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**Adaptive regression and maternal empathy: A Rorschach study  
of unconscious fantasy during pregnancy**

**Frank, Mary Ann, Ph.D.**

**City University of New York, 1992**

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**ADAPTIVE REGRESSION AND MATERNAL EMPATHY:  
A RORSCHACH STUDY OF UNCONSCIOUS FANTASY DURING PREGNANCY**

by  
**Mary Ann Frank**

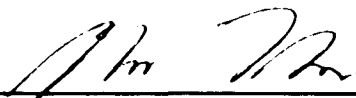
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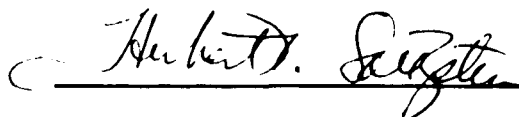
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**Abstract**

**ADAPTIVE REGRESSION AND MATERNAL EMPATHY:  
A RORSCHACH STUDY OF UNCONSCIOUS FANTASY DURING PREGNANCY**

by

**Mary Ann Frank**

**Adviser: Dr. Steven Tuber**

The present study investigates the hypothesis that there is a significant relationship between a woman's capacity for adaptive regression on the Rorschach test administered during pregnancy and her later capacity for maternal empathy, as measured by her infant's attachment status at one year.

Data were gathered from 25 mother-infant dyads. Rorschachs were administered to mothers in the second and third trimesters of their first pregnancies. These protocols were scored using the Holt Manual for Assessing Primary Process Manifestations on the Rorschach; mean and highest adaptive regression scores were obtained. Infants and their mothers were videotaped in the Ainsworth Strange Situation when the infants were a year old.

The findings support the hypothesis that greater ease of access to well-regulated primary process fantasy during pregnancy is significantly, positively related to infant security of attachment at one year. The post hoc findings further suggest that the content of unconscious fantasy among mothers of securely attached infants is distinguished by the presence of maternal themes and images. Finally the distribution of attachment classifications by gender suggests the possibility of a gender effect among infants who are less emotionally reactive in the Strange Situation. In this study, girls evidencing this "minimizing" pattern of emotional arousal and regulation were consistently classified as securely attached, while boys were nearly always judged as insecure/avoidant.

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understanding of the data.

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## INTRODUCTION

When D.W. Winnicott (1960) remarked whimsically, "There is no such thing as an infant," he was asserting a principal that has become virtually axiomatic in the literature on normal child development. Over the last quarter century, studies representing a range of theoretical paradigms have viewed infant and mother as "a unit," and evidence from converging sources suggests that sensitive, reliable maternal care early in life plays a crucial and continuing role in later socioemotional development (see, e.g., Bretherton, 1985; Cicchetti et al., 1990). These investigations of the dyad have, in turn, given definition to Winnicott's notion of the "good enough" mother who, it now seems, acts not only as her infant's primary caregiver but also as his cognitive and affective mentor (see Stern, 1985).

Winnicott returned frequently to the subject of maternal empathy in his writings. In his elegant paper "The Theory of the Parent Infant Relationship," (1960) he wrote:

"The important thing, in my view, is that the mother through the identification of herself with her infant knows what the infant feels like and so is able to provide almost exactly what the infant needs in the way of holding and in the provision of an environment generally. Without such an identification I consider that she is not able to provide what the infant needs at the beginning, which is a live adaptation to the infant's needs" (p. 54).

In all human relations, empathy springs not from a strict perception of the other's communications, but an

accurate interpretation of those communications. Empathic interpretation is forged from a welter of data: immediate perceptual and kinesthetic impressions, memories of relevant experiences and feelings, and -- according to psychoanalytic theory -- from conscious and unconscious imaginative acts known as fantasy (Levin, 1985; Stern, 1991). Understanding the relationship between fantasy and maternal empathy is of particular concern because, as Winnicott suggests, it may advance our ability to understand and prevent developmental difficulties in children. Yet the impact of these psychological processes on a mother's ability to maintain an appropriately responsive connection to her infant has been largely ignored.

The proposed study seeks to remedy that neglect by examining the intermingling of fantasy and perception in a group of first time mothers-to-be. A central premise of this study is that maternal fantasy -- be it benign, aggressive, erotic, tender or any permutation thereof -- is a psychological given. Individual differences exist, however, in mothers' freedom of access to their fantasy life. To the extent that mothers are able to integrate imaginative acts in the service of adaptive ends, fantasy may be considered a potentially rich psychological medium for infant development. The mother-infant relationship may also be enhanced by a maternal ability to recognize and reflect upon those same fantasies, through an ongoing comparison of the world of subjective impressions with the

world outside the self.

Maternal empathy may be jeopardized, however, in cases where mothers are so easily flooded with fantasy that it distorts their ability to remain attentive to the real needs, attributes and strengths of the infant. Also impaired may be those mothers who present with constricted access to fantasy in defense against distressing impulses and feelings.

This line of thinking is consistent with the psychoanalytic understanding of empathic responsiveness in general. A complex cognitive and affective process, empathy is thought to involve an interplay between primary and secondary process modes of thought that leads to a more richly integrated appreciation of reality. This theoretical proposition has led to the formulation of the central hypothesis of the proposed study: Women who demonstrate a higher level of "adaptive regression" will more successfully empathize with their infants' affective experience.

This hypothesis will be tested by a prospective Rorschach study of expectant women during their second and third trimester of pregnancy. Indices of adaptive regression based on the Holt Scale (1968, 1977) will be used to prospectively predict the quality of the mother-infant relationship at 12 months as assessed by the Ainsworth Strange Situation paradigm.

In order to clearly delineate the hypotheses to be tested and the methods for testing them, a more careful

examination of the relevant earlier literature is required. The proposed study bridges several different domains in the literature: developmental psychology, attachment theory and research; and psychoanalytic theory and research.

CHAPTER ONE  
Literature Review

The review that follows is divided into two major sections. In Part I, I will demonstrate that maternal empathy is manifested in multiple ways during the first year of life, with mothers fostering infant development through the provision of mentorship, a secure base, and a narrative framework. In experience as it is lived by mother and infant, these multiple, largely unconscious agendas are indistinguishable from one another, embedded as deeply as they are in the daily routine of feeding, playing, diaper changing and bathing. For the purposes of conceptual clarity, however, I will consider them separately. Acts of maternal imagination and fantasy, it will be suggested, are involved to varying degrees in each relational matrix. The literature on pregnancy, reviewed in the final section of Part I, further supports the notion that imagination and fantasy may be key variables in the development of maternal empathy.

The three sections that comprise Part II focus on psychoanalytic contributions to the study of empathy more generally. This section will emphasize in particular the theoretical and research findings suggesting the important role played by adaptive regression in regulating access to fantasy and making possible mature empathic responsivity.

## PART I: DIMENSIONS OF MOTHERING

### MOTHER AS MENTOR: A DEVELOPMENTAL PERSPECTIVE

By virtue of his potential to develop two unique capacities -- language and a sense of self among selves -- a healthy infant arrives into the world endowed with the biological promise of humanness. However, the presence of a human mentor -- a mothering one -- is crucial if that promise is to be fulfilled. Indeed, without minimally adequate opportunities for social interaction, the biological kernel of language and self may permanently wither and die (Curtiss, 1977; Sacks, 1989).

Elucidating the step-by-step induction of the infant into the world of language, self and other has been a preoccupation for developmental theorists interested in the social and affective contexts of cognitive development. "Affect attunement" (Stern, 1985), the "primordial sharing situation" (Werner and Kaplan, 1984/1963), "zone of proximal development" (Vygotsky, 1978) and "facilitating environment" (Winnicott, 1960) are all attempts to conceptualize maternal empathy in terms of a primary mentoring experience.

Critical to most of these accounts is the mother's ability to be both "with" the infant's level of experience and organization and yet one step "ahead" of him. Only in this paradoxical space, argue these theorists, can the infant begin to make a meaningful correspondence between his own internal, independent sensory experience with the

world the mother is attempting to communicate to him through touch, gaze, gesture, language.

In considering the mentoring relationship, several questions are implicitly raised. How does a mother come to know her infant? More generally we might ask: how does an adult empathize with the experience of another sentient being organized at an entirely different level of relatedness. In the first year of life alone, a mother is called upon to provide a facilitating environment to a helpless, dependent six week old whose needs are primarily for oral satiation and physical closeness; a sturdy six month old who is an eager and lively social partner and explorer of the physical world; and a cruising 11 month old. Only toward the end of this critical first year does the infant begin to acquire the rudiments of language.

An adult female, on the other hand, inhabits a very different psychological world, a world governed by the rules of language and logic. She has a developed sense of self, and a sense of others as coherent selves. A psychologically competent adult has a sense of continuity about time, a sense that her actions have consequences, an ability to organize, plan and anticipate. Some of these self experiences may have their beginnings in the prelingual months, but are radically reworked and reexperienced as language is acquired.

Given these disparities in relatedness and organization, what psychological experience in the mother is

called upon in her efforts to be both "with" and slightly "ahead" of her infant's? It is reasonable to speculate that she must at least have access, through sense memory and imagination, to the experiential world of the infant -- to its "feel" -- and a willingness to communicate at "about" his level of relatedness. At the same time, because the cues provided by an infant may be ambiguous the mother will at best retrieve/fantasize an approximation of his experience. Thus the mentoring process will also involve mother's ability to recognize and correct missteps in this crucial interchange. The dialectic between memory, imagination, fantasy on the one hand, and accuracy of perception, on the other, requires the application of adult faculties like perceptual discrimination, the ability to flexibly shift cognitive set, and sound reality testing among others. Implicit in this model is the notion that maternal differences in this dialectic will influence the quality of a mother's mentorship.

Understanding differences in the ability to access and regulate fantasy may, therefore, contribute to our understanding of the process of maternal mentorship. While there is no clear evidence regarding the nature of the psychological processes involved, a number of studies indicate that, in fact, the quality of mentoring strategies can influence infant cognitive development. Moreover, some of these findings suggest that there seems to be an optimal range of maternal intervention which actively promotes

cognitive development by sensitively encouraging infants to attend to properties, objects and events in the environment (Belsky, et al, 1984; Bornstein & Ruddy, 1984; Brazelton et al, 1979; Field, 1977; Landry, et al, 1986; Stern, 1974). Thus the present study may ultimately advance our understanding of an important maternal contribution to normal childhood development.

#### MOTHER AS SECURE BASE: A VIEW FROM ATTACHMENT THEORY

The last two decades has seen an explosion of interest in the relationship between the quality of maternal care an infant receives and his later social and emotional development. Aspects of maternal care, especially maternal contact and responsiveness to infant distress cues in early infancy, have been strongly correlated with the child's quality of attachment, sociability and cognitive development during the first year of life (Ainsworth et al., 1978; Fish & Crockenberg, 1981; Lewis & Coates, 1980), cognitive and affective flexibility during toddlerhood (Slade, 1987; Marcus, 1988) and social competency in childhood (Matas, et al., 1978; Sroufe, 1979). Such findings have led attachment theorists to view a mother's ability to provide her infant with a secure base as fundamental to understanding maternal empathy.

Much of this research rests on the foundation of the pioneering work of Mary Ainsworth who developed the laboratory procedure called the "Strange Situation."

Ainsworth et al. (1978) and Ainsworth (1979) observed that mothers respond differently to their infants' bids for closeness and comfort. By the end of the infant's first year, Ainsworth demonstrated that these differences in maternal sensitivity led to enduring and classifiable patterns of infant responses to being reunited with mother after a brief separation in a controlled laboratory procedure. She defined three "attachment" categories based on infants behavioral strategies. Those infants who responded to the stress of separation with heightened efforts to gain and maintain proximity and contact with the mother upon her return, and displayed little or no avoidant or resistant behavior toward her were labeled "secure". By contrast, Ainsworth identified two types of "insecure" attachment strategies. Anxious Avoidant infants showed little or no contact or proximity-seeking behaviors on reunion with the mother; indeed, they actively avoided her often in spite of her attempts to bring about a reengagement. The second "insecure" group, which Ainsworth characterized as anxious resistant or anxious ambivalent described infants who simultaneously sought proximity and contact with the mother even as they displayed angry and resistant behaviors.

Longitudinal observations of mothers and infants in the home later revealed that a 12 month old's reunion strategies were part of a dynamic pattern of social interaction with his mother dating from the earliest weeks and months of life

(Ainsworth et al., 1978; Ainsworth, 1979). Specifically, mothers of infants who were later identified as secure tended to register their infants' cues, and use them to make subtle adjustments in their own caretaking and social behaviors. In their en face interactions, responses to infant cries, and behaviors in the feeding situation, mothers of secure babies were more responsive to their infants' input and seemed to relish close bodily contact with their infants. By contrast, mothers of avoidant infants more frequently "admitted and/or displayed aversion to close bodily contact" with their infants than did mothers of secure or ambivalent babies. Main (1977) further found that mothers of ambivalent babies "displayed a remarkable lack of emotional (facial) expression when watching or in interaction with their babies" (Ainsworth, 1979, p. 35). Other researchers have provided corroborating evidence that maternal warmth and sensitivity during the first six months predicts secure attachment classification in the Strange Situation at twelve months (Maslin, 1983; Belsky, Rovine & Taylor, 1984).

The robust correlation between aspects of maternal care in the first months of life and infant reunion behaviors in the "Strange Situation" at one year, has given researchers interested in the antecedents of maternal empathy a powerful, reproducible laboratory paradigm for judging the importance of related psychological variables. Within Ainsworth's own theoretical paradigm, investigators like

Main, Kaplan & Cassidy (1985) and Slade (personal communication, 1987) are, for example, using a semi-structured clinical interview to examine the representational substrate of maternal empathy. Called the Adult Attachment Interview (AAI), this instrument provides the interviewer guidelines for an extensive and detailed inquiry that elicits an individual's earliest memories and feelings about relationships with significant figures in her life. The interview is recorded and verbatim transcripts are rated along several different dimensions with a premium placed on "coherence": the ability to recall a range of thoughts and feelings about early relationships and speak about them in an organized manner that is relatively free of internal contradiction. The three classifications derived from close analysis of parent interviews -- Autonomous, Dismissing and Preoccupied -- were later found by Main and Goldwyn (1988) to correlate with their childrens' attachment classification. Children of autonomous mothers tended to be secure, children of dismissing mothers were anxious-avoidant, and preoccupied mothers anxious-resistant. Main, Kaplan and Cassidy, (1985) and Ricks (1985) found significant correlations between judgment of parents as secure on the AAI and their childrens security of attachment in infancy and development of age appropriate behaviors in the pre-school years.

The circumscribed emphasis of the AAI on historically important relationships, and the theoretical bias of

attachment theory, has left many questions unanswered regarding the psychological underpinnings of a mother's capacity to provide a "secure base" for her infant. Among the most important of these, how does narrative "coherence" translate into a capacity that allows an adult, verbal human being to come to understand and sensitively respond to a preverbal infant?

The answer may be found by altering only slightly the emphasis in current theoretical explanations of coherence. If, as has been claimed, the degree of security implicit in an adult's working model of attachment is determined not on the basis of the actual events in childhood, but rather on the ways memories and feelings about these experiences are accessed and organized, then it is reasonable to assume that the key to understanding "coherence" lies in further elucidation of the organizational capacity itself. For example, this organizational capacity may be involved in regulating access not only to memories of actual events but to fantasies as well.

Thus, while current attachment theory does not address the possible mediating role played by imagination and fantasy in influencing maternal attachment behaviors, its central theoretical constructs do not preclude the admission of such variables in accounting for a mother's ability to provide a secure base for her infant. Broadening the concept of coherence to include such variables seems warranted. As has been previously argued, regulated fantasy

may be a critical catalyst in mobilizing maternal mentoring strategies. Moreover, as will be suggested below, maternal fantasy in the form of narrative interpretation of infant behavior may play an important role in infant development.

#### MOTHER AS NARRATOR: A PSYCHOANALYTIC PERSPECTIVE

Classical psychoanalytic theory tells us that fantasy and wish are an essential strand in the intricate weave of adult development, adding richness and complexity to each life narrative and contributing subtle shadings to all important relationships (Laplanche & Pontalis, 1967/73). The theory further holds that relationships which couple ambiguity with intense affect -- like the relationship between a mother and her infant or an analyst and a patient -- are the most likely to stimulate fantasy (Fraiberg et al., 1975; Wachtel, 1978). Anyone who has spent time with new parents has observed how quickly parents begin to spin stories about their newborns -- their personalities, potentialities, aims and goals -- often based upon the flimsiest of evidence. As revealing of parents' wishes and fears for themselves as they are reflective of infant capacities, these fantasies exist in unconscious counterpoint to the "actual" relationship. Among other adaptive functions, these stories are in the service of making something which seems like a bundle of needs more nearly human, and more simply endearing. Pathology may be determined by the extent to which conflictual themes from

parents' lives become "parasitic," i.e. rigidly define, or dictate, their view of the infant (Stern, 1991).

The power of newborns to revive in their mothers residues of powerful early fantasies was illustrated for me several years ago, when I visited a childhood friend in the hospital one evening shortly after the birth of her second daughter. As the plump newborn lay sleeping in her bassinet, my friend sleepily recounted the details of a trouble free labor and delivery, and her sense of relief that the baby had arrived robust and physically intact. As she began to compare this experience of labor and delivery to the first, however, her tone grew more contemplative. She didn't recall giving the sex of the baby much thought at all during her pregnancy, so she was caught off guard by the disappointment that welled up upon learning she'd delivered another girl. And, too, she had to confess, this second daughter just didn't seem as pink and pretty as she remembered the older one appearing at birth. She mused aloud about the uneasy undercurrent of competition that had colored her relationship with her own younger sister for as long as she could remember -- would this dynamic now be passed on to a new generation? As she struggled to sort through this tangle of feelings, the baby began to fuss. Without so much as a pause she ambled over to the bassinet and tenderly shifted the infant to a more comfortable position, searching her face, as if for an answer to her question. She must have found one for her countenance

suddenly brightened and turning to me with all the unabashed pride of a new mother, she crowed, "She's really quite dear, isn't she!"

The stories that healthy mothers weave about their infants are, of course, amenable to modification. As the infant confounds the mother's expectations in multiple ways large and small, the story line is edited and revamped, until a goodness of fit is achieved. But for some infants -- particularly those with negative "stimulus value" -- the particular spin adults give to their early narrative interpretations may make a profound, life altering difference in the infant's development. Brazelton (1990), for example, provides a harrowing account of an assessment he performed on a premature infant born to a drug addicted mother in a Boston hospital. The neonatologist and other doctors assigned to the case diagnosed the baby blind because her eyes wandered independently. On the basis of other physical findings, they also concluded she was deaf and had suffered central nervous system damage. As each of Brazelton's attempts to orient and engage the baby provokes the opposite response, he grows more desperate and begins to envision a future of abuse and neglect for this "extremely unattractive" infant. Refusing to accept defeat, he forces her thumb into her mouth and holds it there:

"She gagged and the onlookers winced. I held it in her mouth until she finally began to suck on it. At that point her eyes...came together. She seemed to focus all her kinetic energy on her sucking. Her eyes

opened to follow my face and voice...She followed a bright red ball that I held ...in front of her eyes...her features becoming babyish and pretty for the first time...She had become an engaging baby. No longer did we think she was blind or even brain damaged. She was saving herself."(Brazelton, 1990, p. 90)

Finally, the relationship between infant behavior and adult narrative interpretation of that behavior is also apparent in the laboratory. Stern's (1985) studies of mothers' responses to viewing videotapes of themselves playing with their infants demonstrate that their attitudes, plans and fantasies guide even moment-to-moment interactions to achieve an ultimate aim. Stern notes, for example, that one mother in his study deliberately and purposefully undermatched her son's displays of enthusiasm. When asked what prompted such "misattunements," she revealed that she was concerned that he was "too much like his father, who was too passive and low keyed." (Stern, 1985, p. 213)

#### PREGNANCY: A CRITICAL PHASE IN THE PSYCHOLOGICAL BIRTH OF THE MATERNAL SELF

Some writers have argued that there is intensification of, and preoccupation with fantasy during pregnancy. At least from the moment when the pregnancy is confirmed, and perhaps before confirmation when the pregnancy is planned, women may experience the beginning of a "turn inward" (Bibring et al., 1961). While some researchers have suggested that the psychological changes accompanying

pregnancy facilitate the pregnant woman's gradual transition to the role of mother, they have not delineated this process. By the same token, there has been a conspicuous absence of thought given to the question of what the implications are for the mothers who, overwhelmed by the internal promptings of pregnancy, excessively curb their access to fantasy or become mired in it.

The earliest psychoanalytic views of pregnancy, drawn almost exclusively from theoretical constructs rather than systematic observations of pregnant women, characterized that inward focus as essentially "regressive," with Helene Deutsch (1947) proposing that it was a calm, partly dream-like period during which women could virtually relinquish all other demands and pressures and focus exclusively on the developing child. While Deutsch acknowledged that the reactivation of unresolved preoedipal conflicts and anticipation of the heavy demands of mothering might make pregnancy a less than blissful experience for a few women, she argued that such distress reflected individual difficulties in fully accepting a feminine identification. In Deutsch's idealized view, the dreamy, withdrawn serenity of pregnancy existed as the hallmark of successful maternal adjustment for the vast majority of women.

Bibring, et al. (1961) were the first to document empirically the nature of the psychological changes occasioned by pregnancy and her findings boldly challenged Deutsch's benign view of maternity. In psychoanalytic

evaluations of fifteen pregnant women, she used psychological tests to confirm the emergence of what she interpreted as "developmentally earlier" patterns of behavior, attitudes and wishes. Focusing on the often conflictual character of women's inner experiences and fantasies, she regarded the prevalence of drive laden material as the inevitable, normal outcome of a specific maturational crisis. Pregnancy, in Bibring's view, set in motion a period of intrapsychic reorganization leading to alterations of the woman's patterns of object relatedness:

"Under the impact of the marked physiological and anatomical changes of the first months of pregnancy, the libidinal concentration on the self increases and leads to the integration of, and merging with, this foreign body, turning it into an integral part of herself -- until the quickening disrupts this narcissistic process and undeniably introduces the baby as the new object within the self. From here on, to the delivery, the second task of adjustment sets in: within a state of growing self-cathexis...an opposing trend simultaneously develops. This part of herself begins ... to be perceived as if it were another object, and thus prepares the woman slowly for the delivery and anatomic separation" (Bibring, et al., 1961, pp. 15-16).

In a more recent systematic study of the emotional changes wrought by pregnancy, Leifer (1980) found a shift toward a greater willingness among pregnant women to reflect upon their inner experiences, dreams and anxieties than most normal women in a nonpregnant state. As early as the first trimester women began to report somewhat less emotional investment in the world-at-large. By the second trimester,

stirrings of the fetus usher in a phase of heightened absorption in the experience of pregnancy and preparation for motherhood, eclipsing other interests. The third trimester, for many of the women in Leifer's study, was characterized by dramatic emotional turbulence, mood swings and somewhat less impulse control. Leifer speculated that the turmoil might "stem from the increased openness to one's inner life...and may help facilitate the pregnant woman's gradual adaptation to her new role as mother " (p. 56).

In general, then, psychoanalytic theorists have tended to view pregnancy as a developmental challenge during which conflicts from earlier phases of the woman's psychosexual or interpersonal development are rekindled, worked through and resolved in a manner which permits a woman to fully embrace the pleasures and demands of mothering. For these thinkers, pregnancy opens a psychological window of opportunity -- the work gets done, the window closes. It is beyond the scope of this study to test whether that hypothesis is correct, or whether in fact pregnancy is the beginning of a more lasting shift in women's psychology. The goal of this study is far more circumspect: to momentarily gaze into that window in an attempt to better understand the relationship between access to fantasy during pregnancy and later capacities for maternal empathy.

Nonetheless, it is my belief that the psychoanalytic view of pregnancy as inducing a time-limited psychological crisis in maternal development is incomplete and out of

keeping with the current dyadic emphasis in contemporary theory. It is equally reasonable to assume that increased openness to one's inner life during pregnancy is the first phase in an ongoing, adaptive psychological process that may ultimately enhance the quality of relatedness between mother and infant in particular ways. To offer one plausible connection, the fantasies of pregnancy may be thought to "prime" mothers-to-be for imaginative acts which may lead to richer, more empathic experiences with their infants. That being the case, pregnancy might well be construed as a critical developmental phase in the psychological birth of the human mother.

The immediate goals of this study are advanced by either theoretical conceptualization. Whether one views pregnancy as a discrete developmental event, or a transitional phase in a more extended developmental process, previous studies indicate that the gestational period acts as a significant psychological "stress test" which has the power to facilitate the eruption of unresolved conflicts, impulses, and the like. Typical strategies for containing, defending against, and integrating fantasy material will therefore be cast into even clearer relief during this period.

## PART II: EMPATHY

Thus far, I have limited my focus to a review of the literature on the mother-infant relationship in an effort to provide theoretical and empirical support for the hypothesis that acts of maternal fantasy and imagination are involved in the development of maternal empathy. Casting the net wider to encompass the psychoanalytic literature on empathy in general provides further theoretical support for that hypothesis and also leads to an empirical measure for testing it.

### EMPATHY: A PSYCHOANALYTIC OVERVIEW

A uniquely human achievement, the capacity for empathy makes intimacy of every stripe possible. Where developmental theories have looked to the primal bonds that exist between mother and infant as the model of empathic relatedness, psychoanalysis has also focused on a very different, though no less intimate, relationship to illuminate the subject: the psychotherapeutic alliance that develops between analyst and analysand (Beres and Arlow, 1974; Greenson, 1960; Kohut, 1959; Levin, 1985; Schafer, 1959).

The primary theoretical contribution of psychoanalytic writers has been to view empathy as a dynamic process involving conscious and unconscious fantasies, feelings and thoughts. Empathy has been variously described in the

psychoanalytic literature as the "inner experience of sharing in and comprehending the momentary psychological state of another person," (Schafer, 1959), "emotional knowing," (Greenson, 1960), and "vicarious introspection" (Kohut, 1959), definitions which underscore a central attribute of empathic understanding: it is the outcome of a process which requires access to, and integration of, both cognitive and affective modes of comprehending other human beings. Several reports (Beres, 1968; Beres and Arlow, 1974; Olden, 1953) stress the importance of autonomous ego functions relative to empathy -- transient identification, for example, enables the empathizer to feel not only with the other but about the other -- while simultaneously emphasizing the importance of sturdy ego boundaries in enabling the analyst to preserve his separateness from the patient. That empathy is a two way street is made clear by the degree to which empathic understanding can be disrupted by resistance on the part of the patient.

As we have seen, it is reasonable to view maternal empathy as a particular subset of empathic experience generally, and an expression of the same underlying psychological principles. However, while some authors have speculated that the intense mutual interplay between infant and mother is the prototype for later empathic relatedness, others (Beres and Arlow, 1974; Olden, 1953) are clearer about the potential pitfalls of romanticizing about that early state of symbiotic fusion and mistaking it for mature

empathy.

"When a child is hurt, for example, the empathic mother will react to his pain and anxiety but retain her separate existence as a mother; her identification with the child's pain and anxiety is evoked but it is transient and serves to mobilize behavior appropriate to the emergency. The non-empathic mother, on the other hand, may narcissistically withdraw from the situation or so completely identify with the child that she suffers along with him to the point where she shares the child's helplessness" (Beres and Arlow, 1974, p. 34).

Thus, the experience of "affect contagion," a primitive form of "feeling with" the other, is distinguished from mature empathy by the failure of the individual to invoke adequate reality testing and appropriate ego boundaries. The psychoanalytic theory of adaptive regression, which will be taken up in the next section, more fully describes the interplay between fantasy and reality testing involved in mature maternal empathy.

#### ADAPTIVE REGRESSION AND EMPATHY: A THEORETICAL MODEL

As we have seen, empathic "knowing" of another theoretically involves the simultaneous processing of multiple levels of experience. In the case of maternal empathy specifically, crucial information is extracted from cognitive decoding of infant signals and from the ability to affectively resonate in response to the infant's shifting internal state. According to psychoanalytic theory each of these core levels of experience has a distinctive representational substrate. Since Freud's earliest

writings, the more cognitively driven phenomena have been referred to as "secondary process;" the more affectively, wish or fantasy dominated domain of representation has been designated as "primary process."

That distinction was drawn first in *The Interpretation of Dreams*, Freud's (1900/1909) exploration into the organization of thought and affect. The mind of the infant, Freud asserted, as well as the dream world of adults was dominated by primary process, a primitive set of mental functions that operated solely in response to the pleasure principle. The world of primary process was one in which need, wish, and fantasy were closely intertwined; primary process occupied a "primitive" realm whose "archaic" mental organization remained impervious to developmental adaptation. According to Freud, the hallmarks of primary process thought are the disregard for logical relationships between cause and effect and the absence of reflexive self-awareness. Instead, Freud theorized, that domain was governed by the processes of displacement (where one idea represents another) and condensation (where a complex network of interrelated thoughts is distilled into a composite formation). Human wit and the creative symbolism of dreams as well as the hallucinations of psychotics, argued Freud, were manifestations of "regression" to these earlier ways of thinking. Secondary process thinking, Freud wrote, follows the rules of formal logic and is typified by mental processes that are goal-oriented, reality bound, and

susceptible to modification through interaction with the environment.

With the advent of ego psychology in the 1950's, came the recognition of primary process thought as both sophisticated and involved in the most highly developed mental activities. In "Psychoanalytic Explorations in Art," Ernst Kris (1952) elaborated on the relationship between artistic creativity and the controlled use of primary process through the "relaxation of ego functions." Relaxation or "regression" of ego functions, Kris held, was essential to creativity: "The word 'fantasy' conveys just this disregard of external stringencies and its reference to the product of creative communication." (p. 253) At the same time, Kris asserted, the essential communicative function of art required the artist to continually shift perspective, moving from a position of relative indifference to an imagined audience to a temporary identification with them. This line of argumentation would later inspire a number of Rorschach studies demonstrating the relationship between primary process integration and creative problem solving.

Following Kris, the general principal of "regression in the service of the ego" gained currency among analysts (Arlow and Brenner, 1964), especially those attempting to apply psychoanalytic constructs to projective test data. Schafer (1954) introduced the notion of "shifts in the psychic level of functioning" to explain the presence of

both adaptive and regressive trends in the average subject's responses to the ambiguities posed by the Rorschach. Later Schafer (1967) defined regression in the service of the ego as "the ego's permitting relatively free play to the primary process in order to accomplish adaptive tasks":

"It is warranted to speak here of regression in so far as primary process or its close derivative, normally warded off, are allowed a place in conscious experience; and it is warranted to speak of the process being in the service of the ego in so far as the regression serves ego interests (such as being creative or empathic) is relatively reversible, and is amenable to productive working over by the ego in terms of its adaptive purposes" (p. 125).

Listing the factors facilitating the development of controlled creative regression, Schafer mentions one that has particular relevance to the question of maternal empathy: a relative mastery of early traumata. Such mastery, Schafer notes, implies that distressing early childhood experiences have been worked through sufficiently and integrated into the adult personality. Memories of such experiences, and the helplessness they engendered, enable adults to identify with the crises and crucial experiences of children. This developmental notion links the psychoanalytic theory of empathy with the attachment construct of "coherence."

Recent conceptualizations have addressed two major issues relative to understanding primary process and its place in development. In considering the relationship between primary and secondary process, several theoreticians

have questioned whether the notion of "regression" is even necessary (Arieti, 1976; Suler, 1980). Fischer and Pipp (1984) proposed a cognitive-developmental model in which primary process thought is construed as inhabiting its own "separate but equal" developmental line, which, like secondary process, is subject to systematic refinement over time. They speak, thus, not of "regression" to primary process but of coordination "between" primary and secondary process during mental activity.

The second line of inquiry consists of efforts to understand the relationship between primary process and affect. Elkind (Alvin, 1980) and Zimiles (1981) each view primary process as fundamentally linked to affective material. Russ (1970) has conceptualized primary process content as "material around which the child has experienced early intense feeling states (aggressive, oral, anal)" (p.757). Either current or residual affect may be responsible for the emergence of primary process in fantasy.

One may reasonably assume that a mother's capacity to "free up" her own affects in the service of creating a resonant emotional experience with her infant is likely to be affected by her capacity to integrate those mental representations that are affectively charged with those that are comparatively neutral. Thus, within the theoretical framework of psychoanalytic psychology one meaningful way of exploring the psychological underpinnings of maternal empathy is to examine the coordination of primary and

secondary processes. The study described below investigates these processes via a standardized assessment of Rorschach responses of pregnant women. The unique "affectivity" of pregnancy is predicted to elicit profiles of primary and secondary process integration predictive of later maternal empathy.

#### EMPIRICAL LITERATURE

Recent reviews of the personality assessment literature have emphasized the value of projective measures in revealing not just the perceptual "decoding" of an ambiguous stimulus -- the use for which the Rorschach was originally intended -- but those enduring predispositions unique to the individual that organize this "decoding" process and endow it with meaning. Because they ask individuals to make sense of "well specified, carefully defined, but relatively ambiguous, segments of reality" (Blatt, 1990, pp 401) the Rorschach, and also the Thematic Apperception Test, are thought to expose well-established cognitive structures and mental representations which, in turn, reflect dimensions of personality organization and functioning.

There have been many recent attempts to approach the Rorschach as a method for studying representational processes. Measures designed to assess aspects of manifestly human percepts on the Rorschach and investigate the relationship between interpersonal interactions and internalized representations of self and other have

proliferated over the last decade (Blatt et al., 1980 and 1979; Blatt, et. al, 1976; Krohn & Mayman, 1974; Mayman, 1967; Urist, 1977; Urist & Shill, 1982). In studies using the TAT, Thompson (1986) has advanced the concept of a separate developmental line of affect maturity and rated the quality of human representations along that dimension. Westen (1991) has used TAT protocols to assess four different attributes of object representations: affect-tone; complexity and differentiation of characters; social causality; and quality of emotional investment and moral development.

Though the object relations perspective that informs the above instruments has obvious conceptual appeal for the researcher interested in maternal empathy, none specifically addresses the issue of primary and secondary process manifestations on the Rorschach. Moreover, none of these instruments has emerged as effective in making subtle discriminations among individuals in non-clinical populations. In fact a recent major review of that literature suggests the opposite. Stricker and Healey (1990) reviewed most of the significant empirical object relations research, critiquing each instrument on issues of reliability and validity. Their evaluations of the empirical evidence generated by two of the most commonly used Rorschach based measures -- the Mutuality of Autonomy Scale (Urist, 1977; Urist & Shill, 1982) and the Developmental Assessment of the Concept of the Object Scale

(Blatt, et al., 1976) -- led them to conclude that both more convincingly assessed pathology rather than object relations. In general, the authors observed that although "the quality of research (in the area of object relations) is improving, it remains plagued by limitations of small numbers of subjects, few correlations with nontest data,...and the large problem of accurately and reliably diagnosing the patient populations." (p. 227)

Thus both on empirical and conceptual grounds this writer finds it necessary to consider another Rorschach scale specifically developed to measure the phenomena under discussion.

#### THE HOLT SCALE VARIABLES

Holt (1968, 1977) developed a method for evaluating primary and secondary process manifestations in the Rorschach using three sets of variables to assess each response: content, formal, and control and defense.

**Content Primary Process:** This variable measures the extent and manner in which drives are involved in cognition. Rorschach percepts are rated for the presence of libidinal or aggressive drives and further classified according to the presence and intensity of oral, anal, sexual, exhibitionistic-voyeuristic, homosexual, and aggressive images and themes.

**Formal Primary Process:** This is a measure that captures the extent to which responses flout the reality

principle. Perceptual organization, thought process and verbalization are all assessed for deviations from logical, orderly, realistic thinking. The scoring of formal primary process elements includes indications of the usual elements of primary process thought such as condensation, displacement, substitution, and symbolization (Freud, 1911) and the relative lack of conjunctive and causal, temporal and other relationships (Rapaport, 1954). Included are responses which deviate from what can be seen in reality (e.g. A rabbit with bat wings), logical contradictions (old maids but they look young), unlikely activities or verbal condensations.

**Defense Demand:** A summary score for both types of primary process responses, Defense Demand (DD) is a rating of what Holt refers to as the "shock value" of the responses. A six-point scale is used to classify responses according to the intensity and primitivity expressed in the content and the degree of peculiarity evident from the formal aspects of the response. More socially acceptable responses in which primary process is implicit (e.g. "chicken mc nugget") receive a DD1 rating while direct expressions of aggressive or sexual content, contaminated or otherwise absurd responses are designated a DD6.

**Defense Effectiveness:** Responses containing any scoreable content or formal element are rated on the effectiveness of strategies used to reduce or prevent anxiety. The extent to which subjects' interpretation of

the blot is deemed appropriate and adaptive is also evaluated. A Defense Effectiveness (DE) rating is based on three elements: 1. form level; 2. quality of expressed affect; and 3 the social appropriateness of the context.

**Adaptive Regression:** Holt's Adaptive Regression variable was derived by taking the mean of the product of Defense Demand and Defense Effectiveness for each scoreable response:  $\text{Sum (DD X DE) / PPR (number of primary process scored responses)}$ .

In contrast to the variables described above, the Mutuality of Autonomy Scale (MOAS; Urist, 1977, 1980) is a seven point scale which assesses the balance of mutuality in animate and inanimate movement responses on the Rorschach. The Developmental Analysis of the Concept of the Object Scale (DACOS; Blatt et al., 1976) is a multidimensional assessment of human figure responses on the Rorschach. Neither the MAOS nor the DACOS specifically addresses the question of integration of primary and secondary process material on the Rorschach.

#### **THE HOLT SCALE: A REVIEW OF THE LITERATURE**

**The Holt Manual for Scoring Primary Process Manifestations on the Rorschach** has generated a fair amount of published research continuing up to the present day, though the fact that the instrument has undergone repeated revisions makes it difficult to thoroughly assess that research. Nonetheless, systematic reviews of studies using

the Holt system with clinical and non-clinical child and adult populations have demonstrated both its reliability and validity (see, e.g. Lerner & Lewandowski, 1975).

A study undertaken by Blatt and Berman (1984) provides particularly strong support for the conceptual validity of the Holt Scale variables Defense Demand and Defense Effectiveness as measures of central dimensions of personality organization, as they are presumed to be in the case of maternal empathy. The authors included these variables in a Rorschach study of 76 opiate addicts and 24 psychiatric inpatients. Defense Demand and Defense Effectiveness were among a total of 18 variables the authors submitted to a common factors analysis. Seven empirically independent, orthogonal factors emerged, each of which could be assessed by single variables that successfully differentiated opiate addicts and psychiatric patients and significantly correlated with independent estimates of ego functioning development as evaluated in the Bellak clinical interview and on the Loevinger Sentence Completion Test. The authors further found that of these seven factors, two were assessed by the Holt variables. Moreover, while the seven factors together accounted for 73 percent of the variance of the measures used, Defense Demand and Defense Effectiveness accounted for fully 26 percent of that variance.

Longitudinal studies of non-clinical, exclusively female populations offer some support for the notion that

both access to primary process and adaptive strategies for its integration might be expected to accelerate particularly during developmental stages -- like pregnancy -- where biological and intrapsychic stress are presumed to be greater than usual. In a series of papers, Lehtinen (1981, 1983a, 1983b) reported data from a longitudinal study of 132 Swedish females aged 4-17, who were administered the Rorschach during oedipal, latency and adolescent stages of development. The data were analyzed using the Holt Scale. While Lehtinen's findings have not been replicated (see e.g. Holt, et al, 1986), her reports indicated that amount of primary process, as measured both by percentage and raw summary, and the ratio of Level I to Level II responses tended to significantly decrease with the child's age. However, the downward trend of primary process expression was not linear. Instead, Lehtinen found peaks both at the oedipal phase and again in preadolescence, after a relative lull during latency. Of particular interest was the author's finding that Defense Effectiveness -- that is, the capacity of the individual to integrate primary process material into a successful adaptive response -- was largely consolidated during the latency phase of development, and remained stable during preadolescence and adolescence despite the relatively greater quantity of primary process material seen during those later developmental phases.

Both quantity and mediation of primary process as assessed by the Holt Scale have been significantly related

to openness to affective and imaginal types of experience in children and adults when such openness is adaptive, as it is posited to be in the case of maternal empathy. Russ and Grossman-McKee (1990) administered the Rorschach, the Affect in Play Scale, and the Alternate Uses Test to 60 first and second graders (30 boys, 30 girls). Amount of primary process (Sum PriPro) on the Rorschach was found to be significantly, positively related to freedom of affective expression in fantasy play among children of both sexes. Weiss (1971) found Holt's Adaptive Regression Score to be significantly related to a combined measure of sensitivity to emotional and non-verbal communication; her subjects were 50 college students, 30 males and 20 females.

Pine and Holt (1960) reported unexpected gender differences in an investigation of creativity that suggest a linkage, for females, between ease of access to primary process and creative investment in tasks involving themes of reproduction, interpersonal concerns and maternal relatedness. The authors investigated the relationship between primary process and creativity in a range of domains: problem solving, literary and artistic originality, humor, and pure science. As predicted, there were significant correlations between Defense Effectiveness and overall creativity for both males and females, and significant correlations between Adaptive Regression and overall creativity for males. Much to the authors' surprise, however, amount of primary process was

significantly correlated among females with two outcome measures: literary productiveness on the Thematic Apperception Test, where subjects were instructed on Card 11 to "tell a fairy tale such as you might tell a child," and a test which asked subjects to formulate imaginative hypotheses regarding reproductive function.

One study has even directly related Holt's measure of Adaptive Regression to empathy, albeit in the psychotherapeutic situation. Bachrach (1968) used the Holt Scale to score the Rorschach protocols of 22 male and female psychologists and psychiatrists in training; tape recordings of psychotherapy sessions were evaluated using a measure that captured the psychotherapists' capacity for "conjunctive empathy." Rank order correlations obtained for both measures demonstrated a significant relationship between conjunctive empathy and Holt's measure of Adaptive Regression.

Of note, comparisons between clinicians who were classified as high, medium, or low on the conjunctive empathy variable revealed that Defense Demand scores were greater at either extreme end. Defense Effectiveness scores, on the other hand, followed a linear trend, with clinicians ranked high on conjunctive empathy demonstrating the most effective defensive strategies for integrating primary process material. Because of the manner in which Adaptive Regression is derived, however, the author was able to conclude that Defense Demand contributed to the variance

that Adaptive Regression showed over Defense Effectiveness. Moreover, the relative abundance of primary process material found in all clinicians' protocols -- more than half of all subjects' responses contained formal or content primary process manifestations -- suggested that increased control did not require constriction of access to such material.

In sum, the theory of empathy as, in part, an expression of controlled, creative regression has sound conceptual underpinnings in the psychoanalytic literature and finds both indirect and direct empirical support from the literature on psychological assessment. At the same time, psychoanalytic theory and research has examined empathy largely as it is experienced in the psychotherapeutic consulting room, not as it facilitates the development of an optimal relationship between a mother and her infant. As we have seen, the question of "maternal" empathy -- or as it is more frequently referred to "maternal sensitivity" -- has been a subject that has received more intensive scrutiny from developmental psychologists, generally, and attachment theorists and researchers more specifically.

#### SUMMARY AND HYPOTHESES

Characterizations of the maternal contribution to the mother-infant relationship have focused variously on the mother's ability to mentor her infant; to provide her infant a secure base from which he can eventually both venture

forth into the world and return when necessary for refueling; and, finally, to hold "in trust" a gestalt of her infant that enables her to endow even his earliest unintegrated gestures and behaviors with full human significance. These aspects of maternal empathy are complexly intertwined and it is beyond the scope of this study to determine the relative contribution of each to the provision of optimal care. Nevertheless, each characterization describes a view of sensitive mothering in which acts of maternal imagination and fantasy may be key. An argument has therefore been made that maternal empathy can be construed as one important subset of behaviors in the broader class psychoanalysts refer to as empathy. Similar underlying psychological processes involving fantasy and imagination are assumed to be involved in both the general and the specific instance.

The proposition being set forth here is that one such process -- regression in the service of the ego -- is critical in the development of maternal empathy. In the sense in which it is here being invoked, regression in the service of the ego -- or "adaptive regression" -- represents the balance between the inward tug of a mother's private world of associations and memories and the palpable, contradictory, and continuously changing reality of her developing infant. Implied in such a dynamic tension is that a mother fully accesses the range of her imaginative powers and her affective experiences limited only by the

demands of sound reality testing. This "controlled freedom" affords her maximum intellectual and emotional flexibility in her efforts to interpret her infant's cues, anticipate and plan for various contingencies in infant responsivity, and adapt to shifts in infant relatedness. These are mothers who, from a psychoanalytic standpoint, have sufficient ideational capacity to allow them to recognize and integrate their own and their infants' unpleasant feelings without undue disruption in their ability to assess the relationship. They are further able to recognize when unresolved conflicts from earlier relationships are distorting their ability to accurately evaluate current ones. From the perspective of attachment theory, these are mothers who are able to remain consistently sensitive to their infants' cues throughout the first year of life.

Impairments in the capacity for adaptive regression may be manifested in two ways. On one end of the continuum are mothers whose access to primary process might be described as unregulated. These are mothers whose internal experiences have overriding weight in determining their behavioral responses to their infants. At the same time, the ideational structure for integrating more complex levels of experience in these women is weak, predisposing them to emotional overreactivity and impulsivity in response to their infants' distress cues. Such impairments make the process of differentiating between past and present experiences, and between self and other more difficult.

From the perspective of attachment theory, these are mothers who oscillate in their ability to remain available to their infants' cues. Their responses to the infant are predicted to be accompanied by excessive levels of affective lability.

On the opposite end of the continuum are mothers whose access to primary process is excessively curtailed. These are mothers who defensively disown aspects of their internal experience that threaten their sense of personal agency. Unable to recognize their own internal distress cues, they are similarly inclined to misperceive and ultimately misinterpret their infants' distress cues. In contradistinction to the "unregulated" mothers described above, however, these are mothers who by excluding from awareness what is or has been disturbing or unpleasant in themselves or their environment are able to maintain high levels of reality testing. What is sacrificed in the process is an ability to tolerate expectable levels of complexity and ambiguity. Moreover, where unregulated mothers are susceptible to affective surges, constricted mothers are prone to chronic, low level anger. Unreflectiveness with respect to their own early experiences and relationships leads them to underestimate and undervalue the power of their infant's dependence on them, and in general, makes these mothers less available to their infants for comfort and support.

The goal of this research is to look specifically at the relationship between a mother's access to primary

process and her ability to remain consistently available to her developing infant. The proposed research will test the following hypotheses:

**Major Hypothesis:** There is an optimal range of adaptive regression and fantasy formation which enhances a mother's ability to sensitively respond to her prelingual infant.

**Hypothesis 1**

- a) Mothers of secure infants will demonstrate the highest range of adaptive regression scores in their responses to the Rorschach test.

Well regulated access to sufficiently available primary process will maximize the cognitive and affective flexibility mothers require to respond to the widest range of infant needs. Such mothers, it is predicted, will be better equipped to tolerate the contradictions of parenting without undue disruption in patterns of relating to their infant. The overall consistency manifested in these mothers' affective and behavioral responses will be reflected in their infants' readiness to reestablish contact with them following a brief separation. Infants of mothers who fall into this category will be classified as secure.

- b) Compared to mothers of their secure counterparts, mothers of insecure infants will demonstrate a lower

level of adaptive regression scores in their responses to the Rorschach, as revealed by one of two impairments:

- i) curtailment of access to primary process; or
- ii) dysregulation of access to primary process

Constricted access to primary process fantasy formation will also interfere with a mother's ability to respond to her prelingual infant. It is assumed that reduced access to controlled primary process is the result of minimal ability these mothers have acknowledging and integrating more unpleasant and disturbing feelings in general. Such mothers, it is predicted, will similarly fail to empathically respond to expressions of negative affect in their infants. Infants of these mothers will, over time, avoid displays of negative affect and will engage in reunion strategies classified as anxious-avoidant. These mothers, it is hypothesized, will earn a middle range of adaptive regression scores.

Dysregulation of access to primary process -- either extreme constriction or unregulated access -- will interfere with a mother's ability to empathically respond to her prelingual infant. Such mothers, it is predicted, will be susceptible to surges of anxiety, will be intrusive and unable to remain objective and consistent in response to their infants' cues. Consequently, the infants of such mothers will have parallel impairments in their inconsistent

strategies for regulating distress upon reunion with their mothers. These infants will be engage in reunion strategies classified as anxious-ambivalent. It is predicted that these mothers will earn the lowest adaptive regression scores.

## CHAPTER TWO

### METHOD

#### Introduction

These hypotheses were tested by a prospective study of Rorschach responses of pregnant women. The Rorschach responses were scored using the Holt Scale measures to assess level of primary process integration. These variables were used to predict the quality of the infant attachment at 12 months.

#### Subjects

The subjects for the study were obtained through a longitudinal study of mothers and infants, which followed mothers beginning in the second and third trimester of pregnancy and continued to evaluate the dyad into the infant's sixteenth month. Twenty five middle-class, college-educated, primiparous married women between the ages of 25 and 35 and their first-born children were studied. Twenty four of the pairs were white, one pair was African-American. Fifteen of the infants were female, 10 were male. Mothers were recruited through private obstetricians, Lamaze and other forms of childbirth-education classes. Flyers describing the project were distributed to interested parents by physicians, midwives and Lamaze instructors. Mothers were interviewed and tested three times during their pregnancy. Five post partum visits were scheduled in which mothers were interviewed and mothers and their infants were

videotaped. Subjects were paid a total of \$120.00 for their participation in the study.

### Procedure

The second pregnancy visit, and the second infancy visits served as data points for the present study.

Pregnancy Visit: Subjects were seen in a classroom at City College. Paper-and-pencil measures that had been distributed at the first visit were collected, and mothers were asked whether they had any questions regarding the study thus far. They were then told that a series of tests would be administered to assess the manner in which they thought, reasoned and solved problems. The interviewer, a graduate student in clinical psychology, then administered five WAIS subtests, a drawing exercise, the Rorschach and an interview that asked them to recall their earliest memories. Finally, the interviewer supplied the mothers with additional paper and pencil measures to be taken home, filled out and returned to the study at the next visit.

Infancy Visit: When the child was one year old, the mother brought him/her to an unfamiliar laboratory for the administration of the Strange Situation. Mothers were given the Dyadic Adjustment Scale and the Infant Characteristics Questionnaire to take home and return to the study.

### Measures

The Rorschach -- The Rorschach consists of a standard series of ten inkblots. The subjects were asked upon receiving the first card in the series: "What does this look like to you? What might this be?" All responses on Card I were followed by the prompt "Anything else?" This prompt was discontinued during the remainder of the subjects' free response to Cards II-X. Inquiry followed presentation of the entire series and departed from standard procedure in the following way. Upon inquiry, interviewers followed up subjects' movement responses -- e.g. "I see a man scowling" -- with an open-ended prompt ("Scowling as if...?"). Rorschachs were administered by trained students in a doctoral level program in clinical psychology. Verbatim transcripts of subjects' responses were used in the final scoring.

The Rorschach was scored following the procedures outlined by Holt (1968) in the most recent edition of his Manual for the Scoring of Primary Process Manifestations in Rorschach Responses. This and earlier revisions of the Holt Manual have produced significant construct validation (e.g., Goldberger & Holt, 1958; Lerner & Lewandowski, 1975). As previously discussed, each individual Rorschach response was evaluated for the presence of content or formal manifestations of primary process. Those responses deemed "scoreable" were then evaluated along two separate

dimensions: the blatancy of primary process evident in the response (defense demand); and the perceptual accuracy of the response (defense effectiveness).

The Holt manual for scoring defense demand was preserved in its entirety. Responses containing scoreable primary process elements earned a scaled score of 1 - 6, with a six reserved solely for the most extreme and unsocialized manifestations of primary process. Of the three criteria established by Holt to calculate defense effectiveness, the author elected to retain only Form Quality, which was felt to be a purer measurer of reality testing, and less likely to be contaminated by clinical subjectivity. Though Mayman (1970) and Exner (1986) systems were used to guide decisions regarding perceptual accuracy, final determinations were left to the judgment of the coders (MF and EG). In addition, the six point scale for rating defense effectiveness was converted from -3 to +2 to +1 to +6 in order to reduce confusion regarding the meaning of the mid-range of adaptive regression scores. Scores were assigned as follows: F+ = 6; Fo = 5; Fw+ = 4; Fv and Fw- = 3; Fa = 2; and F- = 1. Adaptive regression scores for each individual scoreable response were calculated by obtaining the product of defense demand x defense effectiveness. Mean adaptive regression scores for each protocol were then derived. Each subjects' highest adaptive regression score constituted an additional variable.

The coders were trained and inter-rater reliability was

achieved in two phases. The first involved scoring Rorschach protocols obtained from adolescent and adult females on a psychiatric inpatient unit, and adult males and females evaluated for outpatient psychotherapy. Once acceptable reliability had been attained, six protocols of pregnant subjects not included in the present study were coded by the two raters independently. Reliability was determined for the following variables: percentage primary process ( $\%PriPro$ ), mean defense demand ( $\bar{X}DD$ ), mean defense effectiveness ( $\bar{X}DE$ ), mean adaptive regression score ( $\bar{X}ARS$ ), and highest adaptive regression score ( $HARS$ ). The intraclass correlation coefficient,  $R_i$ , was used to compute reliability and bias for ordinal data (Cicchetti, et al., 1976). Once acceptable reliability had been established, both coders proceeded to code all 25 protocols. Reliability was checked at regular intervals. The average of the two data points were used in the final statistical analysis.

Final reliability for  $\bar{X}ARS$  and  $HARS$  was calculated using a total of 20 Rorschach protocols randomly selected from the present sample. For  $\%PriPro$ ,  $\bar{X}DD$  and  $\bar{X}DE$ ,  $R_i$ s were respectively, .92, .86 and .82. For  $\bar{X}ARS$  and  $HARS$ ,  $R_i$ s were .83 and .83 respectively.

The Strange Situation -- This procedure was designed to assess the quality of the child's attachment to his mother. It lasts approximately half an hour and consists of eight episodes involving the mother, the baby and a stranger. The

stranger and the mother alternately leave in a standard order; the order of the leavetaking subjects the child to increasing stress. The child's behavior toward the mother upon reunion was rated and each infant assigned to one of three categories: secure (B), anxious-avoidant (A) and anxious-resistant (C). Ratings and classifications were based on Ainsworth, Bell & Strayton. This is a highly reliable and valid scale that has been used in numerous studies of infant behavior and development.

In addition, infants were classified according to eight subgroups. Of particular interest for this study were the four subclassifications of the infants judged secure, B<sub>1-4</sub>. Infants in subgroups B<sub>1</sub> and B<sub>2</sub> show minimal distress upon separation from their mothers and upon her return tend to make contact with her from a distance. B<sub>3</sub> and B<sub>4</sub> infants are more distressed upon separation from their mothers, and more likely to maintain closer contact in her presence.

Video tapes of Strange Situations were coded by Dr. Jude Cassidy's research staff at Pennsylvania State University. Prior to coding, the staff had been trained to reliability by Dr. Cassidy. Dr. Cassidy was called in as a second coder when questions arose regarding final attachment classification.

## RESULTS

The results of the study will be discussed in two parts. The distribution of the infants' attachment status as judged by the Ainsworth Strange Situation will be reviewed, with and without reference to gender. The findings for the hypotheses will then be presented.

### Distribution of Infants' Attachment Status With and Without Reference to Gender

The overall distribution of attachment classifications was 16 (64%) in group B, 5 (20%) in group A, and 4 (16%) in group C. These proportions are consistent with previous studies using the Strange Situation. The distribution of subclassifications among the secure infants were 10 secure displaying less distress upon separation from mother and more distal modes of contact in her presence (primary or secondary B<sub>1</sub> or B<sub>2</sub>) and 5 displaying more separation distress upon mothers departure and proximal modes of contact in her presence (B<sub>3</sub> and B<sub>4</sub>).

With respect to gender differences, there were 15 female and 10 male infants in the study. The distribution of gender in group B was 12 females and 4 males; in group A 0 females and 5 males; in group C, 3 females and 1 male. Within the secure group, females comprised 9 out of 10 B<sub>1,2</sub>

infants, and 3 out of 6 of B<sub>3,4</sub> infants.

Adaptive Regression on the Rorschach and Maternal Empathy:  
Mothers of Secure v. Insecure Babies

Because of the small number of insecure babies in the sample (N = 9, with five avoidant and four resistant), an F test could not be performed to compare differences between the secure and the two distinct insecure groups on the relevant variables. The two insecure groups were therefore combined into a single group called mothers of insecurely attached babies (MIB) and compared with the group comprised of mothers of securely attached babies (MSB).

Table 1

Comparisons of Mothers' Primary Process Scores by Babies'  
Secure and Insecure Attachment Classification

	<u>Babies' Attachment Classification</u>				
	Secure		Insecure		t value
	n = 16		n = 9		
$\bar{X}$	SD	$\bar{X}$	SD		
-----					
Mothers' Scores:					
‡Pri Pro	54	23	49	13	.61
$\bar{X}$ DD	2.4	.49	2	.6	1.5
$\bar{X}$ DE	4.1	.52	3.8	.8	.96
$\bar{X}$ ARS	9.7	1.8	7.8	2.6	2.19*
HARS	18	4.5	13	2.7	2.72**
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\*p < .025, one-tailed

\*\*p < .01, one-tailed

As predicted, one-tailed t tests comparing the two groups revealed that the MSB group had significantly higher mean adaptive regression scores and highest adaptive regression scores than did the MIB group. It is instructive to examine the relevant variables separately. The two groups did not differ significantly on ‡PriPro -- in

both groups just about half of all Rorschach responses contained some manifestation of primary process. In addition, a comparison of the two groups on mean defense effectiveness also failed to yield significant differences. That negative finding is critical from a clinical standpoint, as it suggests that overall, any impairments in reality testing -- and the psychopathology associated with such impairments -- are equally distributed among the two groups. A one-tailed t test comparing groups on mean defense demand, though not achieving statistical significance, demonstrated a trend in the predicted direction with MSB showing a tendency to produce responses with more primitive and illogical thematic content, and hence, greater "shock value." Since the adaptive regression score for each individual scoreable response is the product of DD x DE, the findings suggest that the MSB group is not only able to tap into more primitive unconscious fantasy, but is able to do so without sacrificing perceptual accuracy. Moreover, because mean defense demand in and of itself did not account for the group differences,  $\bar{X}ARS$  signifies that for many responses in the MIB group more primary process material was associated with relatively greater lapses in perceptual accuracy.

In view of the considerable degree of overlap among individual subjects in the two groups, the strength of the differences on the highest adaptive regression score adds an important dimension to this study. These findings suggest

that under similarly extreme conditions, the MSB group demonstrated a significantly greater potential for integrating affect laden and illogical fantasy material than did their counterparts in the MIB group.

Maternal content in unconscious fantasy: Mothers of Secure v. Insecure Infants.

In the course of scoring Rorschach responses for primary process content, it became clear that many protocols contained references to explicitly maternal themes. A post hoc analysis of maternal content was therefore undertaken. A maternal theme was defined as any response containing either literal or metaphorical reference to pregnancy, motherhood or birth. Reproductive organs were excluded from consideration, as were references to "mating". A list of all scoreable responses by attachment group appears in Table 2, below.

A chi square analysis demonstrated that the MSB group had significantly more protocols containing maternal content (10/16) than the MIB group (1/9)  $\chi^2 = 6.17, df = 1, p < .02$ . Indeed, the single reference to maternal themes in the MIB group was manifested in the record of the sole mother in that group whose infant had a secondary "secure" classification in addition to a primary "resistant" classification.

Table 2

Comparisons of Maternal Content by Babies' Attachment StatusMothers of Secure BabiesMothers of Insecure Babies

A sonogram without a fetus

Pregnant dancers

A pelvis...I must be thinking  
about delivering my baby

A pelvis...I see a little  
fetus inside

The bust of two women...the  
symbols represent motherhood

I see an embryo not fully  
developed

Embryos inside a person waiting  
to grow up

Kids going crazy and the mother  
going, Stop!

Blood and darkness and pain,  
like childbirth.

A butterfly being born

Animals coming off of Noah's  
Ark...to sustain the species  
...and repopulate the world

Babies in the womb

A bear giving birth

Don't moths become butterflies?  
It looks like its  
about to go into a cocoon  
and start spinning its nest.

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To summarize, the findings support the hypothesis that greater ease of access to well regulated primary process fantasy during pregnancy is significantly, positively related to infant security of attachment at one year. The post hoc findings further suggest that the content of unconscious fantasy in mothers of securely attached infants is distinguished by the presence of explicitly maternal themes and images. Finally, the distribution of attachment classifications by gender suggest the possibility of a gender effect among infants who show less distress upon separation from their mothers, and engage in more distal modes of contact. In this study, girls evidencing this pattern of emotional expression in the Strange Situation were consistently classified as securely attached, while boys were nearly always judged as insecure/avoidant.

## CHAPTER FOUR

### Discussion

The subjects in this study were challenged by the confluence of multiple interacting variables related to their pregnancies. The condition of pregnancy induces dramatic hormonal upheavals, radical bodily transformations and significant shifts in social role expectations, each with potentially profound psychological consequences for the first time mother-to-be. The study paradigm drafted into service the unfamiliar and ambiguous conditions of the Rorschach to expose the psychological consequences of this major event in adult female development.

This study demonstrates that during pregnancy mothers' responses to the Rorschach test differ along a number of significant dimensions that partially predict the quality of mother-infant attachment evident at the end of the infant's first year of life. Stated more precisely, the Rorschach responses of pregnant women who went on to parent securely attached babies earned higher mean and highest adaptive regression scores on the Holt Scale than did those women who went on to rear insecurely attached infants. In this sample, higher adaptive regression scores were reflective of a greater capacity to give voice to frank and uninhibited expressions of sexual, aggressive and illogically conceived material and integrate such content into a perceptually

convincing gestalt. The two groups of mothers did not differ in their overall ability to formulate perceptually convincing responses to the inkblots; rather, in the secure group lapses in form quality were generally seen in the context of responses where primary process was blatant, while in the insecure group lapses in form quality tended to occur in the context of even weak expressions of primary process. Moreover, significantly more mothers of secure infants made reference to explicitly maternal themes in the course of responding to the Rorschach stimulus. These findings are consistent with psychoanalytic theory which stresses the importance of adaptive regression as a mediating variable in empathic responsiveness. An unexpected finding suggested that gender may be a significant predictor of attachment status among a subgroup of infants with similar patterns of emotional arousal and regulation.

### The Findings

#### Maternal Primary Process, Adaptive Regression and Infant Attachment Status: An Overview

In this study, mothers and their infants were each exposed to novel situations in an effort to gain insight into their predominant modes of organizing experience and behavior under stress. For infants, the "stress test" consisted of exposure to an unfamiliar adult and an unexpected brief separation from his mother. For mothers,

stress was induced during pregnancy within the context of an assignment to interpret, in the presence of an anonymous tester, an ambiguous and novel set of inkblots.

How the mothers in our study interpreted that assignment, and weighted its subtle embedded instructions, revealed significant differences in the freedom with which they were able to access derivatives of unconscious fantasy. As a whole, responses provided by mothers of securely attached babies were distinguished by their general capacity to "stay between the lines" of an inkblot generated gestalt even when giving voice to startlingly primitive primary process material.

Among mothers of secure babies, responses with manifest primary process content at times conveyed infectious high spirits, individually imprinted with mothers' prevailing interests and attitudes about the world around them:

Card II: "Two elephants partying at the Republican Convention. Their party hats are flying in the air and they're doing the cha-cha."

Card X: "This is a celebration that the test is almost over! These are the animals going to Noah's Ark...two of everything...and they've all come and gathered to sustain their species in life. Maybe they are coming off the Ark and are about to repopulate...this brand new world...and they are delighted that the forty days...and nights is over, and now they can go back to earth."

But other responses, sometimes occurring within the same protocol, indicated that feelings of bountiful elation were only part of the story. Indeed, some mothers seemed chronically overwhelmed by feelings of fragility and

internal decay:

Card I: "Maybe like a butterfly...a smothered butterfly that's falling apart with ragged wings."

and many seemed at least transiently susceptible to overpowering surges of feeling:

Card II: "An inkblot. (she laughs) A bloody inkblot. Tender and aggressive feelings were expressed in response to different cards within the same protocol:

Card VII: "Two children staring at one another. Their ponytails are up in the air. They're about to kiss."

Card X: "Gremlins in a face off...they're gonna fight. (laughs) They devour one another."

And sometimes were mingled in a highly elaborated response to a single card:

Card I: "This looks like two birds mating...almost like a mating ritual of some sort...it's a moment of confrontation, kind of ominous...not a beautiful love making scene but it's gonna happen I think. They have claws that could be tough if used that way. I don't know which one is male and female. The heads are arched back in a slightly threatening position...they're not past the formal stage of getting to know one another. It's not certain whether they'll get on or start a fight. They met to mate, but they're testing each other."

Mothers of secure babies produced banal responses:

Card I: "A bat."

vague responses:

Card I: "Can it look like nothing?... An abstraction? I'm just asking."

and indescribably weird responses:

Card III: "A crab...it's like macabre or existential. There's nothing warm or juicy like a vagina ...you're not sure what's going on, a dream or reality."

The differences between mothers of securely and insecurely attached babies are best illustrated by contrasting two perceptually well organized responses to Card III that represent the extreme ends of the primary process continuum. The first response is drawn from the protocol of Lily, a mother of an avoidant toddler; the second from the protocol of Claire, mother of a toddler judged securely attached.

Lily: This looks like two women and they're both, they look like they're doing work that looks like it needs two people to do it, like balancing a rock. (What made it look that way?) This is the woman and that's her chest. Their backs are strained that's why it's work. It looks like they're leaning on this rock.

Claire: Two native women cooking over a fire together. They're putting together big pieces of meat over an open fire. They're singing...these (the upper outer red details) remind me of notes or guitars, so there's music in the air. They're talking. Their hearts (the center red detail) are right out there, very close. They do this a lot, preparing meals. (What made it look like that?) These bodies look very African to me. They look naked -- you can see their breasts. It looks like they have short cropped Afro haircuts, long necks, hands doing something over the fire. Some major thing, a carcass is being cooked, a half cow with ribs. There's an image as though hearts were connected -- the shape and color and where it's positioned near their chests.

Though well perceived, Lily's response is left unscored because manifestations of primary process are absent. Her elaboration hews very close to the perceptual "facts" of the

card, thereby revealing little about her inner fantasy life. Claire's response, on the other hand, is rich in primary process derivatives, most notably the extreme autistic narrative elaboration which includes her comment "they do this a lot, preparing meals." Also evident are symbolic thinking ("these remind me of notes and guitars, so there's music in the air") and a carefully titrated blend of libidinal and aggressive themes. Though variable, her perceptual accuracy is good to excellent, with exquisitely perceived elements (the highly differentiated human figures) juxtaposed with smaller, more weakly articulated ones (the "notes" and "hearts"). This response, even conservatively scored on the Holt Scale, earns a high adaptive regression score of 20 (DD4, DE5).

It is also instructive to compare two weakly organized responses, where presumably the degradation in form quality is in response to the primary process content, and the individual Adaptive Regression Score is lowered as a result. The first response, to Card VI, was provided by Raina, a mother of an insecure resistant toddler; the second was taken from the protocol of Connie, a mother of a secure toddler. Connie's response was offered to Card IX.

Raina: A cat crawling around outside. (What made it look like that?) It has long whiskers, here are the legs, it's crawling around looking for something. (Something?) Maybe food.

Connie: It looks something exploding. Something passing through two things and exploding (What made it look like that?) The way this kind of scatters.

While seeing a cat on Card VI is a common enough response, the animal is typically described as a flattened out, cartoon-like creature. The additional elaboration ("crawling around outside") actually detracts from the form quality, and may reflect an unstable defense against more aggressive impulses. Indeed, when queried, Raina suggests that the unlikely cat is engaged in a quest for food, earning her a weak oral score. Total adaptive regression score is 4. Though Connie's response is even more poorly articulated, it contains more intense primary process material -- the "explosion" earns a defense demand score of 3; consequently, her adaptive regression score is higher at 9.

These illustrations make clear that a higher Adaptive Regression Score is a reflection of the organization of a gestalt relative to the "dose concentration" of primary process: the adaptive regression score does not necessarily coincide with clinically accepted indices of greater psychological intactness (Blatt & Ritzler, 1974; Urist, 1977; Urist & Shill, 1982). For example, if well perceived, "thought disordered" responses such as fabulized combinations and contamination tendencies earn relatively high adaptive regression scores, while extensively articulated human figures engaged in benign reciprocal interaction may be left unscored. The question is therefore raised whether the capacity for adaptive regression can be equated with greater psychological health.

By targeting the unconscious fantasy life of pregnant women, the present paradigm may do more to obscure than clarify this question. A major premise of this study is that pregnancy is a developmental epoch which induces in women distinct physiological and psychological changes -- for example, in formal primary process terms, where she was once "one" she is now, temporarily, "two" -- which may render standard clinical indices less useful when evaluating their Rorschachs. Indeed, to take the above example as a reference point, we might expect a trend in pregnant women to illogically combine or fuse images more readily than a non-pregnant sample. Only a comparative study of a matched sample of never pregnant adult females will allow us to know the answer to the question with greater certainty.

From a clinical standpoint, however, I believe the question needs to be framed differently. For this sample, the critical issue in infant security of attachment may not necessarily be more or less maternal psychopathology, but the nature of psychopathology if it indeed exists. Though indices of particular psychopathological configurations were not systematically obtained, my clinical impression upon reviewing these protocols is that where pathology is suggested among secure mothers it tends to reflect what Blatt (1974) identifies as an anaclitic organization of personality functioning (i.e. affective lability, borderline phenomena, hysterical defenses), while for the mothers of insecure infants, pathology tends to be manifested in themes

and defenses suggestive of an introjective personality configuration (i.e. guilty depression, disgust, brittle obsessional and schizoid defenses). Such an impression, if borne out in a systematic investigation, would make conceptual sense as anaclitically organized individuals are thought to be primarily concerned with relational issues and hence, might remain responsive to their infants in spite of significant pathology. Pathology among introjectively organized individuals, who are preoccupied with issues of identity and autonomy, might be more likely to interfere with maternal availability during the infant's first year of life.

Anaclitic and introjective configurations may additionally be thought of as character styles reflecting, in part, the contribution of temperamental patterns of emotional regulation and arousal. A first step in exploring the relationship between maternal character style and patterns of infant emotional regulation and arousal in the Strange Situation will be discussed more fully below.

Adaptive Regression and Attachment Classification Subtyping:  
The Influence of Character and Temperament

Recent reports have provided evidence that there are differences among the secure subgroups ( $B_1$ ) both in regard to patterns of separation distress and in the regulation of emotional arousal during the Strange Situation.

Specifically, Frodi and Thompson (1985) discovered that the pattern of arousal characteristics in  $B_{1,2}$  infants is similar to that of avoidant babies (i.e., minimal separation distress and brief recovery), while the response of infants in the  $B_{3,4}$  subgroups is more similar to that of ambivalent infants (i.e. intense separation distress and prolonged recovery). In fact, note the authors, "these secure subgroup clusters were more similar to their insecurely attached counterparts in emotional responding than they were to each other" (p. 788).

One study has found similarities between maternal and infant temperament. Weber et al. (1986) investigated 36 mother-infant dyads. They found that infants who were temperamentally more reactive (i.e. evidenced greater separation distress, and maintained proximity to mother following reunion) had mothers who rated themselves as temperamentally less adaptive. These self-ratings were based on a 34 item Dimensions of Temperament Survey (DOTS) which included self-assessments of intensity of reaction, threshold of responsiveness, persistence and distractibility in response to novel situations and persons. Under such conditions, mothers of A and  $B_{1,2}$  infants perceived themselves to be more adaptable than did mothers of the more easily distressed  $B_{3,4}$  and C infants.

These findings, coupled with visual inspection of the data, led me to ask whether there was a relationship between

shared maternal/infant temperament variables, irrespective of attachment status. Overall, mothers of "minimizers" -- i.e. B<sub>1,2</sub> and A infants who evidenced less separation distress and used predominantly distal modes of making contact -- appeared to have higher mean adaptive regression scores. In response to the novel challenge of the Rorschach test, these mothers seemed relatively unflappable. They were highly ideational (indeed, as in the case of Claire, sometimes overrideational) with keen capacities for perceptual elaboration within a recognizable "inkblot" generated gestalt. Mothers with lower overall adaptive regression scores, like Connie, tended to be emotionally reactive and somewhat more diffuse and vague in their perceptual organization. They also tended to ask for help and reassurance from the tester. These women tended to be the mothers of "maximizers" i.e. B<sub>3,4</sub> and C infants who were inclined to make contact through greater proximity seeking and who responded with greater distress to separation from their mothers.

The highest adaptive regression score, on the other hand, appeared far less sensitive to the general trends in temperament described above. Within the group of mothers of secure babies, the highest adaptive regression scores revealed less variability and tended to cluster at the high end of the continuum. Indeed, several MSB/maximizer mothers had modest mean adaptive regression scores (about 8.5), with

highest adaptive regression scores of 25 -- nearly three times their individual means. In contrast, highest adaptive regression scores within the two insecure groups appeared significantly lower from the secure group, did not seem to differ significantly from one another, and seemed to cluster more closely about the mean adaptive regression score for each subject.

In order to test these impressions, two post-hoc 2 x 2 factorial analyses of variance with unequal cell sizes were performed. (See Table 3 and Table 4)

Table 3

Mothers' Mean Adaptive Regression Score: Influence of  
Infants' Attachment Status v. Infant Subgroup

Attachment Status	Attachment Subgroup			
	Minimizers		Maximizers	
	$\bar{X}$	SD	$\bar{X}$	SD
Secure	10.54	1.7	8.52	1.3
Insecure	9.46	2.59	7.17	1.5

Table 4

Mothers' Highest Adaptive Regression Score: Influence of  
Infants' Attachment Status v. Infant Subgroup

Attachment Status	Attachment Subgroup			
	Minimizers		Maximizers	
	$\bar{X}$	SD	$\bar{X}$	SD
Secure	18.85	3.7	17.00	5.7
Insecure	14.88	4.1	12.38	4.2

First, mean adaptive regression scores of mothers of securely attached infants were divided into two groups. The first group consisted of MSB "minimizers," the second MSB "maximizers." These groups were defined, respectively as any mother whose infant carried a B<sub>1</sub> or B<sub>2</sub> primary classification and any mother whose infant carried a B<sub>3</sub> or B<sub>4</sub> designation. The two groups of mothers were compared with mothers of insecure/resistant and insecure/avoidant toddlers (all C and all A designations, respectively).<sup>1</sup> A highly significant main effect was found for the pattern of emotional arousal and regulation dimension (minimizing/maximizing),  $F(1,20) = 8.20$ ;  $p < .01$ . No main effect was found for the security dimension,  $F(1,20) = 2.61$ ,  $p < .25$ . There were also no interaction effects. Thus mothers' mean adaptive regression scores appear to be significantly related to infant patterns of emotional arousal and regulation in the Strange Situation.

A second analysis compared the highest adaptive regression scores of these same groups, and a striking reversal of trends was demonstrated. For highest adaptive regression scores -- the measure of the highest degree of

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<sup>1</sup> One mother was excluded from this post-hoc analysis. In the Strange Situation her infant was classified primarily as U (unusual), a finding which paralleled the mother's highly aberrant Rorschach protocol. There were no human figures seen, and a preponderance of percepts were poorly perceived male and female genitalia seen in isolation. The author concluded that the degree of psychopathology evident in the protocol was extreme enough to warrant exclusion from this analysis.

primary process integration in a single protocol -- a significant main effect was found for the security dimension,  $F(1,20) = 5.01$ ;  $p < .05$ , while no effect was discerned for the temperament dimension,  $F(1,20) = 1.28$ . Again, there was no interaction effect.

The post-hoc nature of the finding, coupled with small cell sizes means that caution must be exercised when attempting to derive conclusions from these analyses. Nonetheless, these two sets of findings are consistent with a recent study of the relationship between temperament and attachment (Belsky & Rovine, 1987) which indicates that while patterns of emotional arousal and regulation make an important contribution to the quality of the attachment relationship, they are not sufficient to explain security of attachment. For the mothers and infants in this study, mothers' single highest adaptive regression score was virtually immune to the influence of these patterns, even as it more sensitively discriminated between mothers who were able to provide a secure base for their infants and those who were not.

A closer look at the mean adaptive regression score and the highest adaptive regression score may shed light on the relationship between these particular Holt scale variables and attachment. The mean adaptive regression score can be likened to a composite photograph, derived from a series taken from multiple perspectives. While it may adequately capture the enduring, "averaged" temperamental contributions

to character, by virtue of the manner in which it is computed it poorly reflects the full range of capacities that each individual brings to bear in an attempt to make sense of internal and external stimulation. The highest adaptive regression score, in contradistinction, is a single snapshot measuring the highest maternal potential for integrating intense and contradictory affects, impulses and ideas into a coherent gestalt. The central hypothesis of this study proposed that it was the capacity for just this sort of integration that would distinguish between the mothers of securely and insecurely attached infants, because it indicated a relatively greater empathic potential. Both the initial, and the post-hoc analyses, suggest that that is indeed the case.

#### Infant Attachment Status at One Year: The Interaction of Temperament and Gender

In an unexpected finding not predicted by the present hypothesis, a strong gender by temperament interaction was found among "minimizing" infants. The data revealed that females displaying this pattern of emotional arousal and regulation were consistently classified as "securely attached" in the Strange Situation (9/9 females), while their male counterparts were virtually always judged "insecure/avoidant" (5/6 males). No such interaction was apparent among "maximizing" infants.

Again, the small sample size means that caution must be

exercised when attempting to interpret this finding. However, the fact that in such a small sample the gender by temperament interaction appears to account for nearly 100% of the variance in attachment classification indicates the need for careful follow-up and replication of these findings to rule out the possibility of systematic gender bias in scoring of the Strange Situation.

Though the attachment literature has not dealt extensively with the influence of gender on mother-infant interaction, the current findings are consistent in several ways with the larger body of research on the influence of gender on development. Very briefly, it has been repeatedly demonstrated that throughout infancy and early childhood, boys are at significantly higher risk than girls for all manner of developmental disturbances (Friedman, et al., 1974; Gualtieri & Hicks, 1985). That they should prove to be at higher risk for developing an insecure attachment to their mothers might therefore be expected.

More intriguing, of course, is the fact that the risk seems concentrated in a particular subset of boys -- i.e. boys who evidence less distress upon separation from their mothers and who make contact with her from a distance. If, as evidence from earlier studies strongly indicate, there is a relationship between maternal and infant patterns of emotional arousal and regulation, one question raised by this finding concerns itself with the nature of the differential effect on girls and boys of a "minimizing"

maternal pattern of emotional arousal and regulation during the first year of life. Conversely, what are the differential effects on maternal responsivity of a minimizing pattern of emotional arousal and regulation when manifested in an infant son as opposed to an infant daughter?

While answering this question is well beyond the scope of this study, there is some evidence that similar patterns of maternal responsivity have different consequences for boys and girls. In a longitudinal microanalytic study of the consequences of mother-infant interaction, Martin (1981) found that maternal responsivity at 10 months predicted child compliance and coerciveness in 22 month old boys, but not in girls. In addition, maternal responsivity at 10 months predicted exploration and interest in strangers at 22 months among boys only; girls with unresponsive mothers were more likely to respond to a stranger and engage in exploratory behavior.

More germane perhaps are the findings by both Gunnar (1978) and Martin (1981) that boys are differentially sensitive to experiences of control or lack of control. In Gunnar's study, which looked at the effects of control over a fear-producing stimulus on fear, increasing control resulted in fear reduction for boys only. In both studies, boys appeared to be very disturbed by lack of control. In Gunnar's study, boys fussed, cried and attempted to elicit the intervention of their mothers in order to gain control

over a scary situation. In Martin's study, they attempted to control their mothers by refusing to go along with them and by attempting to coerce their mothers into giving them what they wanted. As Martin notes, "either the illusion or the reality of control is particularly critical for boys, and reinforcing that illusion or reality may be a particularly important task for mothers of boys" (pp.46-47).

One might reasonably speculate that by virtue of their higher threshold for emotional arousal minimizing mothers are less responsive overall to their infants' cues, and, as we know to be the case for mothers of avoidant babies, more likely to wrest control from their infants in dyadic interaction (Ainsworth et al., 1978). Further research might help ascertain whether these hypothesized differences in maternal responsivity, or other factors, place minimizing boys at higher risk for developing an avoidant attachment to their mothers.

#### Maternal Content in Unconscious Fantasy: The Search for A Psychological Marker

The degree to which unconscious fantasy during pregnancy reflects a "maternal preoccupation" (Winnicott, 1956) -- that is, concerns itself either literally or metaphorically with pregnancy, birth and mothering -- is also positively associated with the mother's overall capacity to provide her offspring with a secure base. Maternal references were found in nearly 2/3 of the 16

protocols of mothers of secure infants. By contrast, among a total of nine protocols of mothers whose babies were later classified as primarily insecurely attached, a lone maternal reference was found (Card VII -- "They look like pregnant dancers"), and this mother's infant was the single child in the study to carry a secondary "secure" classification in addition to a primary "resistant" one. Thus in the present study, the presence of such themes in a Rorschach protocol was highly specific to mothers of securely attached infants. However, the absence of maternal themes in six of the sixteen protocols of mothers of secure infants suggests that the sensitivity of this marker is only partial.

There are several admittedly speculative ways to understand this surprising post hoc finding. In Part I, Section III, I argued that one central facet of the complex phenomena we refer to as maternal empathy lies in the ability of a mother to create a flexible narrative framework within which her infant will assume a prominent, meaningful role. For all mothers in this study conscious concern with pregnancy, childbirth and parenting was evidenced by their continued participation in a longitudinal study investigating those matters. For mothers of securely attached infants, however, this manifest concern was mirrored in unconscious fantasy, where elements of a maternal story line, in nascent form, were beginning to emerge from the more enduring characterological preoccupations that presumably defined unconscious fantasy

prior to pregnancy.

Similarly, the presence of maternal themes in most of the protocols of mothers of securely attached infants is in keeping with the notion of pregnancy as a critical phase in the psychological birth of the maternal self. Whether they be symbolically represented as a moth spinning a cocoon and emerging as a butterfly, or visualized literally as an embryo safely nested in the womb, the mere presence of maternal themes in response to an ambiguous stimulus appears to herald a crucial unconscious psychological shift in mothers' inner worlds, a shift toward a "maternal sensibility," that is reflected in their later ability to remain sensitive to their infants' emotional needs.

Finally, this finding seems in keeping with the view that signs of a secure attachment relationship may be evident well in advance of the actual arrival of the newborn (Bibring, 1961; Main, 1985; Winnicott, 1960). Indeed, it seems fair to say that the psychological birth of the securely attached infant takes shape many months before the infant will be ready to survive on his own -- originating, perhaps, in the symbol laden world of his mother's unconscious fantasy life.

### Implications

The present Rorschach study of pregnancy has significant implications for theory and research on the

antecedents of maternal empathy and infant security of attachment. First, these findings point to potential common pathways for reconciling the claims of psychoanalysis and attachment theory regarding the source of individual differences in maternal sensitivity. Secondly the study appears to confirm the utility of the Rorschach test in empirical research that focuses on individual differences in underlying representational processes. The next two sections will spell out these implications in more detail.

#### Psychoanalysis and Attachment Theory: Toward A Reconciliation

The study underscores the view shared by psychoanalytic and attachment theorists that overt relational behaviors are meaningfully related to underlying unconscious representational templates -- what in this study might be construed as specifically "maternal" templates --- that organize cognition and affect. According to psychoanalytic theory, the empathic sense that allows a mother to "feel her way into" her infant's experience is a creative, constructive, and in part, imaginative process. It is a process, furthermore, that reflects an inner tension: on the one hand, lies the individual's ability to enliven her appreciation of the world and others through regulated access to unconscious (primary process) fantasy; on the other hand rests her capacity to represent and communicate her experience in response to an ambiguous stimulus (like a

Rorschach blot, or a new baby) in the form of a convincing, socially shareable gestalt.

Current views of attachment theorists regarding the maternal antecedents of infant security of attachment also emphasize the central role of underlying representational processes -- although these theorists have been exclusively concerned with individual differences in the ability to access and organize a range of feelings and memories regarding actual attachment related events, rather than unconscious fantasy.

The findings of the current Rorschach study, while articulated in the language of psychoanalysis, are nonetheless consistent with both perspectives on maternal sensitivity. Current thinking on primary process suggests that it reflects unconscious fantasy derived from affectively laden early experience. Just as earlier attachment studies have found that mothers of secure infants demonstrate greater affective flexibility and coherence when recounting actual events from early in life, so this study revealed that mothers of secure infants more freely and coherently access and communicate unconscious derivatives of affectively charged experience.

In its post-hoc findings, the study suggests a further commonality between psychoanalysis and attachment theory. Though speculative, the data indicated that enduring modes of organizing cognition, affect, and behavior -- what psychoanalysts refer to as "character" and attachment

researchers understand as "temperament" -- qualitatively affect the nature of the attachment relationship. Two overarching "styles" were in evidence in the present sample. The mothers of "minimizing" infants, irrespective of those infants' attachment status, shared many qualitative similarities in their responses to the Rorschach. Detailed, imaginative, and intensely alive, these protocols suggested active ideational processes that were mobilized in response to a presumably stressful situation. These were mothers -- on the whole -- who asked for little help from the examiner, preferring instead to occupy themselves with their own imaginative processes. Though similarly vivid, compared to mothers of avoidant infants, mothers of secure/minimizers tended to integrate more intense primary process material into more of their responses.

Mothers of "maximizing" infants had different strategies for managing the stress of the Rorschach. Both groups tended to give more weakly organized responses, overall. In the "secure/maximizing" group were mothers who managed to access libidinal, aggressive, and illogical material. These mothers more frequently referenced the tester when unsure about how to proceed, and introduced aggressive material in the context of a vaguely organized response. Mothers of the "insecure/resistant" infants, however, tended to tightly constrict their access to charged material, giving short, terse weakly organized responses to each card. The question of whether these

temperamental/characterological similarities between mothers and their infants reflect heritable predispositions, or learned behaviors, or a combination of both is far beyond the scope of this study. Still, these findings suggest a possible theoretical bridge between attachment theory and psychoanalysis, and certainly open new avenues for empirical research.

#### Implications for Rorschach Theory and Research

Though originally developed as a test of perception, recent reconsiderations of Rorschach phenomena have suggested that the test may be more profitably viewed as a method of eliciting unconscious representations. Indeed, empirical studies employing Rorschach scales specifically designed to detect broad differences in representational templates have begun to dominate the literature. The present study productively applied one such scale -- the Holt Scale for the Measurement of Primary Process Manifestations on the Rorschach -- to the protocols of first time mothers-to-be. Despite its uncertain place in the psychological assessment literature -- particularly, with respect to studies of exclusively female populations -- the study confirms that the Holt Scale can be a particularly sensitive measure of Rorschach elicited phenomena.

These findings also empirically demonstrated that when properly administered and scored, the Rorschach can usefully and reliably discriminate between groups of individuals in a

non-clinical sample, and predict on the basis of those differences to manifest relational behaviors between mother and infant. For those serious clinical researchers who dismiss the Rorschach as, at best, esoteric, and at worst, completely irrelevant, the findings of the present study provide provocative and compelling evidence to the contrary.

#### Limitations of the Study

Sample - The nature of the sample constrains our ability to draw generalizable conclusions from the study. As reported in the methods section, subjects were recruited from private obstetrical practices and Lamaze classes throughout New York City. While the population reflected some mild ethnic and racial diversity, by and large the subjects were white middle to upper middle class pregnant women. Extrapolations of the findings may therefore only legitimately be made to equally homogeneous groups.

Secondly, pregnant subjects consisted entirely of volunteers willing to commit considerable time and energy to participate in a two year study of pregnancy and parenting. While healthy curiosity and a desire to learn more about infancy and development may have been a factor in the self-selection of this population, it is equally likely that the women who elected to remain in the study were driven by anxious and complicated feelings about themselves vis a vis impending motherhood, thus skewing the sample in particular

ways. This may explain the author's clinical sense that the group as a whole manifested more indices of psychopathology than expected in a non-clinical sample. Either set of motives, however, rules out those mothers who consciously and actively disregard the importance of their pregnancies and their infants' later development, leaving significant gaps in our understanding of an important subsample of this population.

Finally the small sample size constrains our ability to fully evaluate the unexpected findings regarding a possible temperament-by-gender effect in minimizing infants, and the relationship between maternal style in response to the Rorschach and different patterns of infant emotional arousal and regulation during the Strange Situation.

Measures -- A conceptual weakness exists in the Holt Scale for quantifying the degree of primary process contained in a given Rorschach response. In order to earn a Defense Demand Score higher than a 4, the response must manifest truly psychotic process. In effect, therefore, the Defense Demand scale was reduced to four scale points. The author's experience with this population is that they were capable of extensive narrative elaboration not justified by any property of the the inkblot, but coherent, lively and personally meaningful nonetheless. It was not uncommon for mothers of secure babies to respond to the blots with a well elaborated story, complete with characters, social context and plot. A Defense Demand Score of 4 simply did not

capture the phenomena. Future studies using the Holt Scale on a normal sample will need to amend the Defense Demand scale better to reflect these phenomena.

Design -- A flaw in this design was that the author both administered and coded many of the Rorschachs. Although the Rorschachs were administered, on average, 3 years before the present study was completed, and the author was completely blind to the attachment status of the babies, her dual role is a weakness. Further research would benefit from two coders who had both been trained to code the Rorschach but were unfamiliar with the subjects, with the author supervising the training.

### Conclusion

Though limited to a small number of mother-infant dyads, this study strongly suggests that maternal unconscious fantasy during the second trimester of pregnancy partially predicts later infant security of attachment. Many questions remain to be addressed. Future studies will need to explore the relationship between maternal psychopathology and infant attachment status, the influence of pregnancy on indices of thought disorder on the Rorschach, and interactions between infant gender and maternal and infant temperament. Finally, these findings suggest the need for a prospective study specifically designed to identify maternal fantasy representations in

projective test data and their relationship to attachment variables.

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