanted to have children?

Prompt: Why did you want to have a child at this time in your life?

2. How did you feel when you found out you were pregnant?

Comment: Here, we are looking for the subject's affect about knowing she was pregnant in the first days and weeks. Be sure to get elaboration if necessary. For example, if subject says she was scared or excited, find out what she means by this, what she was scared of or excited about.

Prompt to help subject elaborate if necessary.

3. What was your husband's [or baby's father] reaction when you became pregnant?

Prompt: What was he _____ about? (e.g, scared or excited)

In what ways was your husband's reaction to finding out you were pregnant similar to yours and in what ways was it different?

Comment: Looking for his affect about early pregnancy here. Again, be sure to ask for elaboration about specific feelings.

4. What kinds of changes have you made in your lifestyle during your pregnancy?

Prompts: Have you had to adapt your diet, physical activity, sleep schedule, work habits or other aspects of your life?

How did you feel about making these changes?

Comment: Here we are interested both in whether subject has in fact made any changes as well as in how she feels about having had to make these changes---does she feel happy, deprived, etc.? If the subject brings up emotional changes, explain that we'll be getting to emotional changes in a minute but for now we're specifically interested in changes in habits and patterns.

5. Now we're going to talk some about what your pregnancy has been like for you emotionally. Have there been aspects of the pregnancy that have been emotionally difficult for you?

Prompt (if subject does not bring it up spontaneously):

Have there been times when you've felt needy or unsupported or worried or just surprised by your emotional state?

Have you had any concerns about the well-being of your baby?

6. How have you dealt with these feelings?

Prompts: Is there anyone (or anyone else) with whom you can talk about your difficulties in pregnancy?

Comment: Be sure to find out how subject has dealt with her feelings of neediness, etc.

7. In addition to these difficult feelings, have you had any other strong feelings during your pregnancy?

Comment: Here, we're looking for positive feelings, but don't prompt for these.

8. What's the pregnancy been like for your husband emotionally and how has he handled these feelings?

Prompt: Has he had feelings of neediness, loneliness, rejection, or other fears?

How has he dealt with these feelings?

9. In what ways has your relationship with your husband been affected by your pregnancy?

Prompt: Has your sexual relationship with your husband been affected by your pregnancy?

Comment: Be sure to find out subject's feelings about any changes in relationship with her husband.

10. What do you expect the relationship with your husband to be like after the baby is born?

Prompt: How do you expect him to be involved with the baby?

Comment: We are trying to find out, indirectly, whether the subject feels satisfied with her expectations of her husband and whether she feels she can count on him for emotional and/or caretaking support.

11. Now, we're going to go back to talking about your feelings about the baby during pregnancy. When would you say you first really believed there was a baby growing inside of you? How did this affect you?

Prompt: How did it affect you when the baby first started moving?

How does it feel to have a baby growing inside of you now?

12. Would you say you have a relationship with your baby yet? How would you describe it?

Prompt: For example, do you or your husband ever talk to your baby, do you have a nickname for your baby, or are there things you imagine about your baby?

- 12a. What do you imagine your baby will be like?

13. Do you know the sex of the baby?

If "yes": How do you feel about it?

If "no": Do you have a preference or feelings either way?

14. Now we're going to talk about becoming a mother. Do you have a sense of your baby's growing dependence on you and how do you feel about this?

Comment: Here we are trying to find out, indirectly, whether the subject feels the baby is taking from her, depriving her, etc. or whether she enjoys the baby's needing her.

15. Do you have a sense of whether your baby needs anything from you now?

Prompt: How do you feel about responding to those needs?

Comment: Be sure to find out what subject feels her baby needs, e.g., protection by subject, good health of subject, etc. We are trying to get a sense of whether the subject can identify with and respond to the needs of her baby yet.

16. How comfortable do you feel about taking care of your baby once it's born? What do you think this will be like for you?

17. Have you thought about whether you'll bottle-feed or breast-feed your baby?

Comment: Make sure to find out why they've chosen one or the other and how they feel about their choice (i.e., certain, ambivalent, etc.).

18. When you think of your baby's earliest months, what do you imagine will be the most pleasurable times with your baby?

19. What do you imagine will be the most difficult times in your relationship with your baby?

20. What are your current plans for caretaking after the baby is born?

Prompt (If subject is planning to return to work): What kind of babysitting or daycare arrangements have you thought about?

Comment: Try to get a sense of whether the subject anticipates feeling in need of help after the baby is born and whether there is anyone she can count on to help her (e.g., mother, mother-in-law, husband, etc.)

21. What kinds of feelings have you had about your own mother during your pregnancy?
22. Have these feelings affected your actual relationship with your mother?
23. How do you think your early experiences of being parented have affected your feelings during pregnancy?
24. In what ways do you imagine you'll be like your mother as a parent? In what ways do you imagine you'll be different?
25. Are there things that you're afraid you'll do as a mother that you wish you wouldn't?
26. In what ways do you think that being a parent will change your life? How do you feel about these changes?

Prompt: What kinds of changes in your lifestyle do you anticipate having to make and what will this be like for you?
27. Has the way you think about yourself or the way you view yourself as a person changed since you've been pregnant?

Prompt: Do you feel like a mother yet?

Interviewer: Now we're going to switch gears slightly and talk about your feelings about body changes during pregnancy. As you are probably well aware of by now, one of the most dramatic experiences of pregnancy is how much your body and your appearance change over the course of these nine months. I'd like to ask you some questions about what this experience has been like for you as well as about how you felt about your body before pregnancy and even back when you were a child.

- 27a. How have you felt about your body and your appearance during your pregnancy?

28. How early in your pregnancy did you first notice changes in your body and appearance?

Prompts: What was it like when you first realized you couldn't wear your own clothes anymore?

When did you begin to wear maternity clothes and what was this like for you?

Who shopped with you for maternity clothes?

How did you feel about looking pregnant?

Comment: Be sure to find out how subject feels about changes in appearance, about wearing maternity clothes, about looking pregnant, etc.

29. How has your husband's experience of your body during your pregnancy been the same as yours and how has it been different?

30. How do you imagine you will feel about your body and your appearance once your baby is born?

31. Can you remember how you felt about your body or your appearance when you were growing up? Are there any specific incidents or memories that illustrate these feelings?

Comment: If subject describes a shift in feelings about her appearance at some point in her life, find out what brought about the change.

32. Did you get any sense of how your parents or anyone else in your family felt about the way you looked when you were growing up? Can you remember any specific incidents that illustrate this attitude?

33. How do you think your feelings about your appearance when you were young have affected the way you feel about your body as an adult, especially now during pregnancy?

34. I'd like you to try to remember watching your mother getting ready for a social event when you were a child. Try to remember:
- a. whether she took a bath or a shower;
 - b. what parts of her body she touched;
 - c. what she was feeling while getting dressed;
 - d. whether her clothes fit;
 - e. whether she used make-up;
 - f. whether her mirror image pleased her;
 - g. how comfortable she felt with herself; and
 - h. how you felt watching her.

I'll give you a few moments to think about it, then I'd like you to describe what comes to your mind...

35. How did your father feel about your mother's appearance when you were a child? How did she feel about his appearance? Do any specific incidents or comments they might have made to each other come to mind?
36. How do you think their attitudes about appearance influenced the way you feel about yourself physically?
37. I'd like to finish up the interview by asking you how satisfied you've been, overall, with your pregnancy? Is there anything you would have wanted to be different?
38. Is there any other aspect of your pregnancy that has been important to you that we haven't asked you about?

APPENDIX C

The Pregnancy Project:

PREGNANCY INTERVIEW CODING SYSTEM SCALES

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Ariette Slade, Ph.D

May, 1989

Revised August, 1989 and October, 1989

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I. Recognition and Acceptance of Baby's Separateness and Dependency

This category measures the extent to which the mother demonstrates recognition that her fetus is, and infant (in fantasy), will be both highly dependent upon and yet separate from herself with its own needs and feelings. This includes a balance between mother's recognition of her own needs and her baby's needs, wherein there is an awareness that differences between self and baby will have a great impact on mother's life with the potential for conflict. Since self sacrifice (for the baby's physical and emotional well-being) and self-enhancement (experienced through pregnancy and taking on the maternal role), appear to be healthy, normal aspects of pregnancy, this scale will include variations in both.

This scale ranges from 5 to 1 with 3 as a midpoint signifying the highest level rating. While the infant is not yet born, the information necessary to make the ratings should be based upon how she speaks about her present experience of pregnancy and the way she projects herself into the future relationship. Pay particular attention to Questions 4, 11, 12, 14, 15, 16, 17, 18, 19, & 26 for making this rating.

- 5= Baby's needs are paramount. Mother makes it clear that baby will be all consuming. There is no recognition or thought about how she will continue to have her own needs which will need to be met separate from being a mother (granting that there is enormous inherent self sacrifice), and therefore no recognition of the possibility of conflict. Mother indicates that she will tend to experience her baby's feelings and needs as her own. Self-enhancement stems totally from subsuming self to meet needs of infant.
- 4= Some recognition of own needs is present but mother indicates that she cannot allow herself to take action to meet these needs. She indicates that she will not be able to keep baby's needs from always taking precedence. Self-enhancement will again come mostly from meeting another's needs versus own needs but less so than a 5 and more likely with some awareness of this as a problem.
- 3= Baby's and mother's needs are balanced. Baby viewed as having separate needs and feelings. Baby's dependency needs are recognized and mother shows willingness to meet them. Baby's individuality is also recognized and possibility for conflict between mother and baby is acknowledged. Baby's needs are felt to be equally important as mother's. Healthy self-enhancement from projected role as attachment figure is present alongside ability to recognize own separate needs which at times will have to take precedence.

(See Scale I-Page 2)

SCALE 1 -page 2

2= Mother's needs tend to take precedence despite some recognition of baby's separate needs and feelings. Indicates that baby's dependency makes her uncomfortable and will have trouble giving of self to the extent that is demanded. This discomfort makes it difficult to experience self-enhancement from projected role as attachment figure, while her awareness of discomfort with dependency makes it difficult to deny baby's needs and feelings for purposes of self gratification as in *1.

1= Mother's needs are paramount and always take precedence. Little recognition of baby's separate needs, feelings, or individuality. Baby's enormous dependency on her is denied. Possibility of conflict between mother and baby not acknowledged due to lack of recognition of baby's needs. Baby is anticipated to be used (implicitly or explicitly), as an object of self-enhancement and a means of self gratification. Little evidence of mother taking pleasure in her anticipated role as an attachment figure able to meet the baby's needs. The text will indicate difficulty in valuing the baby for itself because mother is preoccupied with how the baby will reflect on her or mirror the view of herself which she must maintain.

II. Affect Tone

This category relates to the mother's overall emotional experience of pregnancy and impending parenthood. This includes the extent to which she is able to verbalize a balanced range of positive and negative feelings and to tolerate ambivalence without being overly positive (idealizing) or overly negative. If subject is emotionally constricted, the rating should be made according to the most prominent affect tone which comes across in the interview.

This scale ranges from 5 to 1 with 3 as the midpoint signifying the highest rating. Pay particular attention to questions 2, 3, 5, 6, 7, 8 & 11. However, for making this rating, the overall affective quality is equally important based upon all of the questions.

5= Overly negative and/or fearful and anxious.

4= Characteristics of 5 but less extreme

3= Range of positive and negative affect balanced. Flexible in ability to experience, tolerate and articulate this range within the context of feelings about pregnancy, relationship to fetus (and future infant) and relationships in general.

2= Characteristics of 1 but less extreme

1= Tends to be overly positive, idealizing with exclusion, minimization, disavowal and/or constriction of negative affect.

III. Insuring Well-Being of Pregnancy and Fetus

This category includes behaviors and actions taken by the mother demonstrating a willingness to give of herself in order to insure the well being of the fetus and later the infant. The text will reflect the mother's ability to see herself in the nurturing/giving role in both fantasy and reality. She will explicitly or implicitly show an awareness and developing acceptance of the total dependency of the infant and the extent of its needs. As part of becoming an attachment figure, the mother will demonstrate her concern for the well-being of her unborn child by taking actions geared toward meeting its needs in utero. Examples would include changes in diet, exercise and other habits in addition to external preparations for the baby.

This scale ranges from 3 to 1 with 3 signifying the highest level. Pay particular attention to questions 4 & 15 for making this rating.

- 3= At this level, the mother would feel that she is already seeking to meet needs that the fetus has in the present during pregnancy. She specifically states changes that she has made such as in diet and exercise in order to insure the well being of the fetus either directly or through care of herself, and does not view these changes as a significant sacrifice.
- 2= Has made some changes on behalf of the fetus but not as specific about what the fetus needs from her during pregnancy. May also see adjustments in lifestyle as more of a sacrifice.
- 1= Denies any need for changes and therefore does not recognize that the fetus has needs while in the womb which the mother can meet. Views life and self as mostly unchanged since the onset of pregnancy, and thus, does not see a need for any self sacrifice.

IV. Importance of Relationship With Mother in Becoming a Mother

This scale looks at the extent to which the woman has experienced and acknowledged feelings about her relationship to her own mother as part of the pregnancy process, as well as her ability to reflect upon issues which have arisen, in order to better understand this relationship and its relevance to impending parenthood. It further looks at the extent to which the woman has used knowledge about her relationship to her own mother to come to a conclusion or decision about how close/involved she can be with her mother. Coming to an understanding of the relationship does not necessarily mean having a very close or positive relationship. Rather, it can include a range of possibilities such as, the woman's ability to forgive her mother for past mistakes, having perspective about and/or empathy for her mother's experience, and/or acceptance of the fact that her mother will never change and that their relationship can never be what the woman would like it to be.

This scale ranges from 3 to 1 with 3 being the highest level rating. Pay particular attention to questions 21-25 for making this rating.

- 3= Ability to recognize that relationship with own mother will influence development of self as parent. Demonstrates awareness through both ability to articulate and reflect on these issues. Is able to articulate, integrate and accept the negatives and positives about mother and the relationship. Shows insight and ability to make meaningful connections on own and has come to a benign understanding about this relationship which she able to express. Has used awareness of relationship to mother to make decisions about relationship with her, concerning current and future level of involvement. This may include how she foresees her mother's involvement with the baby.**
- 2= Demonstrates some awareness of these issues but not fully articulated with notably less ability to reflect, make meaningful connections or decisions concerning current or future involvement with mother than 3. May be overly positive, overly negative and/or vague. A subject with this rating may be able to articulate positive and negative aspects of her mother and the relationship, but will have difficulty integrating the two. Thus, contradictions will tend to appear in the text in relation to subject's feelings and issues about her mother. She will also appear unresolved, ambivalent and/or troubled about the relationship.**
- 1= Minimal or no ability to acknowledge feelings toward own mother in relation to parenting. No ability to integrate issues concerning relationship with mother with decisions about present or future relationship, because lacks the awareness of these issues needed to process them. This may be manifest via denial of feelings toward mother, a dismissive attitude toward the importance of relationship to mother, and/or through an "everything is fine" attitude that has no affective substance to back it up.**

V. Mother's Experience of Relationship to Baby in Utero

This category measures the strength, depth and elaboration (in fantasy and reality), of the mother's developing attachment relationship to her unborn child. A crucial measure of the maternal-fetal relationship will be the extent to which the mother attributes specific characteristics and intentions to the fetus (and/or fantasied infant), and gives clear examples of interacting with the fetus. Such interactions should include both initiation of communication with the fetus and response to communications by the fetus. The ratings will be based upon the quality and detail of such interactions and attributions as well as some articulation of a relationship to an individual with elaborated features (physical and emotional).

This scale ranges from 5 to 1 with 5 representing the highest level rating. Pay particular attention to questions 11, 12, 12a, 13, 14, 15, 18, & 19 for making this rating.

- 5= At this level the mother will verbally acknowledge feeling that she has a relationship with the fetus. She will articulate reasons for why she feels this way and give examples of how she communicates with the fetus. She will be specific about the attribution of feelings, motivations, personality characteristics and/or physical traits to her unborn child. Fantasies about the baby and moments together will be greater in number, well articulated, and reflect a focus on mutual interpersonal interaction.
- 4= Acknowledges feeling as if has a relationship with fetus but less able to articulate reasons and give specific examples of communication with baby. Not as many attributions with tendency to be vague. Fewer and more vague fantasies about baby. If moments together are imagined, they are either less interpersonally and mutually oriented, or not interpersonally oriented at all.
- 3= Does not verbally acknowledge feeling as if has a relationship with baby yet but there is evidence in transcript that a relationship exists but is not well developed. Subject can also receive this rating if she acknowledges a relationship but elaboration is ingenuous and superficial.
- 2= Does not feel as if has a relationship yet but gives indication of thinking about having a relationship. Little or no communication or attribution. Minimal or no fantasy about baby.
- 1= Does not feel as if has a relationship and does not even think about it during pregnancy. No communication, attribution or fantasy expressed.

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