INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI

A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700 800/521-0600

Links Between Maternal Representations of the Child, Observed Maternal Behaviors, and the Quality of Dyadic Engagement in Play at 28 Months.

by

Annelie Hansi Hartmann

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

1998

This manuscript has been read and accepted by the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

9.15.98
Date

Arietta Slade
Arietta Slade, Ph.D. - Chair of Committee

9-16-98
Date

Joseph Glick, Ph.D. - Executive Officer

Anderson J. Franklin, Ph.D.

Steven B. Tuber, Ph.D.

J. Lawrence Aber, Ph.D.

Wendy Haft, Ph.D.
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

ABSTRACT

Links between Maternal Representations of the Child,

Observed Maternal Behavior,

and the

Quality of Dyadic Engagement in Play at 28 months

by

ANNELIE HANSI HARTMANN

Advisor: Professor Arietta Slade

This study investigated the relationship between maternal representations of the child at 28 months and contemporaneously assessed measures of maternal responsiveness, dyadic interaction, and child representational competency in 40 mother-toddler pairs. Mothers were interviewed about their relationship with their child using the Parent Development Interview (PDI) and transcripts were scored using a dimensional scoring system developed by the authors of the PDI. Maternal and child play behaviors were coded from videotapes of mothers interacting with their toddlers in two experimental conditions: 1) where mothers were occupied and children played alone, and 2) where mothers and their children played together. Qualitative ratings of maternal, dyadic, and children's play behavior were made using the Dyadic Symbolic Play Scales developed for the purposes of this study. The developmental level of children's play was also coded using the Developmental Level of Play Scale. Results provided evidence that maternal representations of negative affective experiences pertaining to the relationship are associated with maternal behavior. Specifically, mothers reporting high levels of separation distress were more likely to respond to their child in a contingent manner in free play. Maternal

contingent responsiveness was in turn linked with the quality of dyadic interaction and child representational competency. Findings showed that dyads engaged in more reciprocal

interactions, and children were better able to focus on play and follow through with play themes when mothers displayed contingent responsiveness. Post-hoc analyses examining the role of gender showed that gender exerts an important influence in shaping maternal representations of the child. Findings indicate that mothers of girls experience more joy/pleasure in the relationship and provided richer, more coherent descriptions of the child than mothers of boys. Additionally, boys and girls exhibited different patterns of play in the two experimental conditions and these differences were directly linked with maternal representations. When mothers reported experiencing high levels of anger and guilt in the relationship, girls were better able than boys to engage in self-directed play when playing alone. When mothers of boys reported high levels of separation distress they tended to display more contingent responsiveness when playing with their child which in turn functioned to enhance boys' capacity to focus on play and deploy higher level representational skills. Two cases descriptions are presented which illustrate the different pattern of results obtained for mother-son and mother-daughter dyads in this study, and are discussed in light of the process of separation-individuation which characterizes this developmental period.

Acknowledgments

Bringing this task to completion has been a remarkable journey of growth and discovery. Personally, I feel a deep sense of pride and satisfaction that I was able to realize this dream. In my heart I am aware of the many wonderful people without whose guidance, support, and unwavering belief in my capabilities this never could have happened. This awareness fills me with tremendous joy, and is to them that I now wish to express my gratitude.

Dr. Arietta Slade, my dissertation mentor, has long been a source of inspiration to me. She is a truly gifted teacher who transmits her love for learning to her students and encourages them to think for themselves and develop their creative potential. I am most fortunate that Arietta gave me the opportunity to work on the Pregnancy Project and to use this data base for my study. Most importantly, she introduced me to the world of children's play and fully supported my interest in developing a coding system to assess qualitative dimensions of play behavior. Her encouragement and insightful feedback throughout this process not only helped to keep me on track, but without question made this a better dissertation. Dr. Steven Tuber was the beacon of light that guided me through the most stormy moments. When I struggled to make sense of complex ideas or with the process of writing, he listened calmly and responded in a way that brought new clarity to my thinking. Steve encouraged me to keep on trying, never pretending it was easy; never doubting I would find my own way. Dr. A. J. Franklin, in his kind and gentle manner, was my anchor. By periodically asking me two simple questions "Don't you have something to give me to read?" and "How is this relevant to your study?", A. J. motivated me to continue to be productive and maintain my focus. Arietta, Steve and A. J. have enriched my experience at City and they have my deepest respect.

Dr. J. Lawrence Aber was the first person to recognize and nurture my interest in becoming a clinician, and I feel honored that he agreed to be a reader on my committee. His presence at my defense brought special meaning to this important event in my life, and his feedback about my work motivates me to continue to explore the ideas presented in this study. I also wish to thank Dr. Wendy Haft for expressing her interest in my work and willingness to be a reader. Her supportive presence at my defense was greatly appreciated.

Working with Virginia Picchi, who lent her skills and talents to the conceptualization of the Dyadic Symbolic Play Scales, was a wonderful learning experience. She always raised thought provoking questions and her delightful sense of humor made the oftentimes tedious task of coding videotapes a lot of fun. I am very grateful to my coders, Jane Whang and Hyaejin Yoon for the many hours they devoted to coding my data. Their keen attention to detail and insightful observations significantly contributed to the refinement of the coding systems. It was a pleasure to work with both of them and I am thankful for their commitment to this project. I also wish to thank Marc Glassman for his statistical consultation. His genuine interest helped me to formulate my ideas and find ways to translate them into statistical terms.

No words are adequate in expressing how much the love and support of my friends has meant to me. Ilona, Francoise, Glorianna, Iris, Lauren, Lan, Jackie, Bettina and Leslie, have all shared in this process from beginning to end. Their unconditional and true friendship, through good times and bad, has been the most deeply valued gift. I happily look forward to the many new experiences we will share with one another in our lives beyond City. Cassandra Cook and I ran the final lap of this marathon together and I have special memories of the way we supported each other during the days, hours, and minutes before reaching the finish line.

I am most grateful to Dr. Lawrence Jacobson for the generous way he has always been there for me. He has helped me to overcome many obstacles and has challenged me to grow in ways that I thought weren't possible. His faith in me and genuine caring have touched me in a very profound way.

Finally, I wish to thank my mother and father who devoted their lives to helping other people and who taught me to appreciate the many intangible, yet truly wonderful things about life and loving. They have always supported me in my wish to achieve my dreams and have encouraged me, by example and with their love, to strive to be the best that I can be, to be honest, to respect others, and always be true to myself. I am so glad that my mother can share in this achievement, and wish to dedicate this work to my father, Dr. Hans A. Hartmann, who I miss very much and know would be very proud.

Table of Contents

List of Tables

Introduction

Affectionate. Stubborn. Willful. Curious. Playful. Aggressive. Social. Moody. Enthusiastic. Sensitive. Physical. Persistent. Funny. Demanding. Intense. Shy. Verbal. Needy.

These adjectives are mothers' descriptions of their 28 month old toddlers. They convey the range of different emotions, personality characteristics, and behaviors that toddlers, in general, are capable of experiencing and expressing. They also reflect mothers' subjective understanding of who their child is as an individual, and how the child is experienced within the context of the relationship.

Clinicians have long recognized that a parent's subjective experience of the child exerts a powerful influence on parenting behavior and in shaping the quality of the parent-child relationship. Parental subjective experience refers to the parent's thoughts, feelings, beliefs, and fantasies about the child at any given stage of child development, as well as their own feelings of confidence and competence in their parenting role.

Over the past five years, researchers have developed methodologies for assessing parental subjective experience, and have begun to examine a construct referred to as parental representations of the child. These endeavors have been greatly influenced by the theoretical work of John Bowlby and Mary Main on internal working models of attachment, and focus on a parent's capacity to reflect on and represent their understanding of their child, themselves as parents, as well as salient features of the parent-child relationship.

To date, research in this area has focused on investigating the ways in which parental representations of the child develop and function to guide parent's expectations and behaviors in the parent-child interaction. Preliminary studies have reported a strong link between the quality and organization of parental representations of the child and the parent's capacity to remain emotionally available and provide care that is sensitive to the child's needs during infancy. However, few studies have linked parental representations with parenting behaviors and child outcome during the toddler period.

The toddler period is characterized by a dramatic increase in symbolic play and language. These new competencies on the part of the child greatly expand opportunities for self-expression, for affect regulation and integration, and make possible new modes of sharing meaning with the parent. The toddler period is also a time of increased parent-child conflict and power struggles as toddlers become increasingly self-assertive and attempt to balance the need to extend their sense of autonomy while still maintaining intimacy and connectedness with the mother. Play between mother and child during this tumultuous developmental stage may serve several adaptive functions. Because of its inherently pleasurable nature, play offers opportunities for closeness and for communication in the mother-child interaction by providing a unique context in which the child can be a more equal partner with the mother. Play is also an arena which allows the child to express his individuality by creating highly personal play themes and sharing them with a social partner, thereby promoting both reciprocity and increased separation and individuation.

Research on symbolic play has shown that there are multiple influences on children's developing representational competence. These include the quality of the mother-child relationship as well as the nature of maternal responsiveness. Results across numerous studies have consistently shown that maternal involvement and emotional availability functions to enhance the quality of toddlers' play; play episodes lasted longer,

were more complex, and play behaviors tended to be more interactive when mothers were active and responsive play partners. These findings suggest that play with mother provides a critical vehicle for the child's transition to symbolization and directly influences child competency.

Given the importance of maternal participation and availability, the present study will examine how maternal representations of their toddlers influence how they interact with their children in play, and will explore the implications this has for the child's developing representational world.

The following sections will provide an overview of the toddler period and describe the particular challenges parents are faced with during this developmental stage. Several domains of literature and research relevant to this study will then be reviewed. These include: 1) theory pertaining to parent development, 2) research examining parental representations of the child and their influence on parenting behavior and the quality of the parent-child interaction, 3) theory and research on children's symbolic play, 4) and finally research on the mother's role in fostering representational competency in the child.

Chapter One
Literature Review

Developmental Overview of the Toddler Period

The toddler period, roughly spanning the ages of 18-36 months, is a time of rapid developmental change and upheaval. Many new capabilities emerge which increasingly enable the child to assert his independence and function autonomously vis-à-vis the caregiver. One of the most remarkable developmental achievements, which has a profound impact on child functioning, is the emergence of representational skills. These include the child's ability to form, hold onto and manipulate mental representations of objects and events that are no longer physically present, as well as to express himself using symbols, evidenced by a dramatic increase in language and symbolic play. These changes provide the foundation for more organized psychological experience and play an important role in the ongoing process of self-other differentiation. The toddler can now think about the world and his experiences in increasingly complex ways and respond to them in his own right. He can use language and play to communicate his thoughts and feelings to other people, thereby making himself known and felt in relationships in ways that were not possible during infancy. Parents frequently speak about their sense of wonder and relief at finally being able to know more clearly what is going on in their child's mind and the dramatic way this changes their perceptions and understanding of who their child is as a separate individual. They also describe feelings of frustration and anger as toddlers increasingly assert their separateness by being oppositional and refusing to comply with parental demands. Thus, representational skills open up new avenues of communication between parent and child, and provide a new arena for experiences of dyadic harmony and intimacy, as well as discord, as different ideas, feelings and points of view can now be expressed, shared and understood in new ways.

It is by way of these types of interpersonal exchanges coupled with the child's increasing ability to venture out and explore the world on his own that the toddler begins to develop a sense of personal agency and greater awareness of his physical and psychological separateness. He can now become a more active participant in influencing the course of interactions and directly experience the impact he has on other people. This is accompanied by a growing understanding of others as independent agents who can have wishes and intentions that differ from, or even conflict with his own. Such experiences give rise to a range of new feelings about self and other which can be both exciting and frightening for the child. These include many positive emotions such as delight over new discoveries, enhanced feelings of self-esteem and competence in being able to communicate more effectively and solve problems independently. Negative emotions such as anger and frustration are powerfully experienced when things don't go the toddler's way. Similarly, feelings of vulnerability, separation anxiety, and shame emerge as the child inevitably becomes aware of his limitations and ongoing need for adult support and guidance. Just as toddlers begin to experience a variety of self-conscious emotions, they also increasingly display empathy toward others and are generally curious about they ways emotions work and are communicated in relationships. The toddler period is without question an emotionally turbulent and tender time for the child as he struggles to come to terms with his separateness. It is also a particularly challenging and confusing time for parents as toddlers typically display these new and oftentimes contradictory emotions with an intensity that can be overwhelming, and invariably evoke equally powerful reactions within the parent.

Developmental changes on the part of the child during the toddler period bring about a restructuring of issues pertaining to attachment and exploration within the parent-child relationship. Researchers have written extensively about the internal tensions toddlers experience as they attempt to balance the need to extend their sense of autonomy with the

ongoing need to feel safe and protected in intimate relationships (Lieberman 1993, Mahler, Pine & Bergman, 1975). Parents too need to adjust their behaviors in keeping with the child's current capabilities and limitations, and are faced with the complex task of balancing two complementary sets of caregiving patterns: protective behaviors that provide the child with nurturance and safety, and letting go behaviors that encourage the child to explore competently without fear. As much as toddlers would like, and oftentimes adamantly insist on doing things entirely on their own, they are still reliant on their parent's capacity to remain psychologically available and provide guided self-regulation. Many of the dyadic conflicts and power struggles that characterize this developmental stage revolve around the dyad's ability to negotiate a balance between autonomy and relatedness as the child gradually individuates. Representational capabilities play a central role in helping the toddler begin to reconcile these two powerful yet contradictory desires in a variety of ways. For instance, as the toddler physically moves away from the [1] mother, he can use language to maintain contact with her from a distance; conversely while sitting on her lap, he can express his separate thoughts and feelings, thereby addressing his dual need for connectedness and individuation. The ability to conserve mental representations enables the toddler to gradually internalize the mother's function as a supportive presence and utilize this as a resource to cope with new challenges regardless of whether or not she is actually present. It also enhances his capacity to link together feeling states with memories of past and anticipated future events, which lends to the construction of an internal narrative of his experiences which can be revised and elaborated on as new experiences arise.

With experience and maturation, the child's mental representations of self and other, internal and external experience, and reality and fantasy undergo differentiation and

[1] In this paper the term mother will be used to refer to the child's primary caregiver as this study specifically focuses of the mother-toddler relationship.

become internalized in an increasingly stable manner. While representational skills serve as the building blocks for many basic ego functions which structure and organize internal experience (Galenson, 1980; Greenspan & Lieberman, 1994; Slade, 1994), it is important to emphasize that these functions develop gradually and only become integrated into the child's personality over time. This process is complex and multidetermined. How the toddler's emerging sense of self and other become defined and eventually internalized is a function of the reciprocal exchanges and identifications that occur between mother and child over the course of the second and third years of life.

One of the reasons why the toddler period is considered to be a critical time in child development is not only because of the "rapid and massive shifts and turns in developmental processes" (Mahler, Pine & Bergman, 1975, p. 268) on the part of the child, but the powerful way these changes alter mother's perceptions, expectations and actual experiences of being with the child. One of the ongoing tasks mothers are faced with is the ability to integrate these new perceptions, and continue to respond to the child in ways that facilitates the child's growth and adaptation. Unlike infancy, maternal responsiveness during the toddler period is no longer primarily based on the mother's empathic apperception of her child's needs. The toddler can directly communicate his needs and wants, likes and dislikes, as his distinct personality begins to take shape. This offers new sources of pleasure in the relationship as new types of interaction and communication become possible. It also creates new demands and challenges for mothers as toddlers will invariably test limits, and display willfulness and oppositionalism as they test out new capabilities and strive toward independence. According to Mahler and her colleagues (1970, 1996) these changes in child behavior will "regularly upset her [the mother's] intrapsychic equilibrium" (p. 273), and have the potential for eliciting parental conflict. How a mother copes with these changes and the degree to which her own conflicts will impact on her ability to respond appropriately and sensitively to her child's

needs will vary. They will however, have direct implications on the child's developing sense of self as well as the mother's own feelings of competence and confidence in her parenting role.

Parent Development:

> "Parents meet in their children not only the projections of their own conflicts incorporated in the child, but also the promise of their hopes and ambitions."
>
> Benedek 1959 - Parenthood as a Developmental Phase

Research in the area of mother-child interaction has amply demonstrated that mothers change their behaviors in concert with maturational advances made by the child; historically however, the focus has primarily been on understanding the child's psychological development and adaptation. While numerous theorists (Benedek, 1959; Mahler et al., 1975) have recognized that children exert a powerful influence on the parent's own psychological development, it is only recently that researchers have turned their attention to the mother's side of the experience as the child grows and develops.

Therese Benedek (1959) was one of the first theorists to conceptualize parenthood as a developmental process in its own right, and eloquently described the complex ways that parents and children mutually influence each other's development. She was primarily interested in describing the intrapsychic processes that occur within parents as their children develop, and the ways these processes affect parental responsivity to the child, rather than focusing on particular parenting behaviors per se. Benedek viewed the internal world of the parent as a multi-layered process comprised of various interrelated identifications. These identifications include: the parent's identification with the actual child, the identification with her own childhood self, and finally, the parent's identification with her

own parents. According to Benedek, the already existing identifications that make up the psychic configuration of the parent are activated in the actual experiences of interacting with the child. In this way, as the child progresses through various developmental stages, he revives in the parent his own stage related developmental conflicts and issues. This provides parents an opportunity to rework and resolve their own conflictual experiences and achieve intrapsychic reconciliation with their own parents. By way of this process, the mother achieves a new level of personality integration, which in optimal circumstances gives rise to a mental construct of confidence in the parenting role. If however, conflicts remain unresolved, negative self and object representations are perpetuated within the current parent-child relationship, and a new level of personality organization is not achieved. Benedek further added that the outcome of this process at each stage of the child's development will serve as a model for future parent-child transactions.

Benedek considered this dynamic interplay between the mother's internal world and interactions with the actual child as part of the normal process of parenting. Indeed it is not uncommon for parents to speak about ways in which their child powerfully reminds them of their own childhood experiences, as well as memories of how their parents responded to them at the time. Benedek remarked that "the parent cannot help but deal with his own conflict unconsciously, while consciously he tries to help the child achieve his developmental goal". The degree to which the mothers' own conflicts and fantasies interfere with their ability to respond appropriately to the developmental needs of their child will vary. Under optimal conditions, mothers are able to maintain a balance between the already existing identifications derived from past experiences, and a representation of the child as separate and individualistic. Both occur simultaneously, enabling the mother to act upon an empathic apperception of the needs and wants of the child. Non-development facilitating parental relations with the child occur when identifications distort the parent's

empathy, and the parents' involvement is not reciprocal and/or in accordance with the child's physical and emotional needs.

Parental Issues and Conflicts Activated During the Toddler Period

The notion that parents are differentially able to cope with various developmental issues, and that parental conflicts inevitably interface with the child's capacities to resolve phase-specific developmental tasks has been addressed by numerous theorists (Galenson, 1980; Lieberman, 1996; Mahler et al. 1975; McDevitt, 1980; Slade & Bergman, 1988) They have emphasized that the toddler period is a particularly challenging time for parents - especially mothers - since toddlers still primarily experience things in dyadic terms. Thus, issues that are characteristic of the toddler period such as self-other differentiation, emotional ambivalence and negativism, as well as expressions of aggression and sexuality, are often directed toward the primary love object, which is typically the mother.

In their naturalistic observations of mother-toddler interaction Mahler, Pine and Bergman (1975), observed changes in mother's behavior and mood as their children became increasingly autonomous and self-sufficient. They noted that some mothers displayed either a marked worsening or improvement in functioning as the child progressed through various stages of the separation-individuation process. According to them, the child's progressive internal differentiation and increased mastery of cognitive and motor functions have a dramatic impact on maternal fantasies about the child and the relationship, which inevitably affect maternal mood, attitudes and behaviors toward the child. They observed that all mothers are confronted with two contrasting emotional experiences as the child moves from a state of near total to relative dependence: object loss on the one hand, and the promise of and actual gain of a more developed object relationship with the individuating child on the other. Each mother's unique response to these events will depend upon her specific wishes, fantasies, and anxieties. Some mothers may

experience the child's drive for autonomy as a profound loss, making it difficult for them to remain emotionally available to the child and encourage independent behaviors. Similarly, mothers may feel frightened, or rejected by toddler expressions of negativism and aggression which are part and parcel of the child's efforts to distinguish me from not-me experiences, and subsequently have difficulty setting appropriate limits due to their own feelings of anger and helplessness. Other mothers by contrast, welcome and actively foster the child's autonomy. To them, the child's ability to express his wishes and feeling states as well as engage in problem-solving enhances their sense of confidence in being able to respond directly to their child's current needs. Similarly, they derive pleasure from understanding the world anew from their child's perspective and experience intimacy in being able to share experiences with the child in a more mutually constructed manner. This qualitatively different level of relatedness provides opportunities for the dyad to begin to establish what Bowlby (1969, 1982) referred to as a "goal-corrected partnership"; where both members can communicate their goals and plans to one another, and mutually work toward bringing them into greater alignment. Realistically, most mothers are likely to experience the co-mingling of feelings of loss and gain as a bittersweet testimony of their own efforts to provide good enough parenting as their child makes age appropriate strides developmentally. Such sentiments are illustrated in the following vignettes taken from interviews with mothers about their toddlers.

> " Over the past few months I've thought a lot about how she's not a baby any more and that she's her own little person, you know, kind of figuring out what she wants and how she wants things done her own way now....I have mixed feelings about it. I mean on the one hand I like, I've enjoyed her more and more the older she gets. I look forward to, you know, all that new stuff when it happens because it's just great the whole time. Not that I didn't love her as a baby, but as she's gotten older and, you know, she's got more of a personality and is a little more independent - I've enjoyed that even more. But, on the other hand, you know, it has happened so quickly, more quickly than I thought, so in that sense it's kind of sad not to have my little baby anymore."

" I guess I feel ambivalent about it. Every day I can see him exerting more independence and it makes me want to cry sometimes, but at the same time it, makes me proud, you know, that he's capable. I mean I think it speaks well of a parent if their child is independent because it's -- they need to be, but it breaks your heart at the same time..."

" It's very poignant. Just, you know, in terms of watching her now, she's a little girl and she is independent and she is asserting herself in her own personality. It's not like I have my little baby. And, I often say to my husband that I'm glad I have a new baby to hold because I do miss the stages of when she was an infant and just cuddling her and watching her, you know, do all the little baby things. So yeah, I miss that. You wish you could slow it down, they grow up very quickly and you don't realize it. You take a lot of joy in watching your child do its first rollover and first time it sits up by itself, and pretty soon that little child is walking and it's great, it's his first step and his first word, and pretty soon it's gone and it does happen very quickly. As much as this age is frustrating, I would like her to stay at this age for a while because she still needs us. She's still not totally independent."

Lieberman (1996), also described the transactional processes by which parents and children mutually influence each other's development. She noted that the toddler period represents a turning point in the synchronization of the attachment and caregiving systems wherein the "caregiving system becomes increasingly subservient to other parental motivational systems." (p. 277). In other words, as toddlers become increasingly autonomous and self-sufficient, mothers can begin to turn their attention and emotional energy toward other important domains in their life, such as the spousal relationship, friendships with other adults, the desire to return to work or school, or the need to care for younger sibling. While parents must always find a way to balance caregiving with other ongoing aspects of the personal lives, infants by nature demand more exclusive parental availability to ensure their survival. Thus, maturational changes on the part of the child allow the parents' world to gradually open up to other relationships and activities; however,

in sensing this shift toddlers may experience anxiety and fear about losing their parent's love and subsequently display behaviors which function to reassure them of their parent's continuing emotional availability. Similarly, the toddler's developing sense of personal will has the potential for clashing with the parent's own agenda, and dyadic conflicts are likely to ensue as the child becomes a more active partner in eliciting parent's conflicts.

Lieberman (1996) also highlights the important impact that new dimensions of self, such as aggression and sexuality, which begin to emerge during the toddler period, have on maternal perceptions or "attributions" of their child. She defines attributions as "fixed beliefs that the parent has about the child's existential core, beliefs that the parent perceives as objective, accurate perceptions of the child's essence." (p. 286). In her view, maternal attributions function as filters to the ways the child's behaviors are interpreted, and shape the way the child is responded to. These attributions can be more or less rigid, more or less attuned with reality in the sense that their content is consistent with the child's own characteristics and developmental stage, or they can be frankly bizarre and even delusional. Maternal attributions can be of a benevolent or malevolent nature and can be isolated to a particular aspect of the child and the relationship or, under more pathogenic circumstances, can permeate the parents' entire perception of the child. If the child arouses in the mother her own unresolved conflicts around particular issues such as aggression, sexuality, and autonomy, she may feel threatened by their existence in the relationship and defensively curtail her responsiveness to those areas of the child's development, thereby hindering their appropriate development.

Because the toddler period is a time of personality formation for the child, this renders it a particularly vulnerable time with regard to the impact that maternal attributions, especially negative ones, can have on the child's developing sense of self and other. According to Lieberman, the primary anxiety toddlers experience centers around their fear

of losing their parent's love as they separate and individuate, and will adapt their behaviors to maintain a sense of intimacy with the mother. Thus toddlers may inhibit their strivings toward independence, or the expression of any other behavior which they perceive evokes a negative reaction on the part of the mother. Paradoxically, toddler's tendencies toward compliance with parental perceptions of them may lead to an exaggerated expression of the behaviors or emotions the mother has difficulty with. In this way the mother's selective responsiveness to the child, guided by her attributions, can function to provoke in the child the very behaviors which she unconsciously fears and loathes. By way of projective identification, the child becomes the embodiment of the parent's conflict, and these negative attributions become internalized as part of the child's self concept.

Other researchers have written about the child's contribution to this process and also highlight the significance of these events during the toddler period. For example, Zeanah and Benoit (1995) noted that the emergence of representational intelligence after 18 months, leads toddlers to begin to form mental representations of both the parent and child roles in the relationship. Instead of solely internalizing self and object representations, toddlers internalize a set of rules and expectations that guide their reading of, feelings about and behavioral responses within the relationships. Sroufe and Fleeson (1986) add that these representations aren't merely passive filters of experience that determine the individuals' version of reality. Instead they organize the individual's behavior so that they actively re-recreate experience that is congruent with the relationship history. Thus, toddlers have the capacity to behave in ways that invite responses from others that confirm the child's internal model of the relationship, whether they be of a positive or negative in nature.

Benedek (1959) also highlighted the notion that the "child's ego seems to be weakest in those areas which correspond to unresolved conflicts of the parents" (p. 403)

According to her, the transactional relations between parent and child evolves relatively smoothly until the child reaches the developmental level at which the parent, because of his own developmental conflict, is unable to respond appropriately/sensitively to the child's needs and becomes insecure with the child. The child in turn senses this, experiences anxiety, and adapts to the parent's conflictual behavior. Benedek (1970), like Lieberman (1996) states that "the child will do whatever he needs to do to not lose the parent's love." (p.126). Benedek refers to this process as the child's "regressive adaptation to the parent's conflictual behavior". It is in this way that "the parent meets in each child in a particular way the projections of his own conflicts" (Benedek, 1959, p. 405).

Maternal fantasies, attributions, and expectations of the child are clearly very powerful forces which affect the current parent-child relationship and how experiences of self with other in the relationship are internalized by both mother and child. The manner in which maternal fantasies about the child affect the developing relationship is influenced not only by their content and pervasiveness i.e., malevolent or benevolent, global or specific, but also the degree to which they are consciously accessible to the parent. In general, these aspects of the mother's internal world operate largely out of conscious awareness; however, if mothers are able to openly recognize, acknowledge and reflect upon the aspects of their own conflictual experiences that are evoked by the child, they will be less likely to interfere with the child's healthy development and perpetuate interactions which diminish the mother's feelings of competence in her parenting role. In her clinical work with mother-infant dyads, Fraiberg (1980) also emphasized that disturbed relationship patterns can only be altered when the affective meaning of the caregiving experience can be acknowledged and understood. Thus, a mother's capacity to consciously recognize and integrate negative emotional experiences evoked by the child, is a salient feature in changing her maladaptive projective identification with the child, and enables her to respond in a more empathic, attuned and appropriate manner to her unique child's developmental needs and issues.

While the emphasis thus far has been on illustrating how things can go awry in the parent-child relationship as a consequence of distortions in maternal perceptions of the child, it is equally important to note that parental perceptions are essential in promoting healthy development in the child. Sanville (1991) has posited that a child's self is in part born out of illusion: that because parents believe a self is there, they call it into being by their own responsiveness. She described how parents regularly attribute meaning to the child's behavior and bring the child into the framework of their own meaning systems. When these attributions or fantasies are grossly misattuned with the actual child, they may lead to impaired mother-child relationships. However, they can also "lead to great things if those fantasies are congruent with the aptitudes and talents in the child." (p. 8). Thus, maternal fantasies of the potential and wished for child can function to propel the child forward in his development in very positive ways.

The interest in understanding the meaning of behavior and the psychological context of relationships, which has long been the central focus of clinical work, has recently been incorporated into research examining the parent-child relationship. Over the past decade, there has been a notable shift in focus from examining patterns of behavioral interaction, to understanding the subjective experience and meaning of behaviors for both the parent and child over the course of development.

New Directions in Research

Research studying the parent-child relationship has increasingly emphasized the importance of looking at patterns of interaction within the dyad to better understand children's psychological development. This trend reflects increased awareness on the part of researchers of the fact that parents and children exert a mutual influence on each other's behaviors, feeling states, and responsiveness over the course of development. Many new

and sophisticated research techniques have been developed to examine and analyze such things as the temporal flow of the interaction, and constructs such as dyadic synchronicity, reciprocity, and maternal responsiveness. Such efforts have greatly advanced the understanding of the quality of dyadic exchanges and differences in interactional styles; however, numerous researchers (Greenspan & Lieberman, 1980; Zeanah & Anders,1987; Zeanah & Barton, 1989) have pointed out that looking at behavioral indices alone fails to capture the meaning that behaviors have for a given dyad. Zeanah et al. (1989) note that there is a general consensus in the field that what is crucial in understanding parent-child relationships is not the interactive pattern itself, but rather what is communicated and experienced within that pattern about the relationship, the self and the other.

As mentioned earlier, interest in the underlying meaning of behavior and the individual's subjective experience has long been the focus of clinical work with parents and children. Clinicians have recognized that how a parent perceives, interprets and feels about the child and the relationship, influences the parent's ability to respond to the child's cues and signals in a sensitive, contingent and developmentally appropriate manner. Thus, the parent's internal experience of the relationship has direct implications for both the child's development and adaptation. It also influences how the child's developing concepts of self and other become internalized, and influences his expectations and subsequently his behaviors in relationships.

The new emphasis on understanding subjective experience has changed how researchers conceptualize and study parent-child relationships. The parent-child relationship is now viewed as something which exists internally in the form of an internal working model. This internal working model is the organizing structure which embodies an individual's subjective experience of self and other in relationships, and is manifested externally in the way the individual behaves. Thus, the parent or child's internal working

models or subjective experience of the other function as the internal mediators of their external interactional behaviors.

Definition of Internal Working Models

Interest in mental representations was greatly influenced by the theoretical work of John Bowlby (1962, 1980) on the nature and function of biologically based motivational systems. Bowlby's theory posits that humans develop a number of behavioral systems e.g. the attachment behavioral system, the exploratory system, the fear/wariness system, and the caregiving system. According to him, behavioral systems are goal corrected feedback systems, where diverse behaviors are organized to achieve the particular goal of that system. For example, Bowlby considered the biological set goal of the infant attachment behavioral system as proximity to the parent. Furthermore, he viewed that goals extend over long periods of time, and the behaviors needed to achieve those goals are adjusted flexibly, in a non-random manner, to a wide range of environments and the development of the individual. Bowlby recognized that different behaviors may be employed to achieve a particular goal, and argued that in order for a behavioral system to demonstrate such complex changes yet remain organized around a specific goal, it must be guided at the representational level. Thus internal working models are mental representations that structure and order and individual's internal world and operate largely out of conscious awareness.

Bowlby believed that the foundations of working models are laid during the earliest months and years of an individual's life and are based on real experience. He related working models to the ability to plan, which promotes a certain efficacy of behavior since past experiences may be used to forecast what can be expected in the future. Main, Kaplan & Cassidy (1985) have suggested that in addition to influencing behavior, working models can also influence feelings, attention, memory and cognition. Thus internal working

models refer to all the processes involved in the interpretation of social information; they assign meaning to incoming information, determine what affects are experienced as well as what gets encoded into memory. It is in this way that they function as unconscious guides to behavior in relationships. They are termed working models because they are believed to be dynamic in nature i.e., they not only re-present the nature of past interactional experience and permit the forecasting of future experience, but are considered to be open to change and revision with new incoming information. This notion that internal working models are modifiable is what led Main to refer to representations as reflecting a person's "current state of mind" with regard to a particular behavioral system e.g., attachment. While internal working models are thought to be changeable in early life, both Bowlby and Main viewed them as becoming increasingly resistant to change over the course of development.

Because internal working models are based on actual interactive experiences, Bowbly argued that they reflect the history and quality of the parent-child relationship which gradually differentiate into complementary models of self and other. Thus, different patterns of interactive behavior observed in mother-child dyads derive from different relationship histories which have shaped the individual's subjective experience within that relationship. The shift within attachment theory and research from a behavioral to a representational approach to understanding relationships was made possible by the pioneering work of Main et al. (1985) who used Bowlby's notion of internal working models of attachment to emphasize the fact that individual differences in the organization of attachment behavior reflect underlying individual differences in the quality of mental representations with regard to attachment. Main et al. (1985) further suggest that representations of attachment constructed in childhood, form the basis of later adult working models of attachment.

How Internal Working Models are Assessed

For many years, research has focused primarily on establishing links between maternal behavior and individual differences in child outcome. In attachment research the focus was on assessing dimensions of maternal sensitivity and responsiveness to the child's cues and the impact that different maternal styles had on the child's attachment. In the early 1980s, research took a turn to examine the maternal experience with regard to attachment, and was guided by the notion that the mother's own experiences in childhood would influence her approach to parenting her child.

The work of Main et al. (1985) on internal working models of attachment in adulthood opened the way to a comprehensive study of adult representations of attachment. Main et al. developed a semi-structured clinical interview - - The Adult Attachment Interview (AAI) - - designed to elicit feelings and memories from adults about attachment relevant childhood experiences. Main devised a coding system for the AAI which looks not only at content, but various formal features of the narrative discourse, including the level of integration of diverse perceptions, memories, affects and thoughts, and the overall coherence of the narrative. Main believed that these formal features of narrative discourse reflect important differences in the organization of an individual's representational world. Main's emphasis in the scoring of AAIs on the coherence and integration of parental representations involved a shift in focus from the content characteristics of narrative to its formal characteristics. This shift was related to the understanding that qualitative features of parental representations of their own early attachment experiences, and not the presence or absence of any particular feeling, is what mainly influences the way the relationship is experienced and intrapsychically organized.

Over the past decade, researchers have demonstrated a strong relationship between mother's representational models of attachment, as measured by the AAI, and the quality

of the child's attachment, as measured by the Strange Situation (Ainsworth, Blehar, Waters & Wall, 1978). Mothers classified as secure in their relation to their own parents tended to have children whose attachment to them was also secure, whereas mothers classified as dismissing of attachment were more likely to have children who were avoidant, and mothers classified as preoccupied tended to have children who were resistant (Benoit & Parker, 1994; Fonagy, Steele, Morgan, Steele, & Higgitt, 1993; Fonagy, Steele, & Steele, 1991; Main & Goldwyn, in press; Main, Kaplan & Cassidy, 1985; Zeanah, Benoit, Barton, Regan, Hirschberg & Lipsitt, 1993). These findings have provided powerful preliminary evidence that parent's working models of attachment are meaningful indices of how they relate as caregivers to their children, and has paved the way for researchers to begin to explore and better understand intergenerational processes in the ways relationships are experienced from one generation to the next.

While the findings documenting a strong link between adult attachment classifications and infant attachment status have been replicated by researchers examining diverse populations, using different experimental designs, e.g., prospective studies and concurrent mother/infant assessment, as well as in different cultural contexts (for a comprehensive review of attachment studies see van IJzendoorn, 1995), it is important to note that some studies have recently reported discordance between parent and child attachment classifications, in particular with the insecure categories (Fonagy et al., 1995; Slade, Dermer, Gerber, Gibson, Graf, Siegel & Tobias, 1995; Zeanah et al., 1993). This has challenged researchers to begin to explore potential sources for this discontinuity and raise questions of whether certain parental characteristics, child characteristics, or environmental factors are associated with patterns of discordance/discontinuity. In this light, numerous researchers have begun to turn their attention to the powerful influence that the child can have on the parent's psychological development. This line of thinking has been influenced by Bowbly and Main's notion that internal working models are open and

subject to change and revision in the event of transforming life events and the developmental of new relationships that are in some way markedly different from what an individual has previously experienced and grown to expect. It is also consistent with Benedek's (1959) theory that the experience of parenting a child provides parent's the opportunity to rework their own early childhood experiences and arrive at a new and perhaps qualitatively different level of personality integration. The transition to parenthood and ongoing experience of caring for an ever changing and growing child is without doubt a transforming experience for mothers.

Over the past five years, researchers have begun to systematically examine caregiving as a behavioral system that is related to, but distinct from, the attachment behavioral system, and have developed methods for assessing the parent's representation of the child. Within this framework, internal working models of attachment are conceptualized as a more general level of representation relating to intimate relationships, whereas the parent's representation of the child is more specific to the relationship and experience with a particular child.

Caregiving as a Behavioral System Organized at the Level of Representation

In his studies of attachment Bowlby (1969, 1982) suggested that the attachment and caregiving behavioral systems are complementary in nature. He believed that parents instinctively comfort and protect their children in much the same way that infants instinctively seek comfort and protection from their parents. The motivation to seek care leads the child to develop an internal working model of his caregiver; the motivation to provide care will lead parents to develop an internal working model of the child. These representations will function to guide parent's expectations and behaviors in the relationship, and will influence patterns of parental responsiveness (Slade et al., in press.)

Until recently, caregiving had not been approached from an organizational perspective. George & Solomon (1989, 1996), were the first to argue that caregiving should be considered as an independent behavioral system that is organized at the level of representation ,and have presented a framework for conceptualizing and studying the caregiving system. According to them, the caregiving system is designed to provide changing levels and forms of protection and nurturance depending upon the developmental and individual requirements of the young child. The goal of the caregiving system is to keep the child safe, and its adaptive function is the protection of the young. George and Solomon posit that the caregiving system is associated with strong feelings such as anxiety and pleasure and is flexible in nature. Thus, when the child is perceived to be safe, the activation of the caregiving system is low and can shift to promote and encourage exploratory behaviors in the child. Within the context of the caregiving system, the mother continually evaluates the level of care required by the child in a given situation.

How Internal Working Models of the Child are Constructed

Solomon and George (1996) propose that the caregiving representational system has its roots developmentally in the construction of working models of self and other in the context of attachment relationships during childhood but is, under normal conditions, a distinct model of relationships with its own developmental trajectory. In their view, the mother assimilates the child into her already existing model of attachment, but also accommodates to the reality of the child and to the larger caregiving context in which the mother finds herself. Thus, the caregiving system and representation is the product of the balance between assimilation and accommodation, and is considered to be "a mature transformation of the attachment system" (Solomon & George, 1996, p. 15), representing a shift within adults from the childhood perspective of being cared for, to the caregiving perspective of providing care. Furthermore, representations of caregiving are conceptualized as keeping pace with the child's development in that parents tend respond to

their child's age-appropriate developmental tasks with corresponding stage appropriate caregiving behaviors. This is consistent with Bowlby's information processing view emphasizing that working models are modifiable with new incoming information e.g., maturational advances on the part of the child, and are derived from actual interactive experiences.

Other theorists and researchers (Benedek, 1959; Bibring, Dwyer, Huntington & Velenstein, 1961; Winnicott, 1965), propose that mothers begin developing representations of the child during the early stages of pregnancy. These initial representations are largely shaped by mothers' fantasies about the unborn child, and at this stage are still greatly influenced by the mother's own early models of attachment relationships. Slade and Cohen (1996) posit that once the child is born, maternal representations of the child undergo further differentiation and become increasingly defined by the child's actual personality characteristics and the feelings they evoke in the parent over the course of development. In their view, parents simultaneously develop complementary representations of themselves as parents which embody their feelings of confidence and competence in their parenting role. These representations of self as parent similarly undergo revision to incorporate the new demands and challenges parents are faced with as the child continues to develop and mature.

This dynamic conceptualization of how parental representations of the child and of self as parent develop and change is consistent with theoretical notions that periods of developmental transition provide opportunities to revise internal representations. Thus, the toddler period is a particularly interesting and fruitful time to examine maternal representations of the child in that it is by nature a time of developmental upheaval and change. It also presents opportunities to examine the ways in which the caregiving system may change as the child becomes increasingly autonomous and self-sufficient. As

Lieberman (1996) noted, the toddler period is a time when the caregiving system becomes increasingly subservient to other parental motivational systems. How mothers adapt to these changes on a behavioral and representational level, and continue to provide care and stimulation that both keeps that child safe and promotes the child's autonomy while simultaneously enabling her to attend to other aspects and relationships in her life, is of particular relevance during toddlerhood. Researchers examining maternal representations of the child have recommended that future research should be targeted at looking at maternal representations at developmental periods thought to be related to times of transition, to further elucidate the differences between the attachment and caregiving representations systems.

How Parental Representations of the Child are Assessed

Over the past five years several groups of researchers have developed interview protocol and coding schemes to begin to systematically assess parental representations of the child (Aber & Slade, 1985; Bretherton et al. ,1989; George & Solomon, 1989; and Zeanah, Benoit, Hirshberg, Barton & Regan, 1994). These interviews ask parents to describe their relationship with their child, to reflect upon their own emotional and behavioral responses when interacting with their child in a variety of situations, as well as to discuss pleasures and difficulties they experience in their parenting role. Interview questions also assess parent's awareness and understanding of their child's experience, both as an individual and in the context of the parent-child relationship. The interviews are designed to measure a parents "current state of mind" with regard to their relationship with their child, and like the Adult Attachment Interview, are presumed to reveal content as well as qualitative features of internal representations. Two different approaches to coding parental representations of the child have been developed; 1) a categorical approach which is analogous to Mary Main's classification schemes of adult representations of their own early childhood experiences (George & Solomon, 1989; Zeanah et al., 1994) and 2) a

dimensional measurement system which assesses organizational and affective features of parental representations (Aber et al., in press; Slade, Aber, Cohen, Fiorello, Myer, DeSear & Waller, 1993; Slade et al., in press). Consistent with Main's approach to coding narrative data, both approaches rate verbatim transcripts of interviews as a whole, and take into account the match between parental responses and the age or developmental level of the child.

While researchers in this area have approached their data in different ways, and have used somewhat different terminology to describe similar phenomena, the interviews and basic research questions have been similar across studies. The questions that have dominated the research are: 1) whether internal working models of the child are related to an adult's internal working model of attachment and 2) whether a parent's internal working model of the child influences the quality of child attachment/outcome. Both sets of relationships have received preliminary confirmation.

Numerous researchers (Bretherton, Biringen, Ridgeway, Maslin, & Sherman, 1989; George & Solomon, 1996; Slade & Aber, 1986; Slade, Belsky, Aber, & Phelps, in press; Zeanah et al., 1995), have independently documented a significant concordance between adult internal working models of attachment and parental representations of the child. Mothers who were secure in their own early attachment experiences were more likely to have a balanced, coherent and flexible representation of the child, and were also able to view themselves as being able to provide a secure base for the child and feel competent in their parenting role. Insecure mothers by contrast, provided impoverished or distorted descriptions of their children, and were more likely to represent themselves as detached, helpless, or ineffectual in responding to their child's needs for safety, stimulation, and containment. Additionally, secure mothers were better able to acknowledge and integrate both positive and negative affective experiences relevant to their relationship;

whereas insecure mothers tended to either minimize or maximize such emotions. These findings underscore the powerful influence that a parents' own early object relationships and attachment experiences have on the development of a new relationship with the child, and lend support to theoretical notions that these two behavioral systems are indeed linked at the representational level.

More recent studies have established a link between parental working models of the child and child attachment status measured in infancy. Zeanah et al. (1995) reported a strong relationship between a mother's internal working model of her child and the quality of the child's attachment. Thus, babies who were secure in the Strange Situation had mothers who were balanced in their representations of the relationship, babies who were avoidant had mothers whose representations were characterized as disengaged, and babies who were resistant had mothers whose representations were distorted Bretherton et al. (1989) reported that a single sensitivity-insight rating derived from parental interview data was highly correlated with infant security. Similarly, George and Solomon (1989) reported a significant correspondence between maternal internal working models of caregiving on dimensions of secure base, rejection, uncertainty & helplessness, and child's attachment classification.

These studies have demonstrated an interrelationship between parental representational processes and children's capacity for affect regulation and expectations they develop about caregiver responsivity in stressful situations as manifested behaviorally in the Strange Situation. An important question that remains to be explored is the process through which parental mental representations are transmitted to the child. Attachment theory and research has emphasized the role of sensitive responsiveness on the part of the caregiver as the primary vehicle through which parent's internal working models of relationships influence the child's security of attachment. According to this model of

transgenerational transmission, " the parent's attachment related experiences in childhood are embodied within a working model which is thought to affect the development of the mental representation of the child in the caregiver's mind. This determines parenting functions underlying sensitive caregiving behavior, which then constitutes the primary determinant of the child's quality of attachment to the parent" (Fonagy, 1995, p.4). Thus, a third area of inquiry which researchers are beginning to explore is the link between maternal representations of the child and behavioral indices of maternal responsiveness.

Links between Maternal Representations of the Child and Maternal Responsiveness.

In an effort to shed light on the process of transmission and address the question of how parental representations of attachment and caregiving differentially influence parenting behavior, Slade et al. (in press) conducted a longitudinal study of mothers relationships with their first born sons. These investigators employed the Parent Development Interview (PDI) and coding system (see Methods section and Appendix A) to assess maternal representations of the child, and is the first study to date which examines the link between adult attachment classifications, parental representations of the child, and mothering behavior during the toddler period.

The authors conducted separate analyses to examine the relationship between mothers' AAI classifications, qualitative features of maternal representations of the child, and behavioral indices of positive and negative mothering. Significant findings emerged in both these areas. Mothers who were classified as autonomous on the AAI displayed less negative mothering than those classified as dismissing or preoccupied. Results linking parental representations of the child with mothering revealed that mothers who expressed more joy/pleasure in the relationship displayed more sensitivity, provided more cognitive stimulation, and expressed more positive affect and less negative affect than other mothers. Additionally, mothers who were better able to modulate expressions of anger in the

interview engaged in more positive mothering than mothers scoring high on negative affect. These findings are consistent with theoretical notions that the capacity to integrate and freely describe positive and negative affect pertaining to the relationship in a coherent manner influences the quality of responsiveness, and provides an accurate index of the actual experience with the child.

A particularly interesting set of findings which directly pertain to the process of transmission was that 1) maternal representations of the child partially mediated the effect of adult attachment on observed mothering behavior, and 2) a mother's current representation of the child was found to be a more powerful predictor of sensitive caregiving behavior than her own early attachment history. According to Slade et al. (in press) these results provide compelling empirical evidence supporting the notion that while parental representations of the child may initially develop as a function of the parent's own attachment representations, over the course the child's development, these representations undergo increasing differentiation and begin to exert a more direct and measurable effect upon the developing relationship with the child. The authors caution that future studies need to be conducted to replicate these findings and continue to explore the links between maternal representations and parenting behaviors at various stages of child development.

The research findings summarized in this section have demonstrated that maternal representations of the child are linked to three different variables: 1) parental representations of their own early childhood attachments; 2) child attachment security in infancy; and 3) behavioral indices of maternal responsiveness. No studies to date have examined the relationship between maternal representations of the child and child functioning and adaptation during the toddler period.

The Adaptive and Integrative Function of Positive Affect

Slade et al. (in press) utilized a continuous variable approach to coding maternal representations of the child (Slade, Aber, Cohen, Fiorello, Meyer, DeSear & Waller, 1993). This enabled them to examine how different dimensions of maternal affect pertaining to the relationship were related to coherent and incoherent representations of the child, and explore the manner in which particular affects influenced patterns of maternal responsiveness.

Findings reported in their study revealed a relationship between a mother's capacity to experience joy and pleasure in the relationship and her ability to respond in a facilitating manner with the child. The authors discuss the particular relevance this finding has during the toddler period where dyadic conflict and discord is at its peak. They posit that a mother's continuing capacity to experience pleasure in the relationship may function to modulate some of the negative feelings that are normatively aroused during this developmental stage, thereby enabling her to provide care that fosters the child's adaptation. Furthermore, positive affect appeared to influence mother's capacity to differentiate and process information about self and other in the relationship. Mothers scoring high on joy/pleasure were able to provide narrative descriptions of the child that were rich, textured and coherent. They viewed their child's experience as meaningful and complex in it's own right, and displayed a willingness to contemplate their own and their child's independent contributions to the quality of the relationship. Thus, the ability to experience joy and pleasure appears to be linked with mothers' capacity to recognize and maintain clearer cognitive boundaries between her own and her child's experience, as well as "contain" the potentially disruptive impact of negatively charged aspects of the relationship. These findings suggest that this dimension of maternal affective experience plays a critical role in the process of self-other differentiation during toddlerhood. A mother who is able to clearly reflect on and mentally represent her child's experience as distinct from her own, is

likely to interact with her child in ways that communicates her recognition of his or her autonomy. The child in turn will experience himself as known and understood as a separate individual, facilitating his own capacity to internalize and represent self and other in relationships in a differentiated manner. This kind of maternal responsiveness will also impact on the child's self-esteem in that it conveys a sense that his individuality is valued, and worthy of her attention/consideration. Thus a mother's subjective experience of joy/pleasure - as distinct from anger - appears to be a crucial aspect of maternal adaptation during the toddler period. Data suggests that it influences not only the quality of her representation of the child and her continuing capacity to function as a secure base for her child's developing autonomy, but may also have implications for the child's developing representational world.

The present study will attempt to shed light on the interplay between maternal and child representational processes during the toddler period. Of particular interest is the question of how maternal representations of the child influence the parent-child interaction centering around the child's capacity to engage in symbolic play, and their role in facilitating or hindering this important developmental achievement on the part of the child.

The Importance of Symbolic Play

The previously cited study provided evidence for the complex interplay between affective and cognitive processes in adults. Mothers who were secure in their own early attachment relationships displayed greater representational competence i.e., they were better able to describe and integrate a broader range of information and affect relevant to themselves and intimate relationships. Moreover, they displayed a greater willingness to mentally explore aspects of their own and their child's inner life, and clearly valued this type of thinking.

In adults, this cognitive capacity to freely access, contemplate and process information in a way that is both highly personal and attempts to bring order and meaning to experiences, is similar to the kind of mental activity children engage in when they are playing. This ability to reflect on personal experience contributes to our awareness of having an inner core. That is, a sense of ourselves as possessing an inner psychic reality comprised of thoughts, feelings, memories, wishes and fantasies, that is distinctly different from that of other people and which can be shared with others or kept private. This capacity to mentally explore diverse aspects of our experience; to isolate, combine, and rearrange them in new ways, is fundamental to the process by which we make meaning in our lives, and is the foundation for the expression of our creative potential. In adults, the arena for this kind of activity is internal; for children the arena for meaning making, and bringing into being a personal reality, is play.

According to Sanville (1991), children play when they have an abundance of energy over and above that which is required for survival and general welfare." (p.21) This idea is similar to notions put forth by attachment theory that a dynamic balance exists between attachment and exploration. Children who are secure in their relationships with their caregivers have developed a sense of basic trust that their needs for nurturance and safety will be responded to in a reliable and sensitive manner. This confidence in their caregiver's availability and responsiveness, especially in situations of stress, enables them to freely explore their environment and capabilities to their fullest, and know that their bids for continuing emotional connectedness with the caregiver will be met. In toddlerhood, the emergence of representational thinking dramatically changes the nature of exploratory behavior. Toddlers are no longer limited to somatic and behavioral responses and interactions with the environment, but are increasingly capable of exploring the world through mental actions, and can actively combine thoughts to create new ideas. Toddlers

can also use symbols to represent and make sense of their experiences through language and play.

Much has been written about the important affective, cognitive and social functions that play serves in children's development. Playing implies an activity of great pleasure; however, it is also something that the child takes very seriously. When absorbed in play, the child invests his activity with a high degree of emotion and concentration much like an adult who is lost in thought. For the child, the arena upon which thoughts are displayed is real. Children use physical objects (toys), aspects of the material world, as the elements of play. Before children become capable of symbolic play, they primarily examine and experiment with the functional properties of the objects they are playing with. Their play is largely geared towards figuring out how things work, what they can be used for, and how they interrelate. Thus, the scope of play remains very "reality" oriented; tied to the tangible properties of objects, and promotes important cognitive functions such as problem-solving and the attainment and mastery of basic skills and concepts. While this kind of experimentation in play remains an essential way for the child to actively participate in his own learning throughout development, the advent of representational thought enables the child to use objects in a new way - that is as vehicles of his imagination.

The discovery that objects can be used to "represent" aspects of his experience and internal world transforms the nature of child's play and the kinds of learning that occurs through this activity. He can now use play as an arena to play out and reconstruct events in his life. This greatly enhances his ability to make sense of important themes and feelings from every daily life, to begin to understand cause and effect relationships, to try out different roles and broaden his awareness of the ways different "players" can interact with and impact on each other. When playing symbolically, the child can also rearrange things in new ways, explore different scenarios and test out a variety of possibilities. On a

cognitive level, he can engage in "as if" thinking and generate any number of hypotheses about how things could be, shouldn't be, work or don't work. In this sense that child's awareness that playing is not real, allows for greater freedom and flexibility in thinking. Emotionally, this has adaptive value in that the child can create scenarios and outcomes according to his wishes, likes and dislikes, thereby gaining a sense of mastery and control over things which in reality may displease him. This is similar to Winnicott's notions that play takes place in an "intermediate area of experience" where individual's do not constantly feel the constraint to determine what is objective or outside reality, but where he can enjoy the inevitable ambiguity of things and use play to freely explore wishes, ideas and fantasies about oneself, the world and other people.

Children can use play as safe arena to express a variety of emotions and impulses such as anger and aggression in ways that are more "socially acceptable". It provides a kind of escape valve, where the child can pretend to be destructive, disobedient, or uncooperative without fear of reprisals or negative consequences. This becomes especially important during the toddler period where children become more aware of adult standards and internalize their parent's values, and are thus capable of feeling bad (guilty) when they do something wrong. Play also provides opportunities for children to deal with conflicts and master experiences that are frightening, confusing or painful, whether real or imagined. In play, the child can safely turn the tables and become the powerful one. For example, he can pretend to be mommy or daddy who tells the non-compliant baby doll that it's time to go bed. These are all examples of how children can use play adaptively in the service of emotional mastery, and turn passive experiences into active.

These examples have described some of the many adaptive functions of symbolic play. For toddlers, the ability to use play in the service of emotional mastery is still quite rudimentary due to the "emergent" nature of their representational skills and repertoire.

Additionally, the boundaries between reality and fantasy are still somewhat blurred for toddlers; they are just beginning to grasp the concept that playing is pretend and oftentimes need adult guidance to clarify this distinction. For example, a toddler may use a toy phone to pretend to call mommy, and will suddenly appear to be utterly perplexed when he doesn't hear his mother's voice coming from the receiver. Much of the delight and playfulness inherent in toddler's play revolves around this very discovery that things can be transformed and used in ways that are not "literal" but rather defined and created by ideas generated from within. Toddlerhood is a transitional time characterized by the discovery that the imagination is an exciting new terrain that can be explored and shared. Indeed, it is the communicative and interpersonal functions of play and early symbolization that seem to be most vital during the toddler period. For the toddler, the arena of play becomes a place where meaning can be shared, created, and mutually understood between people. The process of communicating and sharing meaning with another helps the toddler to increasingly differentiate me from not me experiences, but also contributes to intimacy in the sense that his ideas are known, valued, and understood. The other's interest and responsiveness to his communications, validates his autonomy and promotes his growing awareness that he has an inner life that is highly individual. In this context, the child can combine the wish to develop potentials of the self, with his desire to connect meaningfully with others in a way that feels personal and authentic. The following vignette is a naturalistic observation of a mother engaged in free play with her 28 month old toddler, and illustrates this notion that play is a place where personal meaning can be shared.

> George, a 28 month old toddler, is looking at the assortment of toys in the room. His mother is sitting on the floor, attentively watching her son as he contemplates what to play with.. George picks up a plastic stick and lies down on his back. He holds the stick with both hands stretched out in front of him and begins to do sit ups. "I'm doing exercises" he tells his mom, who smiles and begins gathering the colorful shapes that are intended to be used as stacking toys with the stick George is holding. George, now

finished with his exercises stands up, waves the stick in the air and enthusiastically announces "I have a stick, it's a stick!". His mom holds out one of the shapes saying "Here, try putting one of theses on your stick". George likes this idea and reaches for the shape. For the next few minutes he gives his full concentration and effort to trying to figure out how to make the shapes fit onto the stick, occasionally stating, "this is hard, I can't do it" Noting both his frustration and desire to master this task on his own, his mother patiently offers instructive information and encouragement. George persists and succeeds at fitting numerous shapes onto the stick. His pride over his accomplishment is apparent as he begins to playfully march around the room with his colorful baton. He visually scans the room, then goes over to his mom and tells her "I need a vacuum. I need to vacuum the floor, it's dirty." Intrigued by her son's idea, his mom asks "Vacuum? What are you going to use as a vacuum." Without hesitation, George displays his stick and declares "this is my vacuum, see..", then bends forward and begins pushing the shapes in backwards and forwards motions along the carpet. He becomes more animated and embellishes his activity with motor noises as he busily vacuums different areas of the room. His mom watches him with an expression of pleasure and amusement. George zooms over to her side, and pauses for a moment to examine his colorful stick. "It's an ice cream cone with different flavors." With surprise and amazement, his mom exclaims "an ice cream cone!?" George offers the stick to his mom and replies "Yeah, it's an ice cream cone for you.". She accepts it and pretends to taste the different flavors. "Mmm, this is delicious." George and his mother look at each other for a moment, his face brightens and they both burst into laughter.

These exchanges demonstrate how symbolic play takes place in an atmosphere where magic mingles with reality. In his mind, George can turn a simple plastic stick into anything he wants it to be. He clearly derives pleasure from his ability to spontaneously generate new ideas, and can planfully follow through with his intentions. His activities also provide examples of the different ways toddlers use toys. For instance, George works very hard at figuring out how to put the shapes onto the stick. There is an industriousness to his efforts; like a scientist working on an experiment. He also knows there is a solution

to this problem, states his need for help, and utilizes the assistance his mother offers. His mother understands his wish to master this task on his own and offers verbal instructions rather than doing it for him. In this manner, his mother affirms his striving towards autonomy and mastery, and conveys her awareness that her child can now meaningfully take in information and use it to guide his behaviors. Thus, she comprehends that he is capable of thinking on his own, yet remains alert and attentive to the possibility that his frustration may require more active involvement on her part.

George is equally industrious in his pretend play and is more animated when engaged in this activity. He derives enormous pleasure from the event that he can create a world according to his own fantasies. His behaviors vividly bring to life Piaget's notion (1951) that "play is close to pure assimilation which makes for satisfaction of the ego rather than subordination to reality " (p. 167).

George's play with his mother nicely captures some of Winnicott's ideas about play. Winnicott (1960a, 1960b) asserts that if a mother, in the earliest stages of her child's life, can lend herself to a high degree of adaptation to her baby's needs, and can refrain from impingements stemming from her own needs, she creates a "holding environment" which protects the infant's "going on being". The infant, is unaware of this maternal provision and can comfortably take it for granted; it is within this context that the infant can act and not react. These actions which stem from the child's illusion of omnipotence, are what Winnicott refers to as "spontaneous gestures"; they are in his view the first evidence of a true self or inner core.. A good enough mother meets this omnipotent gesture of the infant and makes sense of it repeatedly allowing a true self to begin to have life. A not good enough mother by contrast, meets the infant's gesture with one of her own and forces compliance. While misattunements are inevitable, and according to Winnicott (1960b), crucial in enabling the child to begin to distinguish self from other, too many maternal

impingements are considered pathogenic. A child who must continuously conform and react to the real world, risks losing touch with the "spontaneous gesture" - which is the route to playing and creativity. His engagement and attention are in such circumstances, directed outward and although clearly adaptive, he is denied opportunities to experience and develop an inner sense of self.

By way of her attention and responsiveness, George's mother provides an enabling environment for his independent explorations. George does not need his mother to offer play suggestions. Instead it seems that her non-intervening presence and his confidence in her ongoing availability creates a "playspace" for George where he feels safe to behave spontaneously. His energy and animation mount not because instincts are aroused, but because playing allows him to test the limits of being all powerful and creative. In this context, George repeatedly has what for a toddler might rightly be considered a "spontaneous gesture"; that is an idea stemming from within that is uniquely his own. For example, using the stacking toy as a vacuum cleaner and then turning it into an ice cream cone. George is eager to share these gestures with his mother and clearly delights when she "gets it." Her responsiveness lends reality and dimension to George's expressions. She not only communicates understanding of what he means but also introduces something of her own e.g., by taking the ice cream cone, pretending to taste it ,and declaring that it 's delicious. This exchange between George and his mother provides a good example of the ways that reciprocity contributes to meaning making in early life. Here, both members of the dyad focus attention on the behavior of the other and respond with behaviors of their own that enhance and elaborate on a mutually shared theme. This play sequence also demonstrates the dialectic put forth by Winnicott, that when the mother has provided the infant opportunities to play in her non-intervening presence, he develops the capacity to be alone and internalizes her silent presence. From this he develops a self-assurance that he can be by himself, so it becomes safer psychologically to reach for

connection with her or ask for help when he needs it. Thus, a mother who can initially fit in with the infant's predilections, will gradually be permitted by him to introduce her own playing, and they will be able to play together.

How Researchers Have Assessed Children's Play

An extensive body of research exists to document the development of toddlers' independent symbolic play. Several investigators have developed coding systems to assess children's play (Belsky and Most ,1981; McCune-Nicolich, 1981; Nicolich, 1977), and have demonstrated the existence of an invariant , hierarchical sequence in the emergence of object and role play. These findings have elaborated and confirmed Piaget's (1945) notions of stage and hierarchy in early symbolic play development. They are also consistent with Werner and Kaplan's (1963) theory of a developmental progression from undifferentiated exploration to increasingly decontextualized play. The researchers conclude that assessments of the level of children's play provides and accurate index of the child's representational competence or "symbolic maturity" (Nicolich, 1977.)

Piaget was primarily interested in understanding how children think, not what they think about. Thus, he sought to understand and describe the mental operations underlying play rather than focusing on it's content, and his theory of play is closely bound to his theory of intelligence. According to Piaget, symbolic play proceeds according to the same rules that underlie other forms of cognitive development, and the level of a child's play is viewed as an index of emerging representational capacities. Piaget defined levels of play based on children's actions vis-à-vis objects and other people. According to him, the meaning of any symbol lies in the child's current schemes for interacting with the thing symbolized. In other words, symbols do not represent things in themselves, instead they represent the child's present understanding of things. From this he reasoned that observations of the manner in which children interact with objects in their environment,

provides a "window into their cognitive development." The two processes Piaget believed to be basic to cognitive functioning, are assimilation and accommodation. As one progresses through Piaget's stages of intellectual development, variations in the balance between assimilation and accommodation occur; however, he viewed the entire process as being dominated by a progressive "decentering", through which the world is viewed less and less egocentrically by the individual. Within this developmental schema, Piaget considered play to be close to "pure assimilation", i.e., the child changes incoming information to suit his individual interests.

Developmental Trends

Researchers examining the structure and sequence in symbolic play development (Belsky & Most ,1981; McCune-Nicolich, 1981; Nicolich, 1977; Slade, 1986, 1987), have identified the following developmental trends that are consistent with Piaget's theory. In the first year of life play is predominantly characterized by sensorimotor manipulation; the goals of the child's play appears to be to extract information about objects, what objects do, what perceivable qualities they have, and what immediate effects they can produce. This type of play is non-symbolic; the child's actions are tied to the tangible properties of the objects rather than being representative.

According to Piaget (1945/1951) symbolic representation in play usually becomes possible before the child's second birthday with the advent of object permanence (knowledge of the continued existence of a physical object when it is out of sight), and marks the achievement of representational intelligence (action in the absence of objects.) In the months that follow, pretend play assumes increasing importance in the child's play repertoire, with simple action schemes giving way to increasingly complex planful and thematic combinations. Findings reported in the developmental and clinical literature on symbolic play describe broad regularities in symbolic play development during the third

year of life. Three types of major developmental changes observed include: 1) the ascendancy of themes and planning, 2) the increasing flexibility in the choice of signifier, and 3) increasing coherence in the designation of roles in sociodramatic play.

During this period (18-36 months), the most predominant trend reported in symbolic play development is the move from action-oriented schemes to complex, planned thematic sequences. Thus, in the early months of toddlerhood, objects are treated realistically in the context of their intended use, for example, a car is defined by it's "rollability" While children continue to use objects in this manner, toddlers begin to be able to combine a series of such acts around a theme. Thus ideas begin to provide the structure for play, and towards the end of the third year of life, play becomes increasingly elaborate, "organized around conceptual schemes suggested by the child rather than the action properties dictated by the object" (Slade, 1986, p.546). Another trend is for play to become increasingly "decentered". Initially symbolic representation is seen in behaviors directed towards the self e.g., the child will drink from a toy cup. Later toddlers will begin to direct such acts towards others e.g., pretending to feed a doll. Both these types of play provides evidence of a child's capacity to mentally represent a sequence prior to it's enactment.

During this same period researchers have documented that children develop the capacity to imbue meaning onto a seemingly meaningless object. e.g., a toy cup will be used to represent a hat. This type of play where symbols become increasingly "distant" from their referents (Werner and Kaplan, 1963) is termed object substitution or transformational play. As children approach their third birthdays, they begin to exhibit higher level transformational play where the structural aspects of objects are ignored in the service of novel and creative transformation. For example, a child my use an assortment of beads and blocks to represent different types of food while preparing and enacting a

pretend picnic scenario. In this type of play, the child's connotative intention supersedes his or her need to adhere to the tangible, observable properties of the object , and the relationship between signifier and signified is highly personal. For example, a block can represent a cat for one child , and a car for another.. Nicolich considers this transformational quality to be the defining attribute of symbolic play. Other researchers (Slade, 1986), have compared the kind of thought processes children display in transformational play to adults' use of metaphors.

Another trend observed during the toddler period (Bretherton, 1984; Slade, 1986), is the dramatic increase in children's involvement in role-playing and sociodramatic play. According to Slade (1986) this development begins with children taking an "interest in "person props" such as hats, dress-up clothes and using their voices and sound effects to represent objects or actions. As this type of play progresses, it becomes both more sophisticated and organized i.e., plans begin to guide role playing and role enactments result in the emergence of true "characters" play e.g., firemen who put our fires etc. (p.547).

Interpersonal Context of Symbolization

"Play starts as a symbol of the infant's and the small child's trust in the mother."
D.W. Winnicott Notes on Play.

Research on children's play has predominantly focused on the cognitive/maturational aspects of symbolic development. More recently, researchers have turned their attention to examining the interpersonal and social contexts of early symbolic functioning. According to Slade (1987) this work has been greatly influenced by the theories of Werner and Kaplan (1963) and Winnicott (1971), who believe that the early sharing of meaning that takes place between mother and child leads to the capacity to

communicate and symbolize. In their view, the quality of dyadic functioning is directly linked to the development of representational competence.

Werner and Kaplan (1963) present a developmental approach to symbol formation which is characterized by progression from a state of relative globality and undifferentiation, to one of increasing complexity, differentiation and hierarchic integration. According to them, first symbolization occurs in the context of the "promordial sharing situation"; the interactive setting wherein the child first begins to experience himself, the "Other " (typically the mother), and objects in his world. Initially, from the child's perspective, the boundaries between these components are only slightly differentiated, and he relates to them primarily in sensorimotor and affective ways. With development, a gradual shift takes place where objects that were "acted on and with" by the child become "things-of-contemplation" (p.67). As this happens, the child begins to gesturally refer to these objects which according to Werner and Kaplan, is an indication of the child's wish to share them with the other. In this model, that which is initially shared between mother and child is a concrete object of reference; however, as development and differentiation proceed, a higher stage is reached at which sharing of meaning and knowledge is achieved through symbols. Thus, in Werner and Kaplan's view, symbolization first involves the capacity to reference an object, then the capacity to represent that object. A central premise of their theory is that the motivation to symbolize and represent experience arises from the wish to share experiences with a social partner. Thus, the "other" plays an important role in the emergence of symbols and the progressive differentiation of the addressor from the addressee, as well as the symbolic vehicle from its referent. This culminates in the use of shared symbols which are freely and deliberately employed for communication. Slade (1987) has noted that "viewed from this perspective, symbols arise within the context of early social relationships and need to be studied within these relationships (p. 368).

Winnicott (1971) similarly emphasizes the importance of the early mother-child relationship, and designates the "playspace" between mother and child as the "birthplace" of the symbol. According to him, "playing implies trust and belongs to the potential space between (what was at first) baby and mother-figure, with the baby in a state of near absolute dependence and the mother-figure's adaptive function taken for granted by the child." (p. 51). This potential space is the setting for first symbolization, and the restitution of that sense of lack-of separateness may in Winnicott's view be an important motive in some of the first symbol creating activities. Winnicott focuses on the mother's availability for playing. He believes that when mothers, by way of their responsiveness, are able to by provide a "holding environment" in which symbols are "met", they give reality and dimension to the child's symbolic productions. Such recognition affirms the child's autonomy; at the same time, because the mother has been so intimately involved in the child's symbol making, this autonomy does not come at the expense of intimacy and closeness with her.

According to Winnicott (1971), playing has a space and a time that it is not solely inside or outside but is in the potential space first created between mother and infant. In his view, an infant feels omnipotent as a result of good enough mothering and can enjoy the illusion of omnipotent control and creating, and will gradually become aware of the illusory side through play and symbolization.

Mahler, Pine and Bergman (1975), present another theoretical point of view which suggests a crucial relationship between the process of self-object differentiation and both the capacity and impetus for using symbols. According to them, symbol formation and use is thought to take place during the latter subphases of the separation-individuation process i.e., rapprochement and "on the way to libidinal object constancy", where the child becomes increasingly aware of his/her separateness from the mother. These authors

highlight the inter-relatedness between a child's cognitive development and development in the domain of object relations. The child's cognitive capacity to mentally represent experience at this stage, enables him to keep the mother present in her absence. Additionally, and the communicative function of symbols facilitates the child's ongoing exploration of the me, not-me aspects of experience without severing his or her tie to the mother.

Slade (1986), in a naturalistic study of the relationship between symbolic play and the process of separation-individuation in toddlerhood, highlights the importance of distinguishing the act of representation - - which is ubiquitous at this age - - from the unique and personal process of establishing a symbol system. According to her findings, the means by which external experience was translated into symbols does not vary from child to child however, the structure, integrity, and accessibility of symbolic domains does. She reasoned that the nature of a child's representations, their clarity, their complexity and the degree to which they serve adaptive rather than conflictual functions reflects the child's success in the following domains: 1) establishing clear boundaries between himself and others, 2) in substituting internal images for action and physical contact, 3) in managing the anxiety and anger inherent in the process of separation-individuation and 4) in establishing a sense of separateness and autonomy while maintaining a positive tie to his/her primary objects.

In her conclusions, Slade makes note of the interactive rather than causal relationship between progress in separation-individuation and symbolic development. Thus the greater the degree of a child's inner stability and integration, the greater the availability of flexible and complex modes of symbolic expression. Similarly, the more diverse the capacity for symbolic expression and transformation, the greater the opportunity for the child to practice, enhance and delineate self and object representations

through play. "Each level of symbolic representation changes the experience of the object represented, its meaning, function, and relationship to other objects. Similarly, the greater the conflict and anxiety with respect to separation and separateness, the greater the limitations on the child's independent use of thought in the service of autonomy, mastery and learning" (Slade 1986, p. 560).

Sources of Individual Variation in Toddler's Play

The theoretical perspectives outlined above provide explanatory constructs for the context in which early symbolization takes place and suggest that individual differences in the quality of the early mother-child relationship will directly influence the emergence of symbolic process.

The issue of individual variation has received the most direct examination in the attachment literature. A central premise of attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby 1969), is that a dynamic balance exists between attachment and exploration. Thus attachment theory predicts that children's interest and competence in exploring their environment will be directly related to their expectations that the caregiver will meet their needs for comfort and protection. Bretherton (1979), considers this notion in light of the development and expression of representational skills in children. In her view, the harmoniousness of the mother-child relationship which characterizes secure dyads, contributes to the emergence of symbolic thought directly via mother-child interaction, and indirectly by enhancing the child's capacity to explore the environment on his or her own. She states that " if a mother and infant can achieve an interactive style in which reciprocity and affective sharing occur, the child has increased opportunities to acquire cognitive and communicative skills through interaction with the mother." (p.268). Thus, the child in a secure relationship, not only has more opportunities for interaction, but is more likely to have contingent interactions.

A large body of research exists which confirms the relation between security of attachment as measured in Ainsworth's Strange Situation, and a wide range of social and emotional competencies. However, few studies have specifically examined the links between security of attachment and the quantity and quality of exploration. Logically, there is good reason to expect that securely attached infants should be more competent explorers, because of their assumed ability to "lose themselves" in play, based on the sense of trust they have developed with regard to their caregiver's availability. To date, limited data is available on this issue, and of that which exists, findings prove to be inconsistent particularly with respect to a child's performance in play under low-stress i.e., non separation circumstances. For example, Tracy et al. (1980) reported that securely attached infants spend more time manipulating toys than did insecure infants; whereas in another study using a low-stress lab situation, Harmon et al. (1979) reported just the opposite results.

Within the literature examining the relation between attachment and competence, a small number of studies have reported potential links between attachment status and early symbolic functioning. Main (1983), in a study examining the roots of competence, reported differences among anxious and secure toddlers in the quality of exploration, but not in the level or frequency of symbolic play episodes. In another study of competence in the toddler period, Matas et al. (1978) linked security of attachment with greater numbers of symbolic episodes in free play sessions. Similar findings were reported by Bretherton et al. (1979) in a group of 12 month olds observed at home and in the lab. They reported a positive relationship between frequency, level, and diversity of pretend play episodes and the amount of contact- maintaining and proximity seeking in the Strange Situation. Belsky et al. (1984), in a study comparing the highest level of play exhibited by securely and insecurely attached children in two experimental condition; free play and elicited play, found that securely attached children were more likely than their insecure counterparts to

spontaneously generate the highest level of play which they are capable of during free play. This finding, that securely attached children exhibited higher levels of "executive capacity" (i.e., the child's capacity to spontaneously execute his/her own competencies), was viewed by Belsky et al. as an indication that insecurely attached children are unable to "lose themselves in play" and function on their own at the most sophisticated level of which they are capable, because they are overly (pre)occupied with security concerns even in a stress free context.

Slade (1987) in a study using the quality of attachment as a measure of individual difference in mother-child dyads, explored two research questions: 1) the relation between attachment status and symbolic play development over the course of the toddler period and 2) differences in the ways mothers of secure and anxious children involved themselves in play. Her findings indicated that secure and anxious children did not differ in terms of quantity of play, rather differences emerged in measures of play quality. Secure children were more persistent than anxious children in their efforts to create a make believe scene, and were more likely to engage in play organized around a theme or plan. Her results also suggested differential effects of maternal influence across the two groups such that secure children's play episodes lasted longer and were more complex when mother was engaged as an active play partner. In a similar fashion mothers of secure children both spent more time in interactive play with their child and had more episodes of such play when compared with mothers of anxious children. An examination of Slade's findings shows that the two groups of children differed little on any dimension of play when playing on their own however, when involved with their mothers, secure children were "better players." Slade views this as an indication that within the context of a secure relationship, "interactive play provides a medium for the child's increased competency." (p.83). In the case of insecurely attached dyads, play together does not serve these functions, and the child's performance is not enhanced by the supports and structure of the social exchange.

Slade concluded that the differences she observed between the two groups were not reflections of differences in cognitive competency per se, but in the ways cognitive competencies interacted with social competencies.

In a recent study of the influence of the mother-child relationship on the emergence of symbolic play Baruch (1991) found that attachment status and contemporaneous measures of maternal sensitivity both independently influenced the level of a child's symbolic play in stressful free-play episodes but not in non-stressful ones. Securely attached children with mothers who were rated at being more sensitive to their child's cues, were able to apply themselves fully to their environment and get support which enabled them to deploy their highest cognitive skills. By contrast, insecurely attached children exhibited less focused (task-oriented) behaviors under stress, were less likely to turn to their mothers for support, and were less able to engage in cognitively sophisticated play. These findings provide support for Baruch's hypothesis that security of attachment and maternal sensitivity to her child's cues greatly influences a child's ability to obtain his/her highest level of symbolic play in the face of stress. Baruch highlights the potential clinical implications of her findings by reasoning that while the quality of the mother-child relationship might not seem to affect cognitive skills per se, the cumulative impact of not applying oneself fully to the environment, may lead to eventual cognitive limitation. She recommends that further research is needed to examine the influence of security of attachment and maternal sensitivity of older children, in addition to the need to assess the cumulative effect of an inability to explore in the face of frustration.

Two additional longitudinal studies were conducted to investigate changes in mother-child interaction during play. The first (Tamis-LeMonda & Bornstein, 1991), examined toddler play at 13 and 20 months, and found that toddlers become more active participants in play and develop into more "sophisticated players" over this seven month

period as indicated by a significant increase in the frequency and duration of symbolic play, and a consistent movement toward higher play levels. Moreover, children showed an increased tendency to exhibit spontaneous symbolic play i.e., play that was less and less dependent on maternal prompts. At 13 months, the children's engagement in symbolic play was predominantly "mother-generated" whereas at 20 months it became increasingly "child-generated". Tamis-LeMonda and Bornstein additionally questioned whether changes in the play of individual toddlers between 13 and 20 months was associated with changes in their mother's play over this same time period. Their findings reveal a high degree of matching in dyadic play behaviors. For example, between 13 and 20 months, mothers and toddlers both moved toward higher levels of play, and changes in one partner's play was regularly associated with changes in the other partner's play. From this the authors concluded that optimal contexts for learning and mastery are ones in which mothers and toddlers match in play level and are mutually sensitive to change in partner activity. Mothers in this study appeared to be sensitive to their child's developmental level and did not introduce play behaviors that were beyond their child's cognitive capacity to comprehend and act upon.

The second study conducted by O'Connell & Bretherton (1989), looked at toddler play alone and with mother at 20 and 28 months. Their results lend support to Slade's (1987) previously mentioned findings that children demonstrate greater diversity of play in collaboration with their mothers than when playing alone with the same toys. Thus, active maternal guidance seemed to enhance the child's engagement at his or her highest level of play. Furthermore, the type of guidance mother's offered varied as a function of their child's age so that it was appropriately geared toward the current developmental/cognitive level of the child's play. For example, mothers of 20 month olds offered more suggestions for exploratory and combinatorial play than did mothers of 28 month olds. Similarly, mothers of 28 month olds consistently offered more symbolic play suggestions. This

study also revealed that more mothers allowed their children to play without guidance at 28 months than at 20 months of age. The authors suggest that as children become more capable of playing on their own, their mothers feel less compelled to intervene and allow their children more opportunities to structure their own activities thereby communicating awareness of and respect for their child's increased autonomy.

Both these studies emphasize the facilitating role of maternal involvement in play and introduce the notion of developmental change in the quality of maternal guidance. Mothers who were sensitive to their children's developmental level, offered guidance and support that was particularly attuned to the cognitive and interpersonal capacities displayed by their children, thereby enhancing the efficacy of dyadic interactions in play. This implies that the mother's internal working model, or representation of her child changes over the course of development and serves as a guide to inform how she responds emotionally and behaviorally to her child's needs vis-à-vis stage salient developmental tasks across a range of situations.

Mothers' Role in Fostering Representational Competence in the Child

Several studies have compared toddlers' independent symbolic play with collaborative symbolic play between toddlers and mothers (Bretherton & O'Connell, 1984; Slade, 1987). These studies have consistently shown that toddlers engage in both quantitatively and qualitatively more diverse and advanced forms of symbolic play when playing with their mothers than when playing alone. Thus, maternal involvement clearly seems to enhance toddler's emerging pretend capacities. Furthermore, these findings suggest that adults play an important role as facilitators of children's early cognitive development. Given the import of these findings several investigators have examined the nature of maternal input and the impact that different types of maternal involvement have on toddler's symbolic play.

Several alternative models for assessing adult contributions to toddler's play have been developed. These models have largely been informed by Vygotsky's theory of socially mediated cognitive development, and have empirically examined concepts such as the "zone of proximal development" and "scaffolding".

Vygotsky's (1962, 1978) theory emphasizes that all cognitive development is mediated by social factors, and suggest that developmental changes in a child's cognitive capacities occur first in the context of social interaction with skilled partners, and are only later internalized and manifested by children in their independent activities. According to Vygotsky, adult input into children's cognitive development is maximized when adults concentrate their assistance at a level that is just above that which children can accomplish independently. In this manner, adult assistance helps children accomplish what they cannot yet accomplish on their own by acting within the child's "zone of proximal development" "Scaffolding" refers to the notion that adults serve as temporary scaffolds, controlling "those elements of the task which are initially beyond the learner's capacity, thus permitting him to concentrate on and complete only those elements that are within his or her range of competence." (Wood, Bruner, & Ross, 1976, p. 90)

Until recently, most studies providing evidence that adults do indeed tailor their assistance to match or slightly exceed the level at which their child is able to perform independently have focused on structured problem solving activities. These activities are inherently different from mother-child interaction in free play in that an explicit goal is generally specified, and a particular outcome is considered correct. Free play activities, by contrast, rarely focus on achieving a particular goal, and instead allow for an unlimited number of alternatives. The "structure" of activities in play is usually something that gradually emerges over the course on the interaction; can be defined by either mother or child, or is mutually created in a collaborative manner.

Beizer & Howes (1992) conducted a study examining different types of maternal assistance in free play with their toddlers. They examined Vygotsky's constructs of zone of proximal development and scaffolding, and operationalized them in the following manner. When acting within the zone of proximal development mothers fine tune their input into play to match toddlers' emerging symbolic play capacities by making suggestions for symbolic play at levels just above that which their child is playing at independently. Within the domain of symbolic play - the scaffolding position suggests that mothers assist toddlers by creating and maintaining structure for pretend - that is by controlling aspects of the symbolic play setting which are difficult for the novice pretender to control. The scaffolding model suggests that mothers focus their input on teaching toddlers about pretending and supporting the toddlers' early attempts at constructing and sharing pretend ideas, rather than targeting suggestions at particular levels of symbolic play. Within the scaffolding model, mothers work within the child's zone of proximal development in terms of a general orientation towards pretend i.e., they create and maintain an appropriate context for pretend that supports a toddler's emerging abilities. Whereas within the zone of proximal development model, mothers focus on assisting children to play at specific levels of play activity.

Findings revealed that mothers tended to combine both these types of assistance when interacting with their toddlers in free play. This suggests that mothers are flexibly able to deploy different strategies or input into symbolic play as their toddlers develop new skills and play in different ways. While toddlers clearly engaged in more sophisticated symbolic play when interacting with their mother than when playing alone, the authors reported that it was difficult to determine from the results whether mothers were generally responsible for structuring children's pretend activity, or whether children initiated activities that mothers then joined or followed. Thus, their findings raised questions about the

direction of effects i.e., whether mothers were influencing or responding to their children's play capacities could not be conclusively determined.

Bretherton & O' Connell's work (1984) offered a different perspective for understanding mother-child interactions in free play. They observed mothers interacting with their toddlers at different ages, 20 and 28 months, and found that instead of fine tuning their suggestions, mothers tended to offer a "smorgasbord" of assistance i.e., a broad range and type of suggestions to toddlers across all ages. What is noteworthy about this study is that toddlers selectively chose from this array of maternal input, suggestions that were most useful to them at different stages in their representational competence/development. Like the zone of proximal development model, these findings showed that mothers did alter their behavior and made direct suggestions to guide toddlers' symbolic play. What is different in this model is that the children rather than the adults were responsible for selecting suggestions which approximated their zone of proximal development (ability and understanding) . These findings reinforce the complexity of relationships between maternal and toddler input in the construction of early social pretend. They also lend support to the notion that toddlers are increasingly able to influence the course of interaction, and actively seek out experiences and information that contributes to their own learning and development. The O'Connell & Bretherton study highlights the importance of examining both adults' and children's roles in maintaining symbolic play.

The above mentioned studies have shown that different types of maternal input, rather than any one particular kind can function to enhance toddler representational competencies. Greenspan and Lieberman (1996) offer a broader conceptual framework for assessing responsive maternal behavior which focuses on the mother's capacity to provide an adaptive or maladaptive environment for the expression of a child's symbolic communications in play. In their view, a mother who provides an adaptive environment,

encourages the child's representational communications and responds empathically as well as cognitively to them. Under optimal circumstances, she will be able to read her child's intentions accurately, and respond in a flexible and temporally effective manner that facilitates her child's movement toward more differentiated representational capacities. This notion of adaptiveness clearly incorporates some of Vygotsky's notions that a mother's ability to enter into child's play and provide assistance that is slightly beyond the child's own capabilities but still within reach of his comprehension, will promote higher level symbolic play competency on the part of the child.

A maladaptive environment for symbolic expression by contrast, is one which fails to read the child's communications at the cognitive and empathic levels. For example, a mother may misread her child's signals and involve herself in play in ways that are overly intrusive or controlling, thereby putting her own needs above those of her child. Similarly, a mother may appear withdrawn disinterested, or fail to provide cognitive stimulation; hence leaving the child to his own devices. Such behaviors will hinder the child's capacity to elaborate on experiences symbolically, and undermine the child's growing capacity for differentiation. Additionally, a mother may consistently overreach her child's current capability and understanding i.e., insist on playing at a level that is far too sophisticated for the child or may exclusively focus her behaviors on presymbolic modes of playing instead of attempting to promote increased representational competence in the child.

Greenspan & Lieberman (1980) have developed a method for assessing maternal responsiveness with regard to children's symbolic play that classifies maternal behavior into three mutually exclusive categories: contingent, anti-contingent and non-contingent behavioral responses to the child. Contingency refers to the mother's behavior and is defined as a direct, appropriate response to the child's signals, a response that meets the aims of the child's behavior as evaluated by the observer. For example, a mother who

enters into the representational mode being used by the child and uses it to interact with the child engages in contingent responses. A mother who actively intervenes to change the child's use of the symbolic mode, or changes the theme chosen by the child, is using anti-contingent behavior. Finally, a mother who does not respond to the child either in symbolic or in presymbolic modes is displaying non-contingent behavior. Non-contingent responses are those where the mother ignores the child's signals and communications. Greenspan & Lieberman conceptualize these three types of behaviors as a continuum of adaptiveness and argue that all three types of behavior occur in normal childrearing and play an important role in socializing children. The meaning and adaptiveness of the adult's response is dependent in the context in which it occurs. Greenspan and Lieberman posit that in a free-play context, a certain balance in type of maternal responsiveness as adaptive, and a lack of balance is maladaptive.

Summary and Research Aims

Theory and research have demonstrated that parental representations of the child function to guide parent's expectations and behavior in the relationship, and will influence patterns of parental responsiveness. Few studies to date have explored the links between maternal representations of the child and parenting behavior and child adaptation during the toddler period.

A major developmental milestone during the toddler period is the emergence of representational skills, evidenced by a dramatic increase in language and symbolic play. A review of the literature and research on symbolic play indicates that there are multiple influences on children's developing representational competence. These include the quality of the early parent-child relationship, and mother's capacity to respond and interact with the child in a manner which facilitates symbolic communication. Measures have been developed for the purposes of this study (see methods section and appendices) to assess

behavioral indices of maternal responsiveness and the quality of dyadic interaction from videotapes of mothers interacting with their toddlers in a free play paradigm. This will enable the researcher to examine the manner in which these two constructs impact on toddler representational competence.

In the present study, children's representational competence will be assessed using a coding scheme developed by Belsky and Most (1981). This system adheres to theoretical notions outlined in the literature review of the existence of an invariant, hierarchical sequence in the emergence of object and role play, and is consistent with how researchers in this area have assessed symbolic functioning In this coding scheme levels of play are operationalized based on children's use of objects. It also incorporates a rating scale developed by Morris (1991), to assess childrens' involvement in role and socio-dramatic play. In the present study, higher ratings on both these scales will be interpreted as indices of greater representational competence on the part of the child, and a reflection of his or her capacity to see the world in more differentiated terms. Affective/motivational aspects of children's play will also be assessed using the Quality of Involvement rating scale, developed by Hartmann, Slade & Picchi.

Since research has shown that maternal representations of the child exert a powerful influence on shaping the parent-child relationship, the primary focus of this study will be on examining the links between maternal representations of their 28 month old toddlers, and the three contemporaneously assessed behavioral outcome measures: maternal contingent responsiveness; the quality of dyadic interaction in play; and child representational competency.

This study will use the Parent Development Interview (PDI) and scoring system developed by Slade, Aber, Cohen, Fiorello, Meyer, DeSear & Waller (1993), to assess

maternal representations of the child. Data on maternal representations obtained from the dimensional scoring will be converted into factor scores (see methods section): Factor I will pertain will pertain to the mother's capacity to experience joy and pleasure in the relationship, as well as her ability to provide narrative descriptions that are rich and coherent. Factor II, will pertain to the mother's capacity to acknowledge and integrate negative affect relevant to the relationship, and her capacity to express this in a modulated manner. Factor III, will pertain to the mother's experience of her own and her child's separation distress, as well as maternal feelings of guilt in the relationship. It is hypothesized that these constructs; one involving positive affect and coherence, the others involving negative affect, are particularly relevant when examining maternal representations of the child during the toddler period since this stage in development is characterized by increased dyadic discord and conflict. This way of analyzing maternal representations of their toddlers is consistent with previous research (Slade et al., 1997), and will provide and opportunity to further validate these measures and constructs.

The following three sets of analyses will be conducted in this study:

1. The link between maternal representation of the child and maternal contingent responsiveness.

It is hypothesized that a mother's capacity to experience joy and pleasure, and provide coherent and believable descriptions of her own and her child's experience in the relationship will be related to her ability to interact with her child in a responsive and contingent manner in a free play paradigm. By contrast, mothers who experience and express high levels of negative affect pertaining to the relationship, and who are unable to modulate such feelings, are presumed to be less likely to respond contingently to their child's symbolic communications. It is speculated that these mothers may feel overwhelmed or overly preoccupied with the negative aspects of their own and her child's

experience in the current relationship, which will hinder their ability to read the child's cues and respond in an appropriate manner. Such mothers may refrain from entering into interactions with their child due to negative expectations, may wish to take charge and control the nature of the interactions thereby overriding the child's interests and needs, or may feel overly needy themselves and engage in play in a manner that is noninclusive of the child (i.e., mothers who need to play themselves). They may also exclusively focus behaviors on presymbolic modes of playing, instead of promoting increased representational competence - and differentiation - in the child.

2. The links between maternal contingent responsiveness, the quality of dyadic interaction, and of child representational competence.

Consistent with the theory and research on children's symbolic play, a relationship is predicted between maternal responsiveness to the child in play and the quality of dyadic interaction. Specifically, it is expected that when mothers respond in a contingent manner, dyads will be more likely to interact in a reciprocal manner, where both mother and child contribute toward extending a mutually shared play theme. It is also expected that maternal contingent responsiveness will function to enhance children's representational competence, evidenced by higher ratings on both the level of play and quality of involvement rating scales.

3. The links between maternal representations of the child and child representational competence.

Finally, the present study will attempt to shed light on the interplay between maternal and child representational processes by examining the relationship between maternal representations of their toddlers and child representational competence. Findings will be considered in light of inferences that can be made about how the child has come to internalize aspects of the parent-child relationship and the implications this has on his or her

developing representational world and the ongoing process of separation-individuation during the toddler period.

Chapter Two
Methods

I. SUBJECTS

All subjects for the proposed study were participants in The Pregnancy Project, an NIH funded longitudinal study of the emotional experience of pregnancy and transition into parenthood for first time mothers conducted by Dr. Arietta Slade at The City College of New York. The study involved seven visits to the research lab including three prenatal visits during the last trimester of pregnancy, and 4 postnatal visits when children were 4, 10, 14 and 28 months of age. At each visit mothers were interviewed regarding their emotional experiences and were given numerous paper and pencil measures to fill out. All post-natal visits included a videotaped play session where mothers were instructed to interact with their children following a standardized research protocol. All visits were conducted by research assistants who were graduate students in Clinical Psychology and, in an effort to control for experimenter bias, no mother was interviewed twice by the same person.

Sixty six primiparous women were recruited to participate in The Pregnancy Project from a variety of sources including childbirth education classes, flyers posted in maternity stores, and adds placed in parent magazines and local newspapers. Subjects represented a self-selected group of women ranging in age from 25 to 40 years at the time of recruitment, who were predominantly from white (94%), middle or upper middle class backgrounds, living in New York City area. Subjects were highly educated; 50% had completed all or some postgraduate training, 41% had completed college and the remaining 9% had completed some college, and all women were in stable relationships with their husbands or partners at the onset of the study. Additionally, subjects were medically

healthy, without overt psychiatric symptomatology. Of the children born to the women in the study, 43% were girls and 57% were boys.

As remuneration for their participation, subjects were paid 20 dollars per visit and given small gifts for their children and copies of the videotaped play sessions. Given the minimal nature of these reimbursements and the duration of the commitment required of them, all women in the study were considered to be highly motivated participants. Fifty one women and their children completed the 28 month visit. Attrition was largely due to geographical moves rather than withdrawal due to an unwillingness to continue to participate in the research Many women continued to participate despite moves to other parts of the country, thereby demonstrating the attachment these women made to the project. Twenty percent of the women completing the entire study had second children by the time of the 28 month visit, and three women had separated from their husbands.

II. SETTING

All data was collected at a research laboratory at The City College of New York. The lab consisted of three adjoining rooms including; a video room with a one way vision mirror for videotaping mother-child interaction at each visit; a large comfortably furnished room for interviewing mothers; and an adjoining space with age-appropriate toys where children were cared for by Pregnancy Project staff while mothers were being interviewed. Mothers and their children were allowed to visit each other as needed during interview sessions.

III. STUDY SAMPLE AND PROCEDURES

The present study examined data collected from 40 mother-child dyads who completed the 28 month visit. The 28 month visit involved a videotaped play session, and maternal interview session. The play session consisted of two experimental conditions;

mother occupied and mother engaged, lasting 10 minutes each. During the first 10 minutes mothers were asked to sit in a chair to the side of the play area and were given numerous paper and pencil measures to fill out while their child was free to play with a variety of age-appropriate toys laid out on the playroom floor. Mothers were instructed to respond their child minimally, and to encourage the child to return to playing alone. This was followed by 10 minutes during which the mother was asked to join her child on the floor and play with him or her as she normally would at home. After the play session was completed, mothers were interviewed using The Parent Development Interview (Aber, Slade, Berger, Bresgi & Kaplan, 1985) while their children played in a separate room with one of the staff.

The 40 subjects included in the present study were selected based on the quality of the collected data; only subjects who had codeable videotapes with timers visible on the screen and audiotaped interviews that were transcribable were included in the sample. The study sample included 22 boys and 18 girls ranging in age from 27 month, 18 days to 33 months.

IV. MEASURES

The Parent Development Interview

The Parent Development Interview (PDI) is a 45 question semi-structured interview (Aber, et al., 1985) designed to assess various dimensions of the parent's affective experience of parenting a toddler, as well as the parent's current representation of their relationship with the child and themselves as parents. The interview is administered in an informal, conversational manner, and lasts approximately 90 minutes. The first section of the interview is devoted to the parent's description of the child. Mothers are asked to provide 5 adjectives that describe their relationship with the child, and to give examples which elaborate on these descriptions. They are asked what they like and dislike

about the child, and to reflect on ways the child is similar to, and different from both parents. Mothers are asked about their awareness of a range of feelings in the relationship, experiences of pleasure and difficulty with their child, and their emotional and behavioral responses to "typical" toddler situations, such as temper tantrums, willful behavior and separation anxiety. Mothers are then asked to describe themselves as parents including perceived strengths and weaknesses, as well as to comment on ways their parenting is like and unlike that of their own parents' Finally, inquiries are made about the spousal relationship and the extent to which the mother feels supported in her parenting role. Efforts are made throughout the interview via probes to have mothers be as explicit as possible in their description of their experiences. The interviews provide a rich and detailed description of the parent's representation of the child and qualitative features of the parent-child relationship. Interviews are audio-taped and later transcribed for coding purposes. (see Appendix A for the complete text of the 28 month Parent Development Interview)

Scoring of the Parent Development Interview

Verbatim transcripts of the Parent Development Interview were coded using a scoring system developed by the authors of the PDI (Slade, Aber, Cohen, Fiorello, Meyer, DeSear & Waller, 1993). Parental responses were scored using a series of rating scales which yielded continuous variable scores for different dimensions of parental representations. This system evaluates both organizational and affective features of the representation, enabling researchers to relate formal aspects of a representation such as coherence and level of integration, to specific content variables. For example, the qualitative way a particular affective experience such as anger is described, and the extent to which it plays a role in the relationship.

The interviews were rated along three general dimensions: parental representations of their own affective experience, parental representations of their child's affective

experience, and overall quality of the representation. The six parental affective experience codes included: Anger, Separation Distress, Guilt, Neediness, Competence/Efficacy, and Joy/Pleasure. Anger and Separation Distress were rated for degree, acknowledgment and modulation, and Guilt was rated for degree and acknowledgment. The four child affective experience codes included: Anger, Dependence/Independence, Separation Distress and Joy/Pleasure. Overall quality of representation codes included Coherence, and Richness of Perception, adapted from Zeanah (1989).

The majority of the scales were scored along a 9 point continuum, with the mid-point representing the optimal score. Lower scores indicated efforts to avoid, deny or down play emotional experience, and high scores indicated more disruptive and intense levels of emotion. All degree ratings were scored using a 3 point scale (high, medium and low), and coherence and richness of perception were scored along a 5-point continuum, with low scores representing incoherent and impoverished perceptions, and high scores indicating highly coherent and rich parental perceptions respectively..

Interviews were coded by four raters trained to reliability by the director of the Pregnancy Project. None of the raters were involved in data collection and all were blind to the purposes of the present study. Interrater reliabilities were calculated using interclass correlation coefficients [3,k], and ranged from .80 -.95, with a mean of .87.

PREDICTOR VARIABLES: Maternal Representations of the Child

In a previous study utilizing the PDI interview and scoring system on a sample of 125 mothers of toddlers (Slade et al., 1997), the 17 PDI variables described above were subjected to principle components analysis for purposes of data reduction. Three PDI factors emerged from this analysis which accounted for 51.2% of the variance in the 17 PDI ratings. Factor I pertained to joy/pleasure and coherence (Joy/pleasure, coherence,

richness of perception); Factor II to anger (degree of anger, acknowledgment of anger, modulation of anger): and Factor III to guilt/separation distress (acknowledgment of separation distress, degree of separation distress, degree of guilt, acknowledgment of guilt, child separation distress) Factor scores were created by unit weighting the z-scores for each variable loading on a factor and summing the scores. Only variables with loadings >.6 were selected for purposes of high interpretability and replicability. Six PDI variables were not included in the generation of factor scores because they did not meet this statistical criterion. These were modulation of separation distress, competence-efficacy, child dependence-independence, neediness, child anger, and child separation distress. Slade et al. (1998) reported that each of the factor composites were internally consistent, with alpha coefficients of. 84 for Factor I, ,82 for Factor II, and .68 for Factor III. Correlations among the three factor scores were reported as follows: joy/pleasure/coherence: anger r= -.27; joy-pleasure/coherence: guilt/separation distress r=.04; anger: guilt/separation distress r=.14.

For the purposes of the present study, 28 month PDI data gathered on the 40 mothers in this sample were subjected to a principal components factor analysis. It is hypothesized that the factor structure will be analogous to the one described above, and the following three factors will serve as the predictor variables for this investigation; Factor I - Joy-Pleasure/Coherence, Factor II - Anger. Factor III - Guilt/Separation Distress. With respect to data interpretation, high scores on Factor I will be considered optimal scores whereas intermediate score on items loading on Factors II and III will be considered optimal. This is consistent with the way PDI Factor score were utilized in the Slade et al. (1998) study and will facilitate replicability of findings. A detailed description of the variables loading into PDI Factors I, II and III is provided below.

PDI Factor I - Joy-Pleasure/Coherence

1. Joy/Pleasure - This variable is defined as the mother's capacity to experience, joy, pleasure and contentment in the relationship with her child. The mother's ability to express such feelings are coded along a 9-point continuum which is scaled from high to low. Lower ratings indicate little pleasure in the relationship, midpoint ratings indicate thin or shallow expressions of pleasure, and high ratings indicate increasingly rich, vivid and dimensional expressions of pleasure.

2. Coherence - This scale measures the overall coherency of thoughts, feelings and perceptions in the mother's representation of the child and the relationship. This code was adapted by Zeanah (1989) from Main et al.'s (1985) coherence code for the Adult Attachment Interview which assesses the integrity of the representation. This code attends to the formal characteristics of the narratives as a whole and is scored on a five-point continuum from Highly Coherent (1) to Highly Incoherent (5). A highly coherent representation is one where thoughts, feelings and descriptions about the child and the relationship are presented in a well organized, believable and logical manner. Incoherent representations include descriptions that are confused or confusing, as well as contradictory statements in the narrative that go unnoticed by the subject , or are not integrated into the overall narrative. Incoherencies also include bizarre statements and the inability to support generalizations with specific examples.

3. Richness of Perception - This scale, also adapted by Zeanah, measures the poverty or richness of the mother's perceptions of the child and the relationship with the child. It is a summary measure which takes into account the narrative as a whole and like Coherence is scored along a five-point continuum. The scale assesses the mother's ability to convey a sense of "who" her child is as a person. Mother's earning high scores display an ability to provide succinct but qualitatively rich descriptions of their child as an individual.

Impoverished perceptions by contrast, lack variety, tend to be repetitive and/or narrow in focus, and do not elaborate on the child's personality, feelings and behaviors.

PDI Factor II- Anger

1. Anger - This scale measures the different aspects of the mother's experience of anger in her relationship with her child. These include: 1) degree, rated on a three point continuum ranging from little (1) to considerable (3); 2) acknowledgment, rated on a 9 point scale with low scores indicating degrees of denial, midrange scores reflecting full and open acknowledgment of anger without defensiveness, and high scores indicating overinvolvement and preoccupation with angry feelings, and 3) behavioral control/or modulation of angry feelings, also rated on a 9 point continuum from tight, rigid behavioral control (low scores) to failures of behavioral control (high scores). This score incorporates the severity and frequency of behavioral outbursts and is similar to acknowledgment in that the mid-point represents the optimal score.

2. Child Anger - This 9 point scale measures the degree to which mother's represent the child as experiencing anger. Low ratings are given to mothers who do not represent the child as angry under any circumstances. Mid-range ratings are given to mothers who represent the child as angry in believable, circumscribed ways. Here the mother does not describe the child's anger as excessive, uncontainable or unreasonable. High ratings are given to representations of the child as very angry and to mothers who describe themselves as being embroiled in power struggles with the child.

PDI Factor III - Guilt/Separation Distress

1. Guilt - It is assumed that parents normatively experience feelings of guilt with regard to caretaking behaviors, decisions they make involving their own needs and those of their child, as well as about life events that impact on the family at large. This 9 point rating

scale measures whether mothers are able to acknowledge feelings of guilt and the extent to which she accepts them as intrinsic to parenthood. Low ratings are given to mothers who disavow and deny guilt in all aspects of their relationship with their child. Mid-range ratings are given to mothers who openly acknowledge guilt and generally accept such feelings to be an integral part of mothering. High scores are assigned to mothers who report feeling guilty much of the time and appear to be overwhelmed and uncomfortable with such feelings. Ratings for overall degree of guilt represented in the transcript are also assigned on a three point scale ranging from little (1) to considerable (3).

2. Separation Distress - This scale measures the extent to which mothers experience distress in response to separations from their child. Ratings are assigned for overall degree ranging from little (1) to considerable (3), as well as for the mother's ability to acknowledge her own emotional reactions to separations. Low ratings are given to mothers who deny any experience of separation distress. Mid-range ratings are assigned to mothers who openly acknowledge their emotional response to separations and who do not appear to be defensive about such feelings. High ratings are given to mother's who appear to be overly preoccupied or overwhelmed by separation distress to the extent where it may interfere with maternal responsiveness to the child.

3. Child Separation Distress - This 9-point scale rates the degree to which the mother represents the child as distressed by separation. Low scores are given to mother's who do not represent the child as experiencing any separation distress. Mid-range scores are given to mother's who represent the child as experiencing some separation distress, who describe it as manageable, and who consider such reactions as normal in circumscribed situations. High scores are given to mother's who represent the child as extremely distressed by separation, to the extent that separations are acutely disorganizing and difficult for the child.

OUTCOME VARIABLES: Maternal and Child Play Behaviors

All behavioral measures described below were coded from videotapes of the 28 month visit play sessions. Maternal responsiveness and the quality of dyadic interaction in play were only coded for in the mother-engaged condition; child representational competency and quality of involvement in play were coded for in both the mother-occupied (MO) and mother-engaged (ME) experimental conditions.

Coding was done by two independent raters who had B.A.s in Psychology and who were trained to reliability by the investigator. All training was conducted using videotapes of the 28 month play sessions that were not part of the study sample. Similarly, revisions made to the scoring systems were incorporated during the training phase and the revised coding manuals were utilized when coding the study sample. After training reliability was established, the principal investigator coded 13 out of the 40 sample tapes in a randomly assigned order to assess interrater reliability on the study sample. Scoring discrepancies were resolved by conference when scores differed by more than one or two points on the rating scales. Both coders were blind to the purposes of the study as well as other data pertaining to each subject throughout the coding process. Interrater reliability is reported below corresponding with descriptions of each rating scale.

Maternal Contingent Responsiveness

Maternal contingent responsiveness in play was coded from videotapes of mothers interacting with their toddlers in the mother-engaged condition. Maternal behaviors were rated using an adapted version of Greenspan & Lieberman's (1980) measure developed to assess contingent, anti-contingent, and non-contingent behavioral responses to the child. Contingency refers to the mother's behavior and is defined as a direct, appropriate response to the child's signals; a response that meets the aims of the child's behavior as evaluated by the observer. For example, a mother who enters into the representational mode being used

by the child and uses it to interact with the child engages in contingent responses. A mother who actively intervenes to change the child's use of the symbolic mode, or changes the theme chosen by the child, is using anti-contingent behavior. Finally, a mother who does not respond to the child either in symbolic or in presymbolic modes is displaying non-contingent behavior. Non-contingent responses are those where the mother ignores the child's signals and communications. Greenspan & Lieberman conceptualize these three types of behaviors as a continuum of adaptiveness and argue that all three types of behavior occur in normal childrearing and play an important role in socializing children. The meaning and adaptiveness of the adult's response is dependent on the context in which it occurs. In a free-play context, a certain balance is conceptualized as adaptive, and a lack of balance is maladaptive.

Coding

Maternal behavior was coded for the entire 10 minutes of the mother-engaged segment. Each time the mother displayed a response to the child a check was made on the coding sheet and a determination was made as to the type of response it constituted e.g., contingent or anti-contingent. If a mother failed to respond to direct solicitations made by the child this was coded as a non-contingent maternal response These three categories of maternal behavior were by definition mutually exclusive, thus only one categorical determination was made for any given maternal response.

The total number of maternal responses displayed and coded during the 10 minute play segment varied for each subject. For example, one mother may have displayed 10 responses to her child; whereas another 25. One summary score representing maternal contingent responsiveness to the child's play, was computed for each subject. This score was derived by calculating the proportion of maternal responses coded as contingent out of

the total number of maternal responses (including all types) displayed during the 10 minute play session.

Interrater Reliability

Interrater reliability was assessed on a sample of seven subjects not included in the study sample. Intraclass correlation coefficients with an approximate 95% confidence interval were as follows for the three types of maternal behavior: Contingent responses = .94; Anti-Contingent responses = .90; and Non-Contingent responses = .89.

Dyadic Reciprocity in Play

The Quality of Dyadic Interaction in Play is one of four five point rating scales included in the Dyadic Symbolic Play Scales coding system developed by Hartmann, Slade and Picchi (1993). This scale measures the extent to which observations of mother and child at play can be characterized as a mutually shared and enjoyed enterprise. Ratings are made along a five point continuum, with the midpoint representing the optimal score, characterizing reciprocity in the interaction. High and low scores on the continuum are defined to reflect a marked imbalance in the interaction where either the mother (5) or child (1) dominates the interaction (see Appendix C for a complete definition of this scale and the operationalization of scale points, and a sample coding sheet.)

Play interactions that are of a reciprocal nature depict dyads where both mother and child contribute to the play interaction in a manner which functions to enhance, extend and embellish a mutually shared play theme and in which pleasure is derived from the other's participation in the play activity i.e., there is a sense that mother and child experience each other as competent, interested and fun-loving play partners. Other points on this rating scale characterize either a marked imbalance in the interaction for example if the mother is very intrusive and shows little willingness to follow her child's lead or a lack of dyadic

engagement where there is little reciprocity or communication between mother and child. Another type of imbalance is when the child does not spontaneously include the mother in play nor does the mother show an interest in what the child is doing. The child may be engaged in play however it appears to be a solitary activity despite the mother's presence.

Coding

Ratings were made at 15 second intervals for the entire ten minute mother-engaged segment, thereby chronicling the flow and fluctuations in the quality of the interaction over time.. Only one score was assigned for each time interval and a total of 40 scores were generated for each dyad. It was assumed that any given dyad would display a range of scores along this continuum. When mothers and their children engaged in parallel play no score was assigned for dyadic interaction as this did not fit with any of the scale point definitions. Thus, instances of parallel play were considered missing data and some dyads received less than forty scores on this dimensions.

Interrater Reliability

Interrater reliability was assessed on nine tapes that were not part of the study sample. The achieved interclass correlation coefficient with an approximate 95% confidence interval was .89. Interrater reliability on the study sample was slightly higher in part due to revisions that had been made during the training period, with a correlation coefficient of .92.

Recoding of Scores for Data Analysis and Interpretation

In this study, the construct of dyadic reciprocity in play was operationalized and analyzed in the following manner. The forty scores obtained for each dyad were recoded and converted into a 3-point linear continuum representing the degree of dyadic reciprocity. A low score of 0 (the original mid-point) reflects a high degree of reciprocity evidenced in

the interaction. Higher ratings of 2 (original scale point scores of 2 and 4) and 1 (original scale point scores of 1 and 5), reflect differing degrees of non-reciprocal behavior. The highest score of 3 is indicative of a marked imbalance in the interaction.

Converting the original scale into a linear continuum was done to facilitate data analysis and enabled this study to address the question of how maternal representations of the child were related to the degree of mutuality and reciprocity displayed in the interaction. It is recognized that certain types of qualitative information were lost by way of converting the original scale; namely the ability to make distinctions about which member of the dyad contributed most predominantly to non-reciprocal interactive behavior. Information was not be lost with respect to the overall quality of the interaction and the ability to make the following kinds of inferences: the dyad qua dyad was not doing as well as it might be doing in this particular situation, irrespective of who was influencing the imbalance.

Child Representational Competency

Two different dimensions of children's play behavior were coded in the mother-occupied and mother-engaged conditions, and together represent the construct of child representational competency. The first dimension was an assessment of the cognitive/developmental level of play at which the child was playing using a modified version of the Belsky & Most (1981) level of play scale. The second assessed the child's ability to engage in self-directed play and follow through with play themes on his or her own, using the Quality of Involvement rating scale developed by Hartmann, Slade & Picchi (1993) for the purposes of this study. These two coding systems represent important cognitive and affective/motivational aspects of children's play.

Developmental Level of Play

Developmental level of play was scored using a revised version (Morris, 1991) of a 14 step development-of-play scale developed by Belsky and Most (1981) that has been found to form a valid Guttman scale. This version was adapted for use with older toddlers since the original Belsky & Most scale was developed for use with children between the ages of 7 and 21 months. This coding scheme includes 21 hierarchical scales points, behaviorally defined with respect to how the child utilizes the play objects, ranging from concrete to increasingly symbolic modes of object use in play. Lower level scale points refer to simple manipulation and functional use of the objects. Higher ratings reflect the child's capacity to engage in pretend play and employ increasingly sophisticated and complex modes of symbolic expression. Higher levels on this scale include the ability to incorporate symbolic substitutions (e.g., using a block to represent food) and organizing play around a theme by sequentially linking together different pretend acts to create a story, e.g., tea party.

Coding

Developmental/cognitive level of play ratings were made at fifteen second intervals for the entire 10 minute segment of the mother-occupied and mother-engaged conditions. Only one score was assigned to each interval reflecting the highest level of play the child displayed during that time. The coding system also allowed for the delineation of discrete play episodes as well as which member of the dyad initiated an episode.

Continuous time interval measurement yielded information about the length of time the child was capable of sustaining different levels of play. Questions pertaining to this study were not geared toward evaluating a given child's potential with regard to representational competency as it was expected that all children would display a range of play behaviors along the hierarchical continuum. Instead, the analyses focused on the level

of representational competency the child displayed over the entire ten minute segment. In order to evaluate this, a composite summary score integrating information about the developmental/cognitive level of play and duration was calculated for each child in both experimental conditions. Only scores greater than scale point six were included in the composite summary score as these scores by definition constituted symbolic level play. Scores of six and below referred to non-symbolic, exploratory behaviors and were not incorporated in the composite which was aimed at assessing the child's "representational" use of objects in play. Thus, each child's summary reflected the highest level of symbolic play the child was capable of sustaining in each experimental condition.

Interrater reliability

Interrater reliability was established between the experimenter and an undergraduate student in Psychology. Training and initial reliability was established on 28 month videotapes that will not be included in the study. A total of 5 tapes, including both experimental conditions, were independently coded by the two raters to determine reliability for the following five variables: 1) Play level measured for each 15 second interval; 2) Total number of play episodes coded for; 3) Duration of play episodes (in seconds); 4) Play level assigned to play episodes, and 5) Mother or child initiation of an episode.

Intraclass correlation coefficients with an approximate 95% confidence interval were as follows: Play level = .91; Total # of episodes = .95; Episode duration = .98; Play level per episode = .93. Inter-rater agreement for mother/child initiation of play (categorical data) was assessed using Cohen's Kappa, a stringent statistic designed to eliminate inter-rater agreement due to chance (Cohen, 1960). Inter-rater agreement for initiation of play on the 5 initial tapes was: *K* Initiation = .66 meaning that a moderate level of agreement was achieved.

Quality of Involvement in Play

This five point rating scale measures the degree of self-directedness vs. need for the parent to encourage/motivate the child to play; the child's persistence and ability to stay focused on play; the degree to which the child is able to follow through with a play theme (coherence) vs. fleeting interest and less involved exploration and, the child's spontaneous interest in the toys. A high rating of 5 on this scale is indicative of a child who is very involved in play and meets the above mentioned criteria Mid-point ratings are given when the child displays moderate interest in the toys and requires more active encouragement and involvement from the mother in order to successfully follow through with a play sequence. A low rating of 1 is indicative of a child who is highly distracted and exhibits minimal sustained interest in or engagement with the toys.

Coding

Ratings for Quality of Involvement were made a 15 second intervals; thus each child received a total of forty scores for each experimental condition. Summary scores were computed for each child representing the mean level for quality of involvement.

Interrater reliability

The intraclass correlation coefficients achieved for quality of involvement during training and on the study sample were as follows: .89 and .91 respectively.

HYPOTHESES

The appropriate statistics will be used to test the following hypotheses:

Hypothesis 1: The factor structure reported in previous research will be replicated using data from the study sample and the following three factors, representing different affective

dimensions of maternal representations, will serve as the independent variables for subsequent analyses: Factor I = Joy-Pleasure/Coherence; Factor II - Anger; Factor III - Guilt/Separation Distress.

Hypothesis 2: Maternal representations of the child will be linked with maternal responsiveness to the child in free play.

2a. Specifically, it is expected that mothers who report experiencing joy/pleasure in the relationship and who provide rich and coherent representations of the child will respond in a predominantly contingent manner when interacting with their child in free-play. Thus, a positive correlation is predicted between mothers scoring high on Factor I (Joy/Pleasure & Coherence) and ratings of maternal contingent responsiveness.

2b. It is expected that mothers reporting high levels of negative affect pertaining to the relationship and who are unable to modulate such feelings, will be less likely to respond to their child in a contingent manner during free play. Thus, a negative relationship is predicted between high scores on Factor II (Anger) and ratings of maternal contingent responsiveness.

2c. It is expected that mothers reporting high levels of guilt and separation distress will respond to their child in play in a manner which actively promotes interaction. The pattern of such maternal behavior is expected to vary including a mix of child oriented (contingent) and mother oriented (anti-contingent) responses. Thus, it is predicted that mothers scoring high on Factor III (Guilt/Separation Distress) will receive mid-range scores on maternal contingent responsiveness during free play.

Hypothesis 3: Maternal representations will be related to child representational competency.

3a. It is expected that mothers who experience joy/pleasure in the relationship and who provide coherent and rich of descriptions of the child will have children who display greater representational competency, both with respect to play level and quality of involvement. Thus, a positive correlation is predicted between high scores on Factor I and child play behaviors.

3b. It is expected that maternal representations of negative affect (Factors II and II)I will impact on child representational competency. The exact nature of these relationships cannot be predicted for several reasons: 1) children the age of 28 months are likely to have developed a range of coping strategies to deal with their own and other's negative affect which will differentially influence behavior, 2) different dimensions of maternal negative affect may differentially influence child behavior, and 3) maternal negative affect may differentially influence maternal responsiveness which in turn may impact on the child.

Thus, with respect to Hypothesis 3, an exploratory analysis will be conducted in order to better elucidate the manner in which different dimensions of maternal affect, both positive and negative, differentially impact on child representational competency. Included in this analysis will be comparisons of children's play behaviors in both the mother-occupied and mother-engaged experimental conditions.

Hypothesis 4: Maternal responsiveness will be related to both the quality of dyadic interaction in play, and to child representational competency in the mother-engaged experimental condition.

4a. Specifically, it is expected that mothers who respond in a predominantly contingent manner will be more likely to have interactions with their child that are of a reciprocal

nature. Thus, a negative correlation is predicted between maternal contingent responsiveness and the quality of dyadic interaction in play. (Note: Correlation indicating a positive association between these two play behaviors is negative due to recoding of dyadic interaction scale where scores representing reciprocity = 0)

4b. It is expected that children whose mothers respond in a contingent manner will be more focused on play and play at higher levels than children whose mothers display less contingent responsiveness. Thus, positive correlations are predicted between maternal contingent responsiveness and both the level at which the child plays and the quality of his or her involvement in play.

Chapter Three
Results

Four sets of results are presented in this chapter. The first includes descriptive statistics on the various play measures used in this study and an analysis of the factor structure of the Parent Development Interview variables. The second set of results examines the relationships between PDI factor scores and maternal and child play behavior, and the third assesses the relationship between maternal behavior and measures of child representational competency. These analyses address the major hypotheses of this study. The final set of results are post-hoc analyses which examine the influence of gender on the results reported for the study sample as a whole.

Descriptive Statistics on Play Variables

The first analysis examined the statistical properties of the various play measures which served as the outcome variables for this study. Table 1 presents descriptive statistics for each play variable including, the mean, standard deviation, skewness, and minimum and maximum scores (see Table 1).

Inspection of Table 1 shows that all of the different play variables conform to the statistical criterion of being normally distributed i.e., skewness values falling between the -1.5 and +1.5 range, which indicates that correlational statistics can be employed on these measures. This is important information not only for interpreting results of subsequent analyses but also because five of the six play measures have been specifically developed for the purposes of the present study and are therefore being utilized for the first time. The descriptive data shows that a range of scale points were coded for on all play dimensions which indicates that the different behaviors operationalized by the coding systems were

Table 1

Descriptive Statistics on all Play Variables

Play Behaviors	Mean	SD	Skewness	Minimum	Maximum
Maternal Contingent Responsiveness	.673	.140	-1.27	.27	.88
Dyadic Reciprocity	.941	.112	-.100	.63	1.17
Level of Play (MO)	178.45	83.40	.096	14.00	346.00
Level of Play (ME)	224.80	86.56	-.207	26.00	397.00
Quality of Involvement (MO)	3.68	.51	-.56	2.10	4.65
Quality of Involvement (ME)	3.93	.29	.32	3.25	4.55

observed and codeable from the videotapes. This information provides initial validity for these rating scales. The descriptive data also show that the means for child level of play and quality of involvement in play are higher in the mother-engaged experimental condition. This is consistent with the literature and research on play that has documented that young children tend to engage in higher levels of symbolic play and are better able to focus their attention on playing for longer periods of time when mothers are involved as facilitators, in comparison to when children play alone.

Factor Structure of Maternal Representations

The second analysis examined the factor structure of maternal representations on the study sample which included mothers of 18 girls and 22 boys (N=40) whose children ranged in age from 28 to 33 months. The 17 Parent Development Interview (PDI)

variables were subjected to a principal components factor analysis with varimax extraction for the purposes of data reduction.

Table 2

Factor Weightings of PDI Variables

Variables	Factor I	Factor II	Factor III
Richness of Perception	**.86**		
Maternal Joy/Pleasure	**.85**		
Child Joy/Pleasure	**.84**		
Coherence	**.66**		
Child Anger	-.53		
Competence Efficacy	-.48		
Acknowledgment of Anger		**.81**	
Modulation of Anger		**.75**	
Degree of Guilt		**.69**	.34
Acknowledgment of Guilt		**.67**	.34
Neediness		**.59**	-.40
Degree Anger	-.37	.58	
Acknowledgment Separation Distress.			**.83**
Degree Separation Distress			**.74**
Child Separation Distress			**.60**
Child Dependence/Independence			-.39
Modulation Separation Distress			.36
Factor Percent Variance	27.1	15.5	11.7
Eigenvalue	4.6	2.6	1.9

Inspection of Table 2 reveals that three clear factors emerged from this analysis; one pertaining to joy-pleasure and coherence (joy-pleasure, coherence, richness of perception); a second to anger and guilt (acknowledgment of anger, anger modulation, degree of guilt, acknowledgment of guilt, and neediness); and a third factor pertaining to separation distress (acknowledgment of separation distress, degree of separation distress,

and child's separation distress). The three factors accounted for 54.3% of the variance in the 17 PDI ratings. Factor scores were created by unit weighting the z-scores for each variable loading on a factor and summing the scores. Only variables with loadings of > .6 were selected for purposes of high interpretability and replicability. Five variables loaded at .5 or below (child anger, overall degree of parental anger, competence/efficacy, child dependence-independence, and modulation of separation distress.) Each of the factor composites were internally consistent, with alpha coefficients of .81 for Factor I, .76 for Factor II, and .62 for Factor III. Correlations among the three factor scores were as follows: joy-pleasure/coherence: anger/guilt r= -.003; joy-pleasure/coherence: separation distress r= -.01; anger/guilt: separation distress r= -.009.

Hypothesis 1: PDI Factor Structure Replication

The second analysis was aimed at determining whether the factor structure reported in previous research utilizing the PDI interview and scoring system (Aber et. al., in press; Slade et al., in press) could be replicated. The factor structure documented by these researchers was as follows: Factor I = Joy-Pleasure/Coherence, Factor II = Anger, and Factor III = Guilt/Separation Distress. Results on the study sample reveal a factor structure that is similar, but not identical, to that found in other studies. Consistent with previous findings, maternal experiences of joy/pleasure as well as coherence and richness of narrative descriptions loaded together into the first factor. However, unlike previous research, guilt responses loaded together with anger to form the second factor, and in this sample maternal reports of their of own and their child's separation distress emerged as a clearly distinct factor. These findings partially support to the hypothesis of replication, and differ in the way dimensions of negative affective experience are organized. It is possible that the different findings obtained in this study are due to the low ratio between number of subjects in the sample (40) and number of PDI variables (17). Based on these results, the predictor variables used for subsequent analyses examining the links between affective

dimensions of maternal representations and maternal and child play behaviors were as follows: Factor I - Joy-Pleasure/Coherence; Factor II - Anger/Guilt, and Factor III - Separation Distress.

Hypothesis 2: PDI Factors and Maternal Play Behavior

It was predicted that the three PDI Factors representing different affective dimensions of maternal representations would relate differently to maternal play behavior. A series of correlations were conducted to examine the links between maternal representations of the child and maternal contingent responsiveness in the mother-engaged (ME) free play condition. Results are presented below in Table 3.

Table 3

The Relationship between PDI Factor Scores and Maternal Contingent Responsiveness.

Factors	**Maternal Contingent Responsiveness (ME)**
Joy-Pleasure/Coherence	.12 (40) P=.451
Anger/Guilt	-.27+ (40) P=.089
Separation Distress	.38* (40) P=.015
*p<.05 level, +p<.10	

Inspection of Table 3 shows a significant positive relationship between Separation Distress and Maternal Contingent Responsiveness, r = .38 (p<.05). Thus, mothers who report higher levels their own and their child's separation distress are more likely to respond in a contingent manner when relating with their child in free-play. A negative

trend was found between Anger/Guilt and Maternal Contingent Responsiveness, $r = -.27$ ($p < .10$). This trend suggests that mothers who report high levels of anger and guilt pertaining to their relationship with their toddlers are somewhat less likely to respond in a contingent manner when interacting with their child. No significant relationship was found between Joy/Pleasure and Coherence and Maternal Contingent Responsiveness.

These findings lend partial support to the hypothesis that affective dimensions of maternal representations would be linked maternal behavior in free-play. It was expected that Joy-Pleasure/Coherence would positively correlate with maternal contingent responsiveness; however, no relationship was found. In this study, only dimensions of negative affect predicted differentially to maternal behavior, and Separation Distress predicted to maternal behavior in the opposite direction from that originally hypothesized.

Hypothesis 3: PDI Factors and Child Representational Competency

It was predicted that the three PDI factors would be related to various aspects of child representational competency. A series of correlations were conducted to examine these relationships and are presented in Table 4. Specifically, it was expected that high scores on Factor I (Joy-Pleasure/Coherence) would be positively correlated with the level and quality of involvement in the child's play. No specific hypotheses were postulated for Factors II and III. In general, this analysis was considered exploratory in nature, as no studies to date have examined links between maternal representations of the child and child behaviors in the toddler period.

Inspection of Table 4 reveals that there are no significant relationships between any of the three Factors and measures of child representational competency. Correlations in a positive direction, although not reaching significance, can be seen between Factor III and

Table 4

Correlations between PDI Factor Scores and Child Representational Competency (N=40)

Factors	Child Play Level (MO)	Child Play Level (ME)	Quality of Involvement (MO)	Quality of Involvement (ME)
Joy-Pleasure Coherence	-.02 (40) P=.924	.06 (40) P=.714	-.12 (40) P=.447	-.07 (40) P=.658
Anger/Guilt	-.11 (40) P=.504	.05 (40) P=.776	-.17 (40) P=.288	-.15 (40) P=.348
Separation Distress	-.06 (40) P=.696	.21 (40) P=.191	-.07 (40) P=.671	.23 (40) P=.156

child play level and quality of involvement in the ME condition r=.21, p =.191, and r=.23, p=.156 respectively. This suggests that children whose mothers report high levels of separation distress may be better able to focus on playing and engage in higher level symbolic play when their mothers are available as potential play partners.

Hypothesis 4: .Links between Maternal Behavior, the Quality of Dyadic Interaction and Child Representational Competency.

These analyses addressed two sets of relationships, 1) the links between maternal behavior and the quality of dyadic interaction in play, and 2) the links between maternal behavior and various dimensions of child representational competency in the mother-engaged free play condition. Specifically, it was predicted that mothers who responded in a predominantly contingent manner would be more likely to have reciprocal interactions with their child. It was also predicted that children whose mothers responded in a contingent manner would be more focused on play and play at higher levels of symbolic play. Correlations were conducted to examine these relationships and are presented in Table 5.

Table 5

The Relationships between Maternal Contingent Responsiveness, the Quality of Dyadic Interaction, and Child Representational Competency in the Mother-Engaged Free Play Condition

	Dyadic Reciprocity (ME)	Child Play Level (ME)	Quality of Involvement (ME)
Maternal Contingent Responsiveness	-.41** (40) P=.008	.22 (40) P=.163	.48** (40) P=.002

**p<.01, 2-tailed significance

Note: Negative correlations between Maternal Contingent Responsiveness and Dyadic Reciprocity reflect a positive relationship.

Inspection of Table 5 reveals a positive relationship between maternal contingent responsiveness and dyadic reciprocity, r= -.41 (P<.05). Thus, mothers who respond in a predominantly contingent manner are more likely to have reciprocal interactions with their child when engaged in playing. The correlation indicating this positive relationship is negative due to the fact that original five scale points for dyadic reciprocity were recoded so that the mid-point would represent the optimal score of zero.

It was further predicted that maternal contingent responsiveness would directly relate to child representational competency in the mother-engaged (ME) condition. This hypothesis was supported by the significant positive correlation between maternal contingent responsiveness and quality of involvement in the (ME) condition r=.4805, p =<.05. In other words, children whose mothers responded to them in a contingent manner were better able to focus on play and follow through with play themes.

POST-HOC ANALYSES: Examining the Role of Gender

A central premise of this study was that characteristics of the child exert a powerful influence on shaping parental representations of the child. As this sample included 18 female and 22 male toddlers, additional analyses were conducted to examine potential gender differences in maternal representations as well as play behaviors.

1. Gender Differences in Maternal Representations of their Toddlers at 28 Months.

The first analysis examined whether there were differences in maternal representations based on child gender. T-tests for independent samples were conducted comparing the means for mothers of boys and mothers of girls on each of the three PDI Factors. These findings are presented in Table 6.

Table 6
T-tests for Gender Differences in Maternal Representations of the Child

	Females			Males					
Factors	**M**	**sd**	**n**	**M**	**sd**	**n**	**t**	**df**	**p**
Joy/Pleasure 0.46	.63	18	-0.36	1.12	22	2.91	34	.01**	
Anger/Guilt	0.25	1.04	18	-0.19	0.97	22	1.39	38	.17
Separation Distress	-0.20	1.09	18	0.22	0.89	22	-1.33	38	.19

**p <.01, 2-tailed

Inspection of Table 6 shows a statistically significant difference in the way mothers report experiencing Joy/Pleasure and Coherence as a function of child gender. Mothers of

girls reported experiencing more joy/pleasure in their relationship with their daughters, and less with their sons. Examination of the standard deviations revealed greater variability on the dimension of joy-pleasure and coherence for mothers of boys in comparison to mothers of girls, whose representations on Factor I appear to be more consolidated, SD of 1.12, and .63 respectively.

The mean scores relating to gender are also different for Factors II and III although not significantly so. Mothers of girls tended to experience higher levels of Anger/Guilt in the relationship than mothers of boys. A similar trend in the opposite direction was revealed for Separation Distress. Here mothers of girls reported a trend toward less Separation Distress; and mothers of boys received higher scores on Separation Distress. Although these differences are not statistically significant, the effect size for both is in the small-medium range. Thus, these constitute noticeable differences but are not large enough to be statistically significant. The non significance of these findings is likely to be due to the low power level given the small sample size of this study.

2. Gender Differences in Play Behaviors

The purpose of this analysis was to examine whether there were gender differences in maternal and child play behaviors. To address this question, T-Tests for independent samples were conducted on each of the play measures. These findings are reported in Table 7.

Inspection of Table 7 shows that no gender differences were found on measures of Maternal Contingent Responsiveness and the Quality of Dyadic Interaction. However, when examining measures of child representational competency gender differences are apparent. Female toddlers tended to play at higher levels of symbolic play when playing

Table 7

T-tests for Gender Differences in Play Behavior

	Females			Males					
Play Behaviors	**M**	**sd**	**n**	**M**	**sd**	**n**	**t**	**df**	**p**
Maternal Cont. Responsiveness	0.64	0.15	18	0.70	0.12	22	-1.21	38	.23
Dyadic Reciprocity	0.95	1.05	18	0.93	0.97	22	1.20	38	.53
Child Level of Play (MO)	202.33	76.58	18	158.91	85.32	22	1.69	37.6	.09+
Child Level of Play (ME)	248.28	78.19	18	205.59	90.03	22	1.60	37.8	.12
Quality of Involvement (MO)	3.68	0.44	18	3.68	0.56	22	-0.02	38	.98
Quality of Involvement (ME)	3.81	0.26	18	4.02	0.29	22	-2.21	38	.03*

+ $p \leq .10$, *$p < .05$, levels of significance 2-tailed

alone (MO) than did boys. This finding indicates a trend at the $p < .09$ level. Examination of the means shows that level scores for both boys and girls increased in the mother-child free play condition (ME). Separate T-tests were conducted to determine whether this change across the two experimental conditions was significant. Results were significant at the $p<.05$ level only for boys. In summary, these findings indicate that girls in general tended to play at higher levels than boys irrespective of maternal availability, and that boys engaged in higher level symbolic play when their mothers were available as potential play partners.

With respect to quality of involvement, mean scores for girls remained relatively constant across the MO and ME conditions. Boys received higher mean scores in the mother-engaged than mother-occupied condition; this difference was statistically significant

at the p<.05 level. Additionally, boys had higher mean scores than girls; 4.02 and 3.81 respectively, which suggests that boys were better able than girls, to focus their attention on playing and follow through with play themes when mothers were available as play partners. This difference was also statistically significant at the p<.05 level.

3. Gender Differences in the way Maternal Representations Relate to Play Behaviors.

As notable gender differences were found in the ways mothers reported experiencing their relationships with male and female toddlers along the three affective dimensions of maternal representations, a series of separate correlations were conducted to examine the relationship between the three Factors and play behaviors for boys and girls. Results are shown in Tables 8 and 9, and the tables are presented consecutively to facilitate visual referencing of comparisons. As different patterns of relationships emerged for boys and girls, findings will first be reported by gender, then comparative statements will made.

3a. Pattern for Female Toddlers:

Joy/Pleasure

Although mothers of female toddlers reported experiencing higher levels of joy-pleasure in their relationships with their daughters, Joy-pleasure/coherence did not significantly relate to any of the play behaviors. This is consistent with findings for the study sample as a whole.

Anger/Guilt

A significant positive relationship was found between mothers reporting high scores on Anger/Guilt and female toddler's ability to engage in self-directed play when playing alone r=.47, p <.05. Additionally, a small-medium, but not significant effect size is discernible, indicating a tendency toward a negative relationship between Anger/Guilt

Table 8

Correlations between PDI Factor Scores and Play Behaviors for Female Toddlers (n=18)

FACTORS	Maternal Responsive -ness	Dyadic Reciprocity	Child Level of Play (MO)	Child Level of Play (ME)	Quality of Involvement (MO)	Quality of Involvement (ME)
Joy/Pleasure Coherence	.28 (18) P=.246	-.21 (18) P=.393	-.08 (18) P=.749	-.03 (18) P=.905	.26 (18) P=.301	.35 (18) P=.159
Anger/Guilt	-.32 (18) P=.192	.20 (18) P=.417	.09 (18) P=.728	-.04 (18) P=.888	.47* (18) P=.047	-.02 (18) P=.947
Separation Distress	.34 (18) P=.165	-.27 (18) P=.269	.37 (18) P=.135	.48* (18) P=.046	.30 (18) P=.224	.24 (18) P=.331

*p<.05 level

Table 9

Correlations between PDI Factor Scores and Play Behaviors for Male Toddlers (n=22)

FACTORS	Maternal Responsive -ness	Dyadic Reciprocity	Child Level of Play (MO)	Child Level of Play (ME)	Quality of Involvement (MO)	Quality of Involvement (ME)
Joy/Pleasure Coherence	.22 (22) P=.333	-.15 (22) P=.512	-.17 (22) P=.456	-.05 (22) P=.808	-.28 (22) P=.212	-.03 (22) P=.895
Anger/Guilt	-.15 (22) P=.501	.06 (22) P=.782	-.38+ (22) P=.078	.01 (22) P=.958	-.62* (22) P=.002	-.14 (22) P=.541
Separation Distress	.37+ (22) P=.085	-.17 (22) P=.454	-.34 (22) P=.117	.11 (22) P=.611	-.36+ (22) P=.094	.11 (22) P=.618

*p<.05, +p<.10 level

and maternal contingent responsiveness r = -.32, p=.192. The direction of this relationship is consistent with the original hypothesis that mothers reporting higher levels of Anger/Guilt would be less likely to interact with their children in a contingent manner. Again, the strength of this relationship may be influenced by the small sample size.

Separation Distress

A significant relationship was found between high scores on Separation Distress and female toddler's ability to play at higher levels of symbolic play when their mothers were available as potential play partners, r=.48, p<.05. While not significant, it appears that mothers reporting high separation distress tended to display more contingent responsiveness vis-a vis their daughters in free play, r=.34, p=.165.

3b. Pattern for Male Toddlers:

Joy/Pleasure

There was no relationship between maternal representations of Joy-pleasure/Coherence and any of the play measures for boys.

Anger/Guilt

A significant negative relationship was found between Anger/Guilt and quality of involvement in the mother-occupied condition, r=-.62, p=.002. This finding suggests that boys of mothers reporting high levels of anger/guilt are less likely to engage in self-directed play in the mother-occupied condition. Additionally, a negative trend was revealed between Anger/Guilt and child level of play in the MO condition, r=-.38, p=<.10. Thus boys were less likely to focus on play and played at lower levels when mothers reported experiencing high levels of anger/guilt in the relationship.

Separation Distress

There is a positive trend between separation distress and maternal contingent responsiveness, r =.37, p=<.10. This finding suggests that mothers of boys reporting high levels of separation distress were more likely to respond to their sons in a contingent manner when playing with them in free play. Another trend in the negative direction was revealed between separation distress and quality of involvement in the MO condition r = -.36, p =.094. This finding suggests that sons of mothers reporting higher levels of separation distress had difficulty focusing on play and were more distractible when their mothers were unavailable to play with them. Consistent with this finding although not significant, is the trend toward a negative relationship between separation distress and play level, r=-.34, p=.117, suggesting that boys were not only less focused on play but also played at lower symbolic levels.

General Impressions: Comparing boys and girls.

When examining the pattern of all the scores, it seems when mothers reported experiencing higher levels of positive and negative emotion pertaining to the relationship, females toddlers were more focused and better able to engage in self-directed play when playing on their own. This finding is indicated by correlations in the positive direction between all PDI Factors and higher scores for quality of involvement in the mother occupied experimental condition. By contrast, it appears that when mothers reported experiencing higher levels of emotion, male toddlers floundered when playing alone, indicated by negative correlations between the three PDI Factors and ratings of quality of involvement for boys.

Of particular interest is the specific and differential impact that maternal reports of Anger/Guilt had on male and female toddlers' independent play behavior. Girls were

significantly better able to play independently when their mothers reported higher levels of Anger/Guilt and were not available as potential play partners. Maternal reports of Anger/Guilt strongly impacted on boys' ability to play independently. When their mothers reported high levels of Anger/Guilt and were unavailable in the play condition, boys were highly distracted and unable to focus their attention on play.

Fisher's Z-tests were conducted to test whether the difference between the independent correlations reported for boys and girls documenting this relationship between maternal Anger/Guilt and quality of involvement was significant. Results of this analysis are presented in Table 10.

Table 10

Fisher's Z-tests: Significance of differences between independent correlations reported for girls and boys

Variables	R1 - Girls	R2 - Boys	Z-Score	P Level
Anger/Guilt with Quality of Inv. (MO)	.47	-.61	3.53	P<.05, (Sig.)
Separation Distress with Quality of Inv.(MO)	.30	-.37	2.02	P<.05 (Sig.)
Joy-pleasure with Quality of Inv. (MO)	.26	-.28	1.60	P>.05 (N.S.)

The results yielded a Z-score of 3.53 which was statistically significant at the $p<.05$ level. Additionally, the difference between correlations for boys and girls showing a relationship between maternal reports of separation distress and quality of involvement were also statistically significant, $Z = 2.02$, $p<.05$. Z-scores examining this difference with

regard to joy-pleasure/coherence and quality of involvement were not statistically significant, Z=1.14, p >.05. In summary, the Fisher's Z test lends further statistical support for finding that maternal reports of negative affect exert a differential impact on the play behavior of boys and girls when they are playing alone. Maternal reports of positive affect did not exert a differential impact which is consistent with the pattern of findings that negative, not positive maternal affect is the best predictor of children's play behavior.

4. Gender Differences in the Relationship between Maternal Responsiveness and Play Behaviors

A final analysis was conducted to explore whether there were differences in the way maternal responsiveness related to play behaviors for boys and girls. Results are reported in Table 11.

Table 11

Correlations between Maternal Contingent Responsiveness and Play Behaviors for Girls and Boys

		Dyadic Reciprocity	Child Level of Play (MO)	Child Level of Play (ME)	Quality of Involvement (MO)	Quality of Involvement (ME)
Girls	Maternal Responsive -ness	-.31 (18) P=.217	.13 (18) P=.615	.34 (18) P=.171	.34 (18) P=.170	.33 (18) P=.181
Boys	Maternal Responsive -ness	-.51* (22) P=.016	.00 (22) P=1.000	.25 (22) P=.258	-.12 (22) P=.583	.58** (22) P=.005

**p<.01, * p<.05 level.

Inspection of Table 11 shows that maternal responsiveness was not significantly related to any of the play behaviors for girls. Significant positive relationships were, however, evident for boys. Mothers who responded to their boys in a predominantly

contingent manner were more likely to have reciprocal interactions when playing with their sons. This is indicated by the negative correlation between maternal contingent responsiveness and dyadic reciprocity, r= -.51, p=<.05 (recall that negative correlations with dyadic reciprocity represent a positive relationship.) Additionally, it appears that boys were significantly better able to focus on play and follow through with play themes when their mothers were available and responded to them in a contingent manner. This is indicated by the positive correlation between maternal contingent responsiveness and quality of involvement in the ME condition, r=.58, p=<.01. Thus it appears that maternal responsiveness has a greater impact on boys' play behaviors in comparison to girls', as well as on the manner in which mother-son dyads interact when playing together.

CHAPTER FOUR
Discussion

I. What did Maternal Representations of the Child in this Study Look Like?

The first goal of this study was to examine what maternal representations of the child during the toddler period looked like. Maternal representations of their toddlers were assessed using the PDI interview and dimensional scoring system, and a factor analysis was conducted to examine the structure of maternal representations and the manner in which different affective experiences pertaining to the relationship were organized.

Findings revealed that mothers organized their representations along three affective dimensions which are consistent with clinical and theoretical descriptions of the kinds of affects that parents of toddlers normally experience. These were joy-pleasure/coherence, anger/guilt, and separation distress. This factor structure is similar, but not identical, to that reported in previous research. Consistent with other studies (Aber, Belsky, Slade & Crnic, in press; Slade, Belsky, Aber & Phelps, in press), joy-pleasure loaded together with variables that assessed formal characteristics of the narratives as a whole. This provides further documentation for the important integrative function of positive affect in that mothers reporting more joy/pleasure tended to give richer and more coherent descriptions of their child and the parent-child relationship.

The present findings differed from those previously reported (Aber et al., in press; Slade et al., in press) in the way dimensions of negative affect were organized. In this study, separation distress emerged as a distinct factor, whereas in previous studies separation distress and guilt loaded together into one factor. With this sample of mothers guilt responses were more strongly associated with maternal experiences of anger in the relationship. It is possible that this variation is an artifact of the smaller sample size used in

the present study. Closer inspection of how the different variables in each factor relate to each other shows that a small portion of guilt responses did indeed overlap with separation distress, but not enough to load into that factor. Because of the low ratio between the number of subjects in this sample (40) and the number of PDI variables (17) used to conduct this factor analysis, it is recommended that future studies use the alpha's from the originally reported factor structure when analyzing data from this small sample. This proposed change in data analysis plan would be methodologically more sound given that the original factor structure has been documented as stable across independent studies with significantly larger samples (Aber et al., in press; Slade et al., in press), and would therefore lend greater confidence to the interpretation of results and bypass the issue of replicability. Moreover, given the small sample size of this study, the factor analytic approach that was employed may result in some over-inflated statistical connections. Therefore, all data examining the relationship between the three reported factors and behavioral outcome measures presented in this study must be looked at with caution.

There are several other ways to think about why separation distress emerged as a separate factor. First, the children in this study were a group of "older" toddlers who are in the latter stages of the separation-individuation process. Therefore, they may more clearly be asserting their autonomy which in turn would heighten mothers' internal experience and perceptions of their child's "separateness". It is possible that the kind of separation distress mothers in this sample are describing is of a more intrapsychic and interpersonal nature and thus psychologically closer to guilt, rather than solely feelings associated with actual physical separations from the child. It is also possible that these findings pertaining to separation distress were a confound of the experimental conditions. The PDI was administered to mothers after the play session which involved a quasi separation-reunion experience between mother and child. Recall that mothers were instructed not to interact with their child for the first ten minutes, and were given paper and pencil measures to fill

out and keep them occupied while their child played alone. This was followed by ten minutes of mother-child free play. As separation reactions and reunion behaviors were activated in the play session, it is possible that this experience was still prominent in the mother's mind while she was being interviewed about the relationship.

Post-hoc analyses showed differences in the way mothers of boys and girls represented the relationship. While these findings will be discussed in more detail later, they indicate that gender exerts an important influence on shaping maternal perceptions and expectations in the relationship. Taken together, these data add to the growing body of research that support the notion that while parental representations of the child are initially shaped by the parent's own early models of attachment, they undergo revision and are increasingly defined by the child's actual characteristics and the feelings they evoke in the parent over the course of development. Additionally, findings suggests that maternal representations provide a window into how the dyad behaves when strong feelings such as separation distress are evoked in real life situations, as well as an understanding of stage salient issues that the dyad is currently negotiating.

II. How did Maternal Representations Influence Behavior?

The next aim of this study was to examine the link between maternal representations and maternal behavior in free play. It was assumed that maternal representations would function to guide mothers' expectations and behavior in the relationship and directly influence patterns of maternal responsiveness. This was supported by the data but not entirely as predicted.

A central hypothesis in this study was that a mother's capacity to experience joy/pleasure, and provide coherent and believable descriptions of her own and her child's experience in the relationship would be related to her ability to interact with her child in a

responsive and contingent manner in free play. This prediction was also modeled after previous research that has shown a direct link between maternal representations of joy-pleasure/coherence and positive mothering behavior (Slade et al., in press). Surprisingly no relationship was found between Factor I and maternal contingent responsiveness. Instead, findings revealed that maternal representations of negative, not positive affect were directly linked to maternal behavior with the child in free-play.

As predicted, mothers reporting high levels of anger/guilt in the relationship showed a tendency to be less likely to respond to their child in a contingent manner. This finding is similar to that reported by Slade et al. (in press) which revealed that mothers who expressed higher levels of anger in their representations of the mother-child relationship engaged in less positive parenting. These data support notions that mothers who are unable to modulate and integrate negative affect pertaining to the relationship are more likely to be overwhelmed by feelings that will hinder their ability to read the child's cues and respond in an appropriate manner. In contrast mothers reporting high levels of separation distress displayed proportionately higher levels of contingent responsiveness when playing with their child. This finding is in the opposite direction of that originally predicted; however, it makes intuitive sense. It is logical to expect that mothers who report high levels of their own and their child's separation distress, would behave in a manner which re-establishes a feeling of connectedness with their child and serves the adaptive function of repairing perceived interpersonal distance in the relationship.

Again, it should be noted that the experimental conditions in this study were likely to activate separations reactions in each dyad. Thus it seems that maternal representations of separation distress provide an accurate index of how the dyad actually behaves in situations which elicit separation distress and subsequent reunion behaviors.

III. How was Maternal Availability and Responsiveness Related to Child Play Behavior?

The third question addressed by this study was whether maternal responsiveness would be related to child representational competency. This was best examined in the mother-engaged condition, when the mother was fully available to the child. Results showed a strong positive correlation between maternal contingent responsiveness and child play behavior. In other words, children whose mothers responded to them in a contingent manner were better able to focus their attention on play and elaborate on play themes. Additionally, an examination of the means for level of play in each experimental condition show that children tended to play at higher levels of symbolic play when their mothers were available as potential play partners. These findings are consistent with those reported in the play literature (Bretherton & O'Connell, 1984; Slade, 1987) which have shown that toddlers engage in both quantitatively and qualitatively more diverse and advanced forms of symbolic play when playing with their mothers than when playing alone. Researchers (Beizer & Howes, 1992; Bretherton & O'Connell, 1984; Greenspan & Lieberman, 1996; Slade, 1987) have argued that it is the way mothers play with their children and not maternal availability per se which is instrumental in bringing about this change in children's play behavior. Given that maternal contingent responsiveness was significantly related to enhanced child competency, it is important to describe how this construct was operationalized and coded in this study.

Recall that three types of maternal behavior were coded during the mother-engaged condition: contingent, anti-contingent, and non contingent responses. In the broadest sense, contingency referred to any maternal behaviors which functioned to encourage the child's symbolic expression in play. These included any verbal or non-verbal behaviors which conveyed the mothers interest in, and desire to understand what her child was playing with. Contingent responses were spontaneous or elicited behaviors that showed the mother's willingness to follow her child's lead in play, and to facilitate his play via elaboration. The

mother did not need to be an active participant in the play, as many of the children preferred their mothers to be an observing audience for their autonomous activity. In such cases, contingency was coded when the mother's full attention was on her child and her verbal comments and questions were directly related to her child's play and functioned to validate his or her activity and provide cognitive stimulation. Contingent behaviors were those which were responsive to the child's cues and signals.

Maternal attempts to redirect play, and/or interrupt the child's ongoing play activity to draw attention to toys or play themes that she was interested in playing with were coded as anti-contingent responses. Similarly, overly intrusive behavior on the part of the mother which elicited compliant behavior from the child and focused the child's attention exclusively on the mother's interests were also considered anti-contingent as they undermined the child's capacity for differentiation and self-expression in the symbolic mode. Finally, non-contingent behaviors included the following: mothers ignoring the child's signals, failure to provide cognitive stimulation, physically intrusive behaviors such as interrupting the child's play to cuddle, displays of aggression toward the child with the toys, e.g., pretending to saw the child's limbs with the toys saw, and unresponsiveness to the child's bids for maternal involvement and participation in play.

Most mothers in this study displayed a balance of contingent and anti-contingent behaviors. Interestingly, non-contingent behaviors were most often coded for when mothers deliberately ignored aggressive behavior on the part of the child and when mothers failed to provide adequate cognitive stimulation to encourage the child to use the toys symbolically. For example, one child displayed his capacity to play with the toys symbolically when playing on his own in the mother-engaged condition. However, when his mother joined him on the floor, he began playing with the pop-beads in a non-symbolic manner, and continued this play for four and a half minutes. During this time his mother

sat nearby and watched him silently. She remained withdrawn, and failed to respond in any way that might have encouraged him to play with the toys differently. This mother's behavior was coded as non-contingent, and was considered to be a missed opportunity to encourage her child to use the symbolic mode to express himself.

Another mother frequently interrupted her child's autonomous play activity to draw attention to the toys she was playing with. This child was a competent player and continued to follow through with the symbolic play sequence she had initiated; however, she was clearly annoyed by her mother's apparent need for attention and lack of interest in what she was doing. This child received high scores for level of symbolic play; however, her quality of involvement scores were in the mid-range due to her being distracted by her mother's bids for attention. Her mother's behavior was coded as anti-contingent in that she repeatedly tried to redirect her daughter's play

In summary, maternal contingent responsiveness indicates the mother's willingness or capacity to recognize her child as an intentional being, who has thoughts, feelings, and desires that may differ from her own. She is also supporting the child's sense of agency as it is being expressed and organized around new symbolic skills, while remaining connected to the child through recognition and verbal relatedness. From the child's perspective, he is experiencing himself as existing, or "being held " in the mind of another, in this case the mother. According to Fonagy and Target (1996), such experiences are vital to enabling the child to develop a core sense of self. When a child is held in mind, he feels it, and knows it. It provides him with a sense of safety and containment, and most importantly, the knowledge that he exists in that other which is one of the most intimate and authentic forms of human connectedness. Fonagy and Target believe that when children have repeated experiences of being thought about by another, they begin to develop the capacity to explore their own minds as well as those of others.

Study data provide empirical support for these theoretical notions. When mothers responded in a contingent manner, children became more involved in play, were more likely to follow through with play themes, and played at higher levels. This finding shows a direct link between a mother's capacity to contemplate her child's experience and reflect this back to him, and the child's interest in exploring the contents of his own mind through symbolic play. It also highlights the important role of the mother in providing the necessary frame for play and reflection which is consistent with theories about the interpersonal context in which early symbolization develops.

Study data also shows a strong relationship between maternal contingent responsiveness and the quality of dyadic interaction in play. Findings revealed that when mothers responded in a contingent manner, dyads were more likely to engage in reciprocal interactions. Reciprocity referred to play interactions where both the mother and child contributed to the elaboration of a mutually constructed play theme and clearly derived pleasure from this joint activity. The pattern of results indicate that when a child experiences that the mother is interested in understanding his mind/symbolic expressions, the child in turn becomes interested in exploring and getting to know the mind of the mother. The child communicates this interest by allowing the mother to enter into play in a qualitatively different way which involves the mutual give and take of ideas around a shared activity. From this one can infer that when a mother recognizes her child's independent activity, the child feels validated and understood by the mother, which in turn sparks his desire to continue to share experiences with her.

Interestingly, no significant relationship was found between dyadic reciprocity and child representational competence. Specifically, this means that there is no evidence that reciprocal interactions, in comparison to more temporally spaced turn taking behaviors

where either the mother or child takes the lead in directing play activity, were more likely to promote child competency. In general, it seemed that children at this age were less invested in having their mother's be "partners" in play, than in receiving recognition and validation for their autonomous activities. However, findings indicate that when mothers -- by way of contingent responsiveness -- created an atmosphere which enabled the child to freely explore and play in her presence, the child began to show a more active interest in sharing his play with the mother. Moments of reciprocity appeared to originate from the child's experience that his symbolic communications were valued by the mother which fueled his desire to share his play and ideas with his mother regardless of how he was playing with the toys. Thus, reciprocity was not contingent on the level of play at which the child was playing, instead the primary impetus for engaging in such interactions appears to be that of achieving a different kind of relatedness with the mother where mental states can be shared between mother and child. These findings provide empirical support for theoretical notions put forth by Werner & Kaplan (1963) and Winnicott (1971), that the motivation to symbolize and represent experience arises from the wish to share experiences with a social partner. They also illustrate Fonagy and Target's notion (1996) that the capacity to think about one's own and another's experience helps individuals to achieve a higher level of intersubjectivity. When two individuals interact in a way that involves mutual recognition and understanding, it fosters an experience of connecting with others in a way that "is emotionally alive" (p. 463)

IV. The Relationship between Maternal Representations and Child Representational Competency.

The fourth question addressed by this study was whether there is a relationship between maternal representations and child representational competency. This analysis was exploratory in nature; however, it was hypothesized that the overall quality of maternal representations would relate to children's own emerging representational competence. In

general it was thought that mothers who manifest the ability to represent diverse aspects of the relationship, to contemplate her child's experience as a separate individual and acknowledge the ways they mutually influence each other, to flexibly consider a range of thoughts and feelings pertaining to herself, her child and the relationship, would be linked with the child's capacity to employ similar cognitive/affective processes when playing. It was assumed that children whose mothers have rich, textured and coherent representations of the relationship would be likely to have interactions with their mother that convey the sense that thoughts, feelings and ideas are a valued part of the relationship, and contribute to the sense of getting to know self and other in a more differentiated way. It was hypothesized that these kinds of repeated interactions between mother and child would foster feelings of security in the child, and increase his awareness that internal and external experiences can be thought about and represented in the mind. Thus, it was expected that children whose mothers display this kind of representational competence would feel more confident about freely exploring the contents of the own minds and representing them symbolically through language and play.

Results for the study sample as a whole showed no direct relationship between any of the three PDI factors and measures of child representational competency. Instead a pattern of indirect influence that suggests mediation by maternal behavior became apparent (see Appendix D for a flow chart illustrating this hypothesized mediational model). As described earlier, mothers reporting high levels of separation distress were more likely to respond to their children in a contingent manner. Maternal contingent responsiveness was in turn linked with both the quality of dyadic interaction and measures of child representational competence. Taken together, one can speculate on the possible meaning of this pattern of results. When mother's report high levels of their own and/or their child's separation distress, they are more likely to behave with the child in manner which reestablished a feeling of connectedness between mother and child. The specific way they

do this is by following the child's lead in play and validating the child's autonomous activity. This in turn enhances the child's ability to focus on play and elaborate on play themes. When feeling understood by the mother by way of her responsiveness, the child not only displays increased interest in exploring the contents of his own mind, but also in actively sharing this with the mother and inviting her to join in his play, culminating in reciprocal dyadic interactions where both mother and child contribute to the play and derive pleasure from this jointly constructed activity. While there is no direct link between the mother's capacity to represent the child and the relationship in a rich, differentiated and coherent manner and child play behavior, it is apparent that mother's who can freely contemplate their child behavior and reflect this back to him in the interaction, fosters the expression of similar representational competencies on the part of the child in play. Thus, the pattern of behavior between mother and child in play demonstrates the kind of relationships and processes that were expected to be seen solely on the representational level. Since children's representational skills are emerging at this age, it is possible that they still need repeated experiences with the mother wherein thoughts and feelings are expressed directly in the interaction, before this becomes internalized, and can be confidently accessed irrespective of her direct involvement.

Part Two - Post-Hoc Analyses

I. Gender Differences in Maternal Representations of the Child.

Study data show differences in the way mothers represented their relationship with the child as a function of child gender. Specifically, mothers reported experiencing significantly more joy-pleasure in their relationships with their daughters than with their sons. Additionally, since joy/pleasure was associated with formal characteristics of the narratives as a whole, mothers of girls tended to provide richer and more coherent representations of the child and the relationship than mothers of boys. Notable differences

were also apparent in maternal representations of negative affect. Mothers of girls tended to report experiencing more anger/guilt in the relationship than mothers of boys; and mothers of boys reported somewhat higher levels of separation distress.

It is possible that one aspect of the pleasure mothers derive in relation to their daughters may be in the experience of recognizing themselves in their child. Thus, one way of understanding these findings which indicate gender differences in maternal representations, is that mothers may more easily identify with their daughter's experience, and more readily access information about their own early childhood experiences when parenting girls. As girls mature and progress through stages of separation-individuation, their separate personalities become more distinct, but their gender identity also crystallizes and mothers can simultaneously experience their daughters as being both similar and different from themselves. By contrast, as boys separate and individuate, they become not only more autonomous, but also more distinctly different from their mothers with regard to gender identity. Consistent with gender stereotypes, boys at this stage may be expressing their autonomy differently than girls. Boy toddlers are likely to be more aggressive, defiant, and physical than girls, making their "separateness" more demanding and stressful for mothers to deal with and manage. Additionally, boys' and girls' interests and preferences for toys and activities may also be more gender stereotyped and specific, which would make it easier for mothers to relate to, and participate in activities their girls are interested in, in comparison to boys.

It is interesting to contemplate why mothers tended to experience more separation distress with boys than girls. This may in some fundamental way speak to the mother's sense of being able to "get" and relate to her child's experience, as well as utilizing information about their own early childhood to guide parenting behaviors. Results show that maternal representations of boys are less coherent, which suggests that mothers have a

less clear sense of what their sons are about, and of when things will or won't go smoothly in the relationship. The greater variance in maternal representations of joy/pleasure in their relationship with boys indicates that maternal experiences of joy/pleasure with their sons may be more situation specific or contingent on their ability to remain open and emotionally available to them. On a representational level, mothers at this stage convey their awareness of their son's separateness, and appear to have greater difficulty predicting the kinds of situations that will culminate in pleasurable exchanges. Thus, mothers of boy toddlers may need to work harder when interacting with their child to feel confident that they are understanding and appropriately responding to their child's needs and interests.

Mothers of girls may, by contrast, feel an intuitive kinship with their daughters which lends to feelings of closeness and less separation distress. The drawback in this formulation for girls is that by way of identifying with them, girls' mothers may too easily assume that they understand their daughters' experience, which could potentially cause conflict or tension in the relationship as their child attempts to individuate. While the process of parenting will always involve parents projecting their own needs, wishes, and feelings onto the child, this may more powerfully be the case for mothers of girls. A hint of this dynamic may be reflected in the finding that mothers tend to experience more anger towards their daughters than their sons. This may speak to mothers' reactions to their daughters' attempts to individuate, and make their separate personalities more clearly known and delineated in the relationship. The mother/daughter, mother/son dynamics may at this stage involve different goals. For instance, girls may engage in more power struggles, be oppositional and rejecting of the mother in their attempts to define their separateness identities. The message communicated by girls in these types of interactions is, "yes there are many ways that we are the same and for the most part that's a good thing because I like this feeling of closeness with you but, I am also different from you and need you to recognize that as well." The message communicated between mothers and sons

may be the following: " I get that you are different and that makes it hard for me to understand you at times, but it's important that we keep on trying to find ways to relate to each other and feel connected"

II. Differences in the Way Boys and Girls Play.

When looking at measures of representational competency, girls were easily able to engage in self-directed play and tended to play at higher levels of symbolic play when playing alone than did boys. Additionally, their mean scores for level of play and quality of involvement remained relatively constant, and high, across the two experimental conditions. By comparison, boy's level scores increased substantially in the mother-engaged condition, as did their ability to focus on play and follow through with play themes. Boys were also more focused on play than girls when their mothers were available as potential play partners, indicated by higher scores on quality of involvement . Thus, maternal availability had a dramatic impact on enhancing boy's play behavior and promoted their abilities to express themselves symbolically. Girls were interested in exploring objects and played symbolically on their own. Their mother's availability did not significantly function to augment their play, if anything, there is an indication that girls became slightly more distracted when their mothers were involved.

This difference in the way boys and girls played is not readily explainable when looking at the means for maternal responsiveness and quality of dyadic interaction. In other words, mothers in general did not display more contingent responsiveness towards boys than girls. Similarly, mother-daughter dyads were just as likely as mother-son dyads to engage in reciprocal interactions. What then accounts for these differences in boys' and girls' play? While no relationships were found between affective dimensions of maternal representations and child representational competency for the study sample as a whole, post hoc analyses provided an important new piece of information; namely that mothers

represent their relationships with boys and girls differently. Data examining the links between PDI factors and play behavior for boy's and girls separately showed that maternal representations were indeed associated with the different patterns of play behavior displayed by boys and girls. Additionally, gender specific maternal representations predicted to maternal behavior with the child in play.

III. Links Between Maternal Representations of Boys and Girls and Play Behavior.

Although mothers of girls reported experiencing higher levels of joy/pleasure in the relationship, joy/pleasure was not significantly related to any of the play behaviors. This was true for girls and boys. As with findings for the sample as a whole, maternal representations of negative affect turned out to be the best predictors of both maternal behavior and child representational competency. The patterns are, however, different for boys and girls.

When examining the overall pattern of scores, it seems that when mothers represented higher levels of positive and negative emotion pertaining to the relationship, female toddlers were better able to engage in self-directed play when playing on their own. This finding is indicated by correlations in the positive direction between the three PDI factors and quality of involvement in the mother-occupied experimental condition. By contrast, it appears that when mothers represented higher levels of emotion pertaining to the relationship, male toddlers floundered when playing alone, indicated by negative correlations between the three PDI factor scores and ratings of quality of involvement for boys. These findings generally suggest that boys may be more reactive to maternal affect than girls, as well as more affected by the mothers unavailability in the play situation. Recall, that boys were more distracted in the mother-occupied condition and significantly better able to focus their attention in play when their mothers were available. Girls seemed

generally better able to cope with the situational demands, felt safer asserting their autonomy, and were more competent doing so on their own.

The above statements are a general description of how maternal affective experience in the relationship differentially impacts on boys and girls behavior. However, the most powerful predictor of these different tendencies in boys and girls, was the mother's representation of anger/guilt in the relationship. When mothers reported high levels of anger/guilt in the relationship, girls quite simply played better on their own. Boys, on the other hand, had greater difficulty coping with the situation, were less interested in exploring the toys, and seemed perturbed by their mothers unavailability. These findings indicate that girls have better coping strategies for dealing with a negative maternal affect. They can also use these strategies to deal with stressful situations on their own. How can one make sense of this? Recall that mothers of girls provided more integrated and coherent representations of their children, than mothers of boys. Mothers of girls report experiencing more joy/pleasure in the relationship in addition to high levels of the negative affects which are normative for this developmental stage. Perhaps it is the fact that maternal representations are more balanced and integrated with regard to affect in general that enables girls to play better on their own. It is possible that girls have internalized the positive aspects of the relationship and can utilize this as a coping mechanism in the face of negative maternal emotions and in experiences of separation. Similarly, if and when their mothers are feeling angry with them, girls can direct their attention toward other activities which provides an arena for them to explore their own thoughts and feelings. This behavior on the part of girls is adaptive: it enables them to self-soothe and to continue to assert their autonomy in manner that is less likely to provoke a reaction from the mother. Thus, it can also be seen as a way to protect the self and defend against encounters with the mother's anger.

Interestingly, many of the girls tended to engage in female-stereotyped play during the mother-occupied condition. In other words, girls were more likely during this time to play with dolls in a nurturing way, dress up in the pretend clothes, and play with the tea set (Leslie Gibson, personal communication, June 1998). This suggests that when their mothers were unavailable, girls played in a manner which evoked the absent mother. On a behavioral level, girls did not display overt separation reactions; however, the content of their play suggests that they were using their representational skills to conjure the mother up in their minds, and represented ways they are identifying with her in their play. While girls did not actively solicit the mother's attention when playing alone, it appears that they accessed their own developing internal representation of self with mother to cope with potential separation distress.

Boys in this study clearly experienced anxiety when their mothers were unavailable, were less adept at employing self-soothing strategies, and had difficulty engaging in self-directed play. Instead, their behaviors were focused in getting their mother's attention. When they were able to play in the mother-occupied condition, they tended to engage in male-stereotyped play. While this type of play reflected boys' preference with regard to play objects, study data suggests that boys in comparison to girls, are less likely to have internalized a secure sense of their mothers "knowing" them and enjoying being with them, which would impact on their ability to use <u>any</u> toys in a manner which serves the function of conjuring up the mother in their minds. It is important to note that boys and girls did not differ with regard to cognitive competency per se, as both were capable of playing at high levels of symbolic play. They did, however, differ in their ability to deploy these skills in the service of self-regulation and differentiation when playing alone, which seems to be related to feelings of security about the mother's availability. Boys were much more reliant on seeking out interactions with their mothers which directly gave them the experience of being understood and responded to. The strong negative correlation between

maternal representations of anger/guilt and boys play behavior may reflect mothers' awareness of their son's apparent need for their active involvement when dealing with stressful situations. Additionally, maternal anger and emotional unavailability may be more threatening for boys than girls, because of their greater dependency on mothers to help them self-regulate and feel secure enough to explore.

This interpretation of the data lends support to Fonagy's notion (1996) that separation anxiety points to a lack of continuity in the experience of the psychological self. In his theory of early self development, the child actively searches for an image of himself in the mother's mind as an individual with thoughts and feelings. When the mother is able to reflect this back to him, the child internalizes this representation and begins to develop a core sense of self. When the mother's capacity to do this is not "good enough" or is incoherent, the child's sense of self remains vulnerable and he continues to need "the real external mother to be present." (p. 229). By way of repeated interactions with the "real" mother, the child actively continues his search for a clearer self-image.

In this study, the behavior of boys and their mothers is consistent with this theory. Boys in the mother-occupied condition displayed overt separation distress and solicited their mother's attention and involvement. It appears that they still need interactions with the "real" mother to search for an image of themselves in the mother's mind. By calling attention to themselves, boys are also actively helping to create this image which is highly adaptive since mothers of boys have less stable and coherent representations of their child and the relationship.

Mothers in their own way contributed to this process. Study data show that mothers of boys who reported higher levels of their own and their child's separation distress were more attuned to their child's needs, and responded to their sons in a

contingent manner in free play. Their responsiveness enabled boys to feel more secure and focus on play. Additionally, this led to more reciprocal interactions which enabled both mother and son to playfully explore each others thoughts and feelings and experience intimacy by way of mutual recognition. What neither one of them has internalized yet -- namely a secure sense of knowing the other well -- they attempted to find and create in the interaction.

This pattern of results was more true for boys than girls as no significant relationships was found between maternal representations of separation distress, maternal contingent responsiveness and girls' play behavior. These findings for mother-son dyads demonstrate how parent and child mutually influence each other and are involved in a continuous and active process of give and take - with each attempting to accommodate the other in mutual adaptations. Just as the girls' behavior playing alone was adaptive, so too was the boys' in making their needs known and soliciting maternal involvement. Mothers accurately sensed this and responded to the different needs of boys and girls.

The findings obtained in this study are very similar to those reported in Weinberg and Tronick's (1992,1996) research on early gender differences in social emotional expressivity and self-regulatory capacity in a still-face paradigm at six months. Their findings showed that at six months, boys and girls had well organized but dissimilar interactive styles. Boys were more socially oriented than girls, and displayed a greater range of positive and negative affect towards their mothers. Additionally, boys were more emotionally reactive and actively tried to change the mother's behavior. Girls by contrast spent much more time exploring objects and displaying facial expression of interest. They also did not overtly display reactions of distress and appeared to have a greater variety of coping strategies which enabled them to self-soothe e.g., diverting their attention away from the mother towards objects. Weinberg and Tronick concluded that the child's

interactive style reflected their self-regulatory capacity and needs for external regulation. Boys had greater difficulty maintaining affect regulation and were more reliant on external regulation provided by the mother. Their behavior placed greater demands on the mother and served the function of communicating their need for maternal regulatory support. By contrast, girls had fewer regulatory demands and spent more time focusing on other things than the mother.

When examining mothers' behavior, Weinberg and Tronick found that mothers used more strategies with boys that were designed to help them regulate their affective states. Notably, the structure of the interactions between mother-son dyads was different than that of mother-daughter dyads. There was greater coordination and synchronicity in mother-son dyads presumably because this type of responsiveness functioned to help boys maintain self-regulation. Also, the rate of repairing mismatched states was slower for mother-son than mother-daughter dyads. This was because boys were more dysregulated and upset than the girls, making it harder to repair interactive errors. Mother-sons dyads also tracked each others' behaviors more carefully than mother-daughter dyads. From this, the researchers concluded that boys were more invested than girls in ensuring that the mother interpret their messages correctly and respond appropriately as they are more dependent on maternal regulatory support. Similarly, mothers of boys worked harder than mothers of girls in keeping their infants engaged and organized. This was evidence of a different form of attunement between mothers and sons, whereby mothers provided structure for the interaction.

Interestingly, Weinberg and Tronick found that there were very few gender related differences in mother's behaviors and facial expressions when these were analyzed separately from what their children were doing. Additionally, mothers of girls and boys actively matched their child's behavior e.g., mothers tended to look more at boys, and with

girls shared the same focus of attention by looking at the same objects girls were playing with. This is consistent with findings in the present study which showed equal levels of contingent responsiveness for mothers of boys and girls. What differed were the circumstances in which mothers displayed this behavior and how it related both to her perceptions of her child's need, as well as to the child's capacity to explicitly elicit this behavior. Weinberg & Tronick concluded that their findings point to biologically based gender differences in self-regulatory capacities that influence developing patterns of interactive behavior, and which may be an early indication of latter patterns that are often characteristic of boys and girls e.g., girls turning inward and boys acting out.

Case Studies

The following vignettes are descriptions of two toddlers and their mothers who participated in the present study. They are based on observations of videotapes of each dyad in both experimental conditions of the 28 month visit, and illustrate the different patterns of play behaviors for girls and boys revealed by the empirical data.

Typical pattern for boys:

> Jimmy, a 30 month old toddler, had difficulty playing on his own despite his mother's verbal encouragement. He occasionally displayed interest in the toys, but none of his play bouts lasted more than 30 seconds. He was highly distracted by aspects of the environment, such as the videocamera and pictures on the wall and repeatedly tried to get his mother's attention. He walked over to where she was sitting and insisted that she stop filling out the questionnaires. When these attempts to get her undivided attention failed, he went over to the door and stated his wish to leave the playroom and go home. He was clearly unhappy and his facial expression conveyed a mix of worry, annoyance and fear as he was startled by a noise coming from the adjacent room. Even though his play bouts were infrequent and brief, Jimmy's play showed that he had the cognitive capacity to engage in symbolic play. For example, he loaded beads into the

dump truck, used the broom to sweep the floor, and poured something from the pitcher into the tea cup. His overriding preoccupation with his mother's unavailability and feelings of insecurity about the environment, hindered his ability to sustain this higher level play. For five out of the ten minutes, he was completely unable to play and either stood by the door, or next to his mother's side.

When Jimmy's mother joined him in play, the transition was not smooth. His mother started playing with the pops beads, demonstrated how they snap together, and offered Jimmy the beads "so you can make things with them " Jimmy however, first needed to be comforted by his mom. He stood behind her and playfully wrapped his arms around her neck to both give and get a hug. After he regained this emotional connection with his mom, Jimmy gradually turned his attention to the toys. The play was initially directed by his mother as she invited him to join her in a "make-believe tea party". Jimmy's affect changed; he smiled more frequently and began examining the tools in the tool box and tested out how they work. He then spontaneously put the pop beads together and placed the circle he made on his mother's head. Jimmy told his mom "it's a crown for your head", then proceeded to give her the dress up shoes to try on. His mother took her cue and playfully attempted to put the shoes on her feet . In a tone of exaggerated disappointment she declared that "they are too small for mommy's big feet!" Jimmy laughed, then went over to the tool box and began fixing different toys with the tools. He handed his mother the pliers and invited her to help him fix the dump truck. Jimmy and his mother became engrossed in this joint play activity which lasted 2 minutes.

Typical pattern for girls:

Alice entered the room with her mother. She was immediately interested in the toys and went over to examine the baby bottle while her mom explained that she would be busy for a while After fixing the top on the baby bottle, Alice gently picked up the doll, cradled her in her arms, and fed her with the bottle. She walked over to her mom to show her "my baby", and gave the doll to her mother to hold. Her mother took the doll

and propped it up on her lap while Alice picked up the broom and began sweeping the floor. When she was finished, she returned to get the doll and fed her with the pretend spoonfuls of food. Alice turned to her mother and whispered "I'm cooking food for the baby." and pretended to taste some of the food herself. Her mother smiled and resumed filling out the questionnaires. Alice lay the doll on the floor and went over to examine the dress up shoes and toy jewelry. She removed her sneakers, tried on the shoes, and put on the bead necklaces. Alice sauntered over to the one-way vision mirror and admired her reflection. She the walked around the room in the dress-up shoes and announced that she was "going out." Her mother responded by saying that they would still stay in the room for a while to play. Alice accepted this and went over to get the baby doll. She held the doll up to the mirror, then sat her down in a small chair and began feeding herself and the doll with more pretend food.

When Alice's mother joined her on the floor, she reached for the tape measure and began explaining what it's for. Alice grabbed the tape measure out of her mother's hand stating "I want to do it." Alice backed away from her mother and quietly looked at the tape measure but didn't attempt to use it. Instead she placed it on the floor and put on the pretend sunglasses. "Those are pretty neat glasses you're wearing", Alice's mother commented as she reached for the tape measure and began measuring various toys while describing to Alice what she was doing. Alice quietly watched her mother for a while, then turned away to put on the dress up shoes. She wore the shoes and began gathering cups and plates to bring over to the doll who was sitting in the chair in the adjacent corner. Alice's mom stopped measuring things and settled into a comfortable position to watch her daughter play. She expressed her interest in Alice's play by asking questions about the doll and the food Alice had prepared. Alice told her mother that she made "Chinese food" for her baby to eat and that her baby loved the "baby corns and rice.". Her mother offered Alice the tea pot. Alice at first ignored it, then reached over to get it and poured "coconut tea" for herself and the doll. Alice kept her back to her mother while narrating her play with the doll. After the meal she brought a stack of dishes over to her mother and instructed her to wash them. Her mother asked "Is there a dishwasher or do I need to wash them by hand?" Alice thought about it for

> moment and replied "by hand". She then proceeded to give her doll strawberry ice cream for dessert. Alice then found the toy brush and brushed the doll's hair stating that "she had a shampoo and I'm fixing her pony tail" Her mother remarked that Alice also had her hair in a pony tail and that her hair color was similar to the doll's. Alice indignantly replied, "She doesn't like pony tails and she has white hair, mine is blond." Her mother smiled to herself about her daughter's contrariness and continued to express interest in her daughter's play by observing and commenting on her activities.

Jimmy's behavior is consistent with the pattern of results obtained for boys in this study. He was stressed and anxious in the mother-occupied condition and had a harder time than Alice coping with his mother's unavailability. Jimmy displayed curiosity about the toys as well as his cognitive capacity to play with them symbolically, but was unable to manage his anxiety long enough to engage in extended bouts of play. Instead he was highly distractible, and clearly preoccupied with getting his mother's undivided attention. Jimmy could not confidently use the toys in a manner which helped him to self-soothe or conjure his mother up in his mind. To cope with the situation, he frequently stood by his mother's side, and escalated his attempts to solicit her involvement. In comparison to Alice, Jimmy was much more emotionally reactive and displayed negative affect. Given his level of discomfort, Jimmy's repeated attempts to get his mother's attention were an adaptive call for help as he clearly needed her to help him self-regulate.

When his mother became available, the transition was initially not smooth. She attempted to get him interested in playing with the toys, however, Jimmy first needed to be directly comforted by her. His mother was attuned to her son's needs and by being responsive in a playful manner was able to direct Jimmy's attention toward having a pretend tea party with her. This interactive play helped Jimmy begin to feel calm enough to explore the toys independently. His affect also changed as he began to experience the

pleasure of exploring his own mind and sharing his spontaneous ideas with his mother. For example, he displayed pride in making a crown for his mother to wear and delighted that she understood his play and could reflect this back to him by way of her responsiveness. His mother's exaggerated affective displays also functioned to help Jimmy recuperate from his previous state of upset by evoking laughter. Toward the end of the play session, Jimmy seriously focused his attention on play and by using the tools to fix various objects , he showed his capacity for engaging in role play and deployed higher level representational skills in the service of mastery. Additionally, while confidently asserting his autonomy, he invited his mother to join in his play. This interactive and reciprocal play served the dual purpose of promoting his sense of agency while simultaneously maintaining an intimate and playful connection with his mother. While Jimmy was at first dependent on his mother to facilitate his engagement in play, he was now able to relate to her in a qualitatively different way which involved the mutual exchange of ideas around a joint activity.

Alice on the other hand was spontaneously interested in exploring the toys, and was able to calmly keep herself busy with self-directed activity while her mother was occupied. Her play was very female stereotyped; she played with the doll in a nurturing way, put on the dress up shoes, and cooked pretend food for herself and the doll. The content of her play suggested that she was identifying with her mother by taking on the mommy role, and also using this play to self soothe e.g., feeding herself, and mentally evoking her mother during the time that she was unavailable. Her facial expression was one of interest and concentration. She also showed that she was pleased with herself and generally secure in handling this situation when walking over to the mirror and smiling at her reflection. Alice did not need her mother's encouragement or active involvement to remain focused on play. She did however periodically reference her mother and displayed confidence in her mother's responsiveness when bringing the doll over to her to hold while she swept the

floor. From her behavior, one can infer that Alice has internalized positive aspects and expectations about her relationship with her mother, and was able to utilize this as a secure base from which to explore and express her autonomy.

When Alice's mother joined her on the floor, she displayed her interest in playing with her daughter. Alice, however, was somewhat distracted by her mother's presence and reluctant to let her enter into her world of play. While she was interested in what her mother was doing, she defensively guarded her playspace and was adamant about asserting her autonomy. Her mother responded to her daughter's cues, refrained from intruding in Alice's play, and comfortably settled into her role as an observing audience for Alice's activities. When her mother began to do this, Alice once again became focused on play and resumed her role as mommy for the doll. While she kept her back to her mother, she verbalized what she was doing, thereby sharing the contents of her mind with her mother and communicating her desire to maintain a sense of connection. Her mother's ongoing interest and verbal recognition functioned to validate Alice's behavior, and although the play was less interactive than that between Jimmy and his mother, Alice achieved a similar intimacy with her mother by sharing her highly original symbolic communications with her and having them reflected back to her. While the boundaries between self and other were clearly delineated between Alice and her mom, they were in synch with each other with regard to sharing mental states. Alice continued to convey her expectation of her mother's responsiveness when she handed her the stack of dishes to wash. This was also an example of how play provided Alice the opportunity to safely turn the tables in the relationship by instructing her mother to do something, which in real life might very well have elicited a different response on the part of the mother. The fact that both Alice and her mother understood that they were "playing" together enabled them to test out issues of self-other differentiation and engage in power struggles without hurting each other's feelings and jeopardizing the relationship. For example, on numerous occasions Alice's mother

might easily have felt rejected by her daughter, instead, she recognized that Alice in her play was asserting her separateness, and was even able to delight in this. Her mother's recognition and understanding of her daughter's developmentally appropriate behavior enabled her to respond in a manner that was contingent to her daughter's needs. Alice continued to assert both her autonomy and her wish to share her experiences with mother in a more distal mode. Thus stage salient issues of attachment and autonomy were expressed in this relationship, and were bound together in the interaction by way of mutual recognition.

Importance of Maternal Recognition in the Process of Separation-Individuation.

These vignettes, as well as the study data, highlight the importance of maternal recognition in fostering children's representational competence and in enabling them to achieve a balance between their need to assert their autonomy, and their wish to maintain a connection with the mother. These findings are consistent with intersubjective theories of the process of separation-individuation which emphasize the important role of recognition as a vehicle toward differentiation. In this view, as articulated by Jessica Benjamin (1988), each individual is dependent on a significant other to recognize his or her uniqueness in order to achieve and fully experience an autonomous sense of self. Benjamin articulates the notion that mutuality is a necessary condition of autonomy; this implies that there is an ongoing tension that is felt within and between individuals, to maintain a balance between the need to assert the self and the need to respect and stay connected with the other. By conceptualizing differentiation in this way, Benjamin presents attachment and autonomy as complementary features in the development of a sense of self rather than two separate an opposing developmental tasks.

Recognition, as described by Benjamin, is a response from the other which makes meaningful the feelings, intentions and actions of the self. It allows the self to realize its

agency and authorship in a tangible way. Benjamin's notions are similar to Fonagy and Target's (1996) ideas that the psychological self develops through the perception of oneself in another's mind, as a thinking and feeling individual. Both theories emphasize that such recognition can only come from an other who is in turn recognized as a person in his or her own right. In other words, the mother's response or reflection the child sees, cannot be an exact copy of the child's internal state instead, it must embody something of "not-me", so that child can truly experience himself as being understood by an independent other who responds in her different way. According to Benjamin, awareness of the mother's separateness is a developmental achievement for the child, and a necessary precondition for experiences of mutual recognition. Once this differentiation has occurred, both mother and child can derive conscious pleasure from the sense that inner experiences can be shared and that two independent minds can cooperate in one intention. Both partners must be active in this process in order for a genuine sense of intimacy to occur.

Study data show that during the toddler period, maternal recognition serves an equally important but slightly different function for boys and girls in the process of self-other differentiation. As mothers and daughters are more likely to identify with each other and experience the ways they are alike, female toddlers appear to be more invested in asserting their separateness while in their mother's presence, and demonstrate their need for mothers to validate their autonomy. It seems that when mothers of girls are able to respect this boundary of separateness and reflect this back to their daughters, girls tend to feel safer allowing mothers to join in play and have reciprocal interaction with them.

By contrast, boys appear to be more acutely aware of their separateness from the mother and need to actively re-establish connection with her, and directly experience themselves as existing in her mind. Once their mothers have responded in a way that communicates their interest in knowing and understanding them, boys are able to use this

feeling of connection with the mother as a base from which to safely explore. Thus it appears that when interacting with their mothers, girls are more interested in asserting their separateness, whereas boys are more invested in re-establishing closeness with their mothers because they are too anxious and overly aware of separateness. Both boys and girls need their mother's recognition and validating response but, as mentioned earlier the messages conveyed by mothers of boys and girls in the play interactions are different . Girls seem to need their mother to acknowledge "we are close but it's also OK for us to be different." Boys by contrast, need their mothers to acknowledge that " I know we are different, but I really want to understand you and feel connected with you." The common ending of each of these sentences for both boys and girls is "so that we can enjoy sharing experiences together." The gender differences in patterns of behavior and maternal responsiveness demonstrated in this study can both culminate in reciprocal interactions and exchanges characterized by mutual recognition. This kind of relatedness is something that both boys and girls and their mothers enjoy when it happens. In other words, there appear to be no gender differences in coveting this intimate way of sharing experiences with the mother which addresses both attachment and autonomy needs which are characteristic of this developmental period. However, the way mother-daughter dyads, and mother-son dyads go about achieving it is different.

Significance and Limitations

This study adds to the growing body of research which has shown that maternal representations of the child do indeed function to guide parenting behavior and influence patterns of mother-child interaction. Additionally, this is the first study to demonstrate links between maternal representations of the child and child adaptive functioning in the toddler period. First, findings revealed a direct link between mothers reporting high levels of their own and their child's separation distress and maternal contingent responsiveness to the child in free play. Maternal contingent responsiveness was in turn linked with higher

levels of child representational competency in the mother engaged experimental condition. This pattern of results suggests the possibility that the effects of maternal representations of separation distress on child behavior may be mediated by maternal responsiveness, and merits further exploration in studies with a larger sample. Secondly, maternal representations of anger/guilt were directly linked with boys' and girls' play behavior in the mother occupied condition. When mothers reported higher levels of anger/guilt in the relationship, female toddlers were better able to play on their own. By contrast, male toddlers had greater difficulty engaging in self-directed play when their mother's reported high levels of anger/guilt. Gender differences were also revealed in the ways mothers represented their relationship with boys and girls, as well as in patterns of boys and girls play behavior, both alone and when mothers were available as potential play partners.

Findings showed that at 28 months there were notable difference in boys' and girls' capacity to play alone while their mothers were occupied. Girls appeared to be more secure, better able to cope with their mothers unavailability, and were easily able to direct their attention towards exploring objects. From this inferences were made that girls have internalized positive aspects of the mother-child relationship and were able to utilize this in the service of exploring and developing their representational world. Boys at 28 months were more anxious and needed direct interaction with the mother in order to achieve the same level of experience as girls. Boys were more dependent on their mothers to provide external regulation and needed to reestablish connection with her before turning their attention to the toys and comfortably deploying higher level representational skills.

Although the examination of gender differences in this study was not theory driven, findings show the importance of considering gender in future research. Given that the subjects in this study represented a relatively homogeneous group (e.g., education level, SES, birth order, etc.) this lends greater confidence in concluding that the findings reported

in this study really do attest to something different is going on between mother-girl and mother-boy dyads at this developmental stage. Additionally, the gender differences in social-emotional expressivity and interactive styles reported in this study are similar to those documented in infant studies (Weinberg & Tronick, 1992, 1996).

An interesting question to explore in future research is whether the gender differences uncovered in this study are a developmental/maturational phenomenon, or an early indication of later patterns which are often characteristic of boys and girls. It appears from the data that boys still need more active involvement from the mother. If they continue to seek this out and if their mothers continue to respond to them appropriately, will they catch up by 36 months? One way to explore this question would be to assess the same boys' play behavior under the same experimental conditions at 36 months. The central focus would be on whether their pattern of play and capacity to deploy their representational skills is similar to that seen in girls at 28 months. This would help to clarify whether the gender differences documented in this study are truly a reflection of how boys and girls relate differently to the social and object worlds. It would also clarify whether there are gender differences in the capacity to self-regulate and need for others to assist them in making sense of their own and others emotions.

Unlike previous research (Aber, Belsky, Slade & Crnic, in press; Slade, Belsky, Aber & Phelps, in press.), no relationship was found between Joy-Pleasure/Coherence and any of the behavioral outcome measures. It is possible that this lack of findings is due to the fact that none of the measures used in this study explicitly looked at maternal or child affect, as was done in other research. To explore this further, future studies can include an assessment of maternal and child affect, and devise a coding system to address the question of whether mother and child exhibit pleasure when interacting in play. The

inclusion of measures which directly look at affect would more aptly lend to replication of results which have shown links between Joy/Pleasure and positive and negative mothering.

One strength of this study was its cross-sectional design, enabling the examiner to explore questions about the relationship between current maternal representations of the child and contemporaneously assessed maternal, dyadic and child behavioral measures. This provided further validation for the Parent Development Interview (1995) and dimensional scoring system (1993). Data showed that these instruments appeared to be sensitive in tapping mother's perceptions and experience of important developmental issues currently impacting on the relationship. Since the PDI was also administered to mothers in the study sample at 10 months, future research can examine continuity and change in maternal representations of the child across different developmental stages.

Study data revealed qualitative differences in children's capacity to cope with the situation demands of the experimental conditions and in feelings of security about maternal availability. Additionally, differences were apparent in children's capacity to deploy representational skills which are an important developmental achievement during the toddler period. Numerous longitudinal studies within the field of attachment research have demonstrated that infant attachment status is a powerful predictor of later child adaptive functioning with regard to stage salient developmental tasks. Since the attachment status of all children who participated in this study was assessed at 14 months, future research should examine whether individual differences in children's play behavior are associated with secure and insecure attachment classifications.

Additionally, an important theoretical question raised by various investigators is the relationship between parental representations of their own attachment experiences in childhood, and the parents' developing representation of the child. Since data on the quality

of adult internal working models of attachment - - as measured by the Adult Attachment Interview - - and parental representations of the child - - as measured by the PDI - - is available for all subjects in this study, future research can explore the distinctions between these two representational systems and shed light on the ways they are related and influence each other. Inquiries can also be made on how these two maternal representational measures are differentially linked to child outcome.

Finally, study data provide initial construct validity for the new measures developed for the purposes of this study to assess qualitative dimensions of maternal and child play behaviors. From the pattern of results, it appears that the Quality of Involvement and Quality of Dyadic Interaction rating scales do indeed measure what they were intended to. Additionally, they appear to provide valuable information for understanding affective/motivational aspects of play behavior to compliment conventionally used rating scales which solely focus of cognitive/maturational aspects of symbolic development. It is hoped that these measures will be used in future studies examining children's play to continue to validate their usefulness and further clarify the unique contribution they make in understanding qualitative dimensions of play behavior.

Methodological Issues and Limitations

From a statistical point of view, a serious limitation of the current study was the use of a factor analytic approach to analyze the PDI data given the low ratio between the number of subjects in this sample (40) and the number of PDI variables (17) used to conduct the factor analysis. Because of this, the findings reported in this study may reflect over-inflated connections and should be considered with caution and await replication. It is recommended that future studies utilizing the PDI data gathered on this sample use the alpha's from the originally reported factor structure (Aber, Belsky, Slade & Crnic, in press; Slade, Belsky, Aber & Phelps, in press). This proposed change in data analysis plan

would be methodologically more sound given that the original factor structure has been documented as stable across independent studies with significantly larger samples and would therefore lend greater confidence to the interpretation of results.

Another limitation with regard to data analysis was the exclusive use of correlational analyses to examine links between the predictor and outcome variables. This assumed that the different variables would related to one another in a linear fashion. In reality this may not be the case particularly since many of the variables were rated along continuums where high, middle, and low scores reflected qualitatively different behaviors and/or internal processes. Thus, the use of correlational statistics may have failed to capture important information about how the variables relate to one another, as well as potential interaction effects. For example, it is possible that the different affective dimensions of maternal representations interact, and relate to behavioral outcome in a combined manner. To address these limitations, future studies should be designed to examine curvilinear as well as mutlivariate relations between the predictor and outcome variables.

As has been mentioned earlier, the power level for conducting the statistical analyses presented in this study was low due to the small sample size. Numerous small-medium effect sizes were revealed in the correlational analyses which did not reach statistical significance. It is possible that with a larger sample size, the magnitude of these findings would increase and further illuminate the relationship among the different variables.

It is important to note that the generalizability of all the findings reported in this study are limited due to the homogeneity of the subject pool (a predominantly white, middle-class, highly educated sample) and small sample size. Hopefully, future studies

will address these limitations and attempt to replicate these findings in order to continue to shed light on the ways that maternal representations of the child during the toddler period influence maternal and child behavior

Appendices

PARENT DEVELOPMENT INTERVIEW

J. Lawrence Aber
Arietta Slade
Brenda Berger
Ivan Bresgi
Merryle Kaplan

A. VIEW OF THE CHILD

1. Could you describe (your child) to me?

2. In an average day, what would you describe as his/her most favorite moments?

3. And least favorite moments?

4. What do you like most about your child?

5. What do you like least about your child?

6. Parents often notice similarities and differences between themselves and their children. How do you think (your child) is both like and unlike you?

7. How is he/she like and unlike your spouse?

B. VIEW OF THE RELATIONSHIP

1. I'd like to ask you to choose 5 adjectives that you feel reflect the relationship between you and (your child). (Pause while they list adjectives.) Could you tell me why you chose those adjectives?

2. Describe a time in the last week when you and (your child) really "clicked." Probe, if necessary: Can you tell me more about the incident? How did you feel? How do you think (your child) felt?

3. Now, describe a time in the last week when you and (your child) really weren't "clicking." Probe, if necessary: Can you tell me more about the incident? How did you feel? How do you think (your child) felt?

4. How do you think (your child's) relationship with you is affecting his/her development or personality?

5. Are there experiences in (your child's) life that you feel were a setback for him/her?

C. AFFECTIVE EXPERIENCE OF PARENTING

1. Describe yourself as a parent.

2. What gives you the most joy in being a parent?

3. What gives you the most pain or difficulty in being a parent?

4. When you worry about (your child), what do you find yourself worrying most about?

5. How has having (your child) changed you?

6. Do you ever feel needy as a parent? Probe, if necessary: What kinds of situations make you feel this way? How do you handle your needy feelings?

6 a. What kind of effect do these feelings have on (your child)?

7. Do you ever feel angry as a parent? Probe, if necessary: What kinds of situations make you feel this way? How do you handle your angry feelings?

7 a. What kind of effect do these feelings have on (your child)?

8. Do you ever feel guilty as parent? Probe, if necessary: What kinds of situations make you feel this way? How do you handle your guilty feelings?

8 a. What kind of effect do these feelings have on (your child)?

9. When you child is upset, what does he/she do? How does that make you feel?

10. What is it like when your child refuses to do what you ask him/her to do, or deliberately provokes you?

11. Describe a time in the last week when (you child) was being especially aggressive -- either toward you, a toy, or himself. Probe: How did this incident make you feel? How did you handle it?

12. Does (your child) ever feel rejected?

Now, I'm going to ask you a little about your own parents.

13. How do you want to be like and unlike your mother as a parent?

14. How about your father?

15. How are you like and unlike your mother as parent?

16. How about your father?

D. PARENTAL REACTIONS TO TYPICAL INFANT/TODDLER SITUATIONS

1. How does (your child) feel when you are busy and can't pay attention to him/her? Probe, if not spontaneously volunteered: How do you feel when this happens?

2. How does (your child) feel when you are able to devote considerable time and attention to him/her? Probe, if not spontaneously volunteered: How do you feel when this happens?

3. How does (your child) do in exploring the world and solving problems on his/her own? Probe, if not spontaneously volunteered: How do you feel when this happens?

4. What happens when he/she can't do things on his/her own? Probe, if not spontaneously volunteered: How do you feel about his/her problem solving?

E. SEPARATION

1. Now, I'm going to ask you about routine separations. By routine separations I mean when (your child) is left with someone familiar for the usual or expected length of time.

a. What are routine separations like for your child and for you?

b. How do you think your child feels when you leave and when you return? (Do not ask this question if Subject has already answered it previously.)

2. What is the longest time you have ever left (your child)?

a. How did you and your child feel about this separation? Probe, if not answered: How do you think he/she felt when you left and when you returned?

3. What has been the most stressful separation for your child? How did you and your child feel about this separation? Probe, if not answered: What kind of effect do you think this separation had on your child?

4. Has there ever been a time in your child's life when you felt as if you were losing him/her just a little bit? What did that feel like for you?

5. Is there anyone very important to you who (your child) doesn't know but who you wish he/she was close to?

F. SPOUSAL RELATIONSHIP

In this section, use spouse/partner/lover's name when reference is to (your spouse).

Now let's talk a little bit about you and your husband.

1. Does your relationship with (your spouse) affect your relationship with (your child)? How?

2. In what ways do you feel (your spouse) is supportive or helpful to you in parenting, and in what ways do you wish he would be a bit more supportive or helpful?

G. CHANGE

1. How has your relationship with your husband been affected by having a toddler?

Prompts:

a. If not offered spontaneously: Are there ways it has enhanced your marriage, or are there things that you miss?

b. How have the two of you felt about these changes?

2. If mother has not mentioned changes in her and her husband's sexual relationship: What kind of impact has having a child had on your sexual relationship?

Prompt:

a. How have you felt about your sexuality, and about the changes in your sexual relationship.

3. How has your husband felt about the changes in your sexual relationship?

4. How is your husband involved with the baby these days? How have you felt about his involvement?

5. To what degree do you feel your husband supports you emotionally and practically in the day-to-day job of mothering?

H. CONFLICT

Now let's talk a bit about how you and your husband negotiate conflicts these days.

1. What the two of you disagree about something or are angry with each other, what happens? Do you fight? talk? Let it slide?

Comment: Use subject's language regarding conflict.

2. Do you think that the particular way the two of you disagree or fight works for you? Does it make things better or worse? (If subject has -- implicitly or explicitly -- answered the preceding question , ask this question anyway, but say something to acknowledge that the question is redundant.)

3. What kinds of things do you two come into conflict about most often?

4. How often do you fight?

5. How "serious" does it feel?

Finally, let's talk a little about your overall experience of parenting your child.

1. Your child is already over two years old; he/she is no longer a baby and, by now, you're an experienced parent. If you had the experience to do all over again, would you do it about the same or somewhat differently?

Thank the mother very much for her continued participation in the research project over the past two and a half years!!!..

Level of Symbolic Play Coding Manual

Adapted by Pamela Morris - 1991 -
from the original
Belsky & Most (1981) 17 rating scale for use with preschool age children.

Level of Play:
Code the highest level of play in each 15-second interval:

1. **No Play:** If a higher category of play cannot be coded, code no play. The child is not engaged in visually guided exploration lasting at least 2 seconds in duration.

2. **Simple Manipulation:** Visually guided manipulation at least 2 seconds in duration that can't be coded in any other category.

EXAMPLES: Touch and look at object, showing object to mother, turning over object. This can also include verbal discussion/description of objects without manipulating them, however the child needs to be visually attending to the object.

3. **Functional:** Visually guided manipulation that is particularly appropriate for a certain object and involves the intentional extraction of some unique piece of information.

EXAMPLES: Opening and closing doctor bag, rolling car on the floor, opening and closing doll's eyes, squeezing the blood pressure pump (without evidence of pretend).

4. **Juxtaposed:** Bringing together and integrating two or more materials in an inappropriate manner, that is, in a manner not intended by the manufacturer.

EXAMPLES: Place horse on car, lay bristle block on doll, put toys that do not belong in the doctor's kit in the bag.

5. **Grouping:** Bringing together and integrating two or more like materials.

EXAMPLES: Putting together two cars, putting together two horses.

6. **Functional Relational:** Bringing together and integrating two objects in an appropriate manner, that is, in a manner intended by the manufacturer.

EXAMPLES: Putting bristle blocks together, putting clothes on the doll, putting appropriate toys in the doctor kit.

7. **Enactive Naming:** Approximating pretense activity but without confirming evidence of actual pretense behavior. Any activities which are not supported by physical and/or verbal cues by the child which illustrate the child's intention to pretend , will be coded as enactive naming.

EXAMPLES: Touch cup to lips without making drinking sounds, tilting head, or tipping cup. Put blood pressure gauge on mother's arm quickly, without concentrating or commenting on it. Of the mother initiates the pretend (as with the doctor kit) and the child is concentrating on the activities, but not physically helping or verbally commenting on it, it will be scored as enactive naming. (If the child is not concentrating at all, the activity the mother is doing is not scored). Put bottle in doll's mouth without commenting or caressing doll.

Levels of Pretend Play

8. **Pretend Self:** Pretense behavior director to the self in which pretense is apparent and it is only one act. Pretense is apparent when the child adds verbal cues to support the pretense. Without the verbal cues, the child must demonstrate some intent to pretend (concentrating on the activities with the doctor kit).

EXAMPLES: Put Band-Aid on pretend cut on self, feed self with spoon, drink from cup. With the doctor kit, if the child does not say anything, but is concentrating on the activities, and there is a clear intention to pretend, it will be scored as pretend play. If the mother initiates the pretend with the doctor kit, the child must aid in the activities either physically or verbally.

9. **Pretend External:** Pretend play is directed toward another and it is only one act. Pretense is apparent when the child adds verbal cues to support the pretense. Without the verbal cues, the child must demonstrate some intent to pretend.

EXAMPLES: Feeding doll, kiss or hug doll, drive car with motor noises, concentrating on the activities with the doctor kit, fondly caressing the doll. With the doctor kit, if the child does not say anything, but is concentrating on the activities, and there is a clear intention to pretend, it will be scored as pretend play.

10. **Substitution Self:** Giving a "meaningless" object meaning in the context of pretend self.

EXAMPLES: Eating bristle block, putting bristle block on a pretend cut.

11. **Substitution External:** Giving a "meaningless" object meaning in the context of a pretend external.

EXAMPLES: Feeding doll with a bristle block, pushing a block on the floor with motor noises.

12. **Sequence No Story:** Repeating a single pretend act with a minor variation. There is no story line involved, nor is there any object substitution.

EXAMPLES: Feeding self with spoon and feeding doll with a spoon, pouring tea for self and pouring tea for doll. The two acts must be pretend (see criteria for pretend self and pretend external).

13. **Pretend acts linked by a physical search bridge:** Similar to a sequence story, however, the length of time linking the tow acts is longer than 10 seconds, but not more than 20 seconds, during which time the child is searching through related toys for an object for the next pretend act. The two pretend acts are different, and the search must be through related toys.

EXAMPLES: Using stethoscope to check mother's heartbeat, searching through doctor kit for another doctor tool, giving mother a shot.

14. Pretend acts linked by a narrative bridge: Similar to a sequence story, however, the length of time linking the two acts is linger than 10 seconds, but not more than 20 seconds, during which time the child is speaking about the pretend acts the child is performing. The two pretend acts are different, and the narrative must reflect the theme of the pretend acts.

EXAMPLES: Using stethoscope to check mother's heartbeat, discussing that now the mother is going to get a shot, giving mother a shot.

15. Sequence Story: Linking two different pretend acts. There is no object substitution involved.

EXAMPLES: Stir in cup and then drink, pour in cup and then drink.

16. Pretend acts (with a substitution) linked by a physical search bridge: Similar to a sequence substitution, however, the length of time linking the two acts is longer than 10 seconds, but not more than 20 seconds, during which time the child is searching through related toys for an object for the next pretend act. The two pretend acts are different, there is a single object substitution, and the search must be through related toys.

EXAMPLES: Using stethoscope to check mother's heartbeat, searching through doctor kit for another doctor tool, giving mother a shot with a block.

17. Pretend acts (with a substitution) linked by a narrative bridge: Similar to a sequence substitution, however, the length of time linking the two acts is longer than 10 seconds, but not longer than 20 seconds, during which time the child is speaking about the pretend acts the child is performing. The two pretend acts are different, there is a single object substitution, and the narrative must reflect the theme of the pretend acts.

EXAMPLES: Using stethoscope to check mother's heartbeat, discussing that now the mother was going to get a shot, giving mother a shot with a block.

18. Sequence Substitution: Incorporating a substitution into a sequence story.

EXAMPLES: Pour into a block and then drink, stir with a block and then drink out of a cup.

19 Pretend acts (with two substitutions) linked by a physical search bridge: Similar to a double substitution, however, the length of time linking the two acts is longer than 10 seconds, but not longer than 20 seconds, during which time the child is searching through related toys for an object for the next pretend act. The two pretend acts are different, there are two object substitutions, and the search must be through related toys.

EXAMPLES: Using a block as a stethoscope" to check mother's heartbeat, searching through doctor kit for another doctor tool, giving mother a shot with a block.

20. Pretend acts (with two substitutions) linked by a narrative bridge: Similar to a double substitution, however, the length of time linking the two acts is longer than 10 seconds, but not longer than 20 seconds, during which time the child is speaking about the pretend acts the child is performing. The two pretend acts are different, there are two object substitutions , and the narrative must reflect the theme of the pretend acts.

EXAMPLES: Using the block as a stethoscope to check mother's heartbeat, discussing that now the mother was going to get a shot, giving mother a shot with a block.

21. Double Substitution: Incorporating two distinct substitutions into a sequence story.

EXAMPLES: Stirring in one block and feeding a doll with another block.

Role Play Codes:

Code all levels that occur in each 15-second interval:

1. **No Role Enactment/Role Play:** If the child does not act as another, or assume another person's role, code no role enactment/role play.

2. **Solitary Role Enactment:** The child acts as another (ex. mother, doctor) but without stating directly that they are assuming another role. The child is alone for this activity, the mother is not involved, and if a toy is used, it is not animated by the child.

EXAMPLES: The child may caress the doll, and put her to sleep, but not state that the doll is his/her baby, or that he/she is the parent, or the child may act like a doctor on the doll, without stating that the doll is his/her patient, or that he/she is the doctor. Simply feeding the doll is not enough to code role enactment, the child must do at least two acts in sequence to the doll (ex. feeding and burping) to constitute role enactment.

3. **Solitary Role Play:** This level is distinguished from solitary role enactment in that the child verbally states that he/she is assuming another role. the child may do so by stating what role they are assuming "I am the mother/father; I am the doctor", or by stating what role the toy is in relation to them "This is my baby; This is my patient". Again, the mother is not involved in this play, and the toy is not animated by the child (see next levels). For role play, the child does not need to do two activities with the doll. If the child states the role he/she is playing, and performs a single act, it is enough to constitute role play.

4. **Role Enactment with toy as active partner:** At this level of play, the child animates the doll or other toy, while acting the part of another. The child does not sate directly the roles the toy he/she are assuming.

EXAMPLES: The child may caress and feed the baby doll, as well as speak and cry for the baby, but without ever saying that the toy is his/her baby, or that he/she is the parent; or

the child may act like a doctor on the doll, and speak for the doll, without stating that the doll is the patient or that he/she is the doctor.

5. **Role Play with toy as an active partner:** This level is distinguished from role enactment with toy as active partner in that the child verbally states that he/she is assuming another role. The child may do so by stating what role they are assuming "I am the mother/father; I am the doctor", or by stating what role the toy is in relation to them "This is my baby; This is my patient". The child must animate the toy (i.e., speak or cry for it), but the mother is not involved.

6. **Social Role Enactment:** At this level of play, the child acts the part of another and is involved with the mother. the child does nor state directly the roles the mother or he/she are assuming. The child may talk to the mother in mother talk, and treat her as if she is a bay, or act like a doctor, or patient with the mother, but without directly saying any of the roles involved.

7. **Social Role Play:** This level is distinguished from social role enactment in that the child verbally states that he/she is assuming another role. The child may do so by stating what role they are assuming "I am the mother/father; I am the doctor", or by stating what role the mother is in relation to them "You are my baby; You are my patient".

8. **Doll play with Interacting Roles:** The child animates the dolls, without he/she being involved in the action. the toys must interact in some way. They must act independent of the child, with activities of speech and action.

EXAMPLES: The child animates the two dolls, having one act as the mother, dressing and feeding the other, or one being the doctor and the other being the patient.

Supplemental Coding Instructions and Guidelines

In addition to level of play also code:

1. **Time in pretend play/role play:** If the child engages in play at level 5 or higher, or the child engages in role play, record the length of the play episode. record the time the play started, the time the play ended, and the total time elapsed.

The criteria for **beginning an episode** are as follows: a) the child picks up a toy and begins to enact a pretend sequence, or begins a role play sequence or, b) there is a shift of focus from an episode of exploratory or manipulative play with an object to an episode of scoreable pretend play or role play, or c) there is a stated intention to pretend or role play followed by a successful search for a toy. If the mother begins the pretend acts, the timing begins when the child responds, either physically or verbally.

The criteria for **ending an episode** are a) the child drops the object or set of objects he or she is playing with or, b) the child return to exploratory or relational play for more than 10 seconds, or c) the child play with a different set of toys in exploratory or pretend play that is not linked to the previous pretend play sequence. If symbolic/role play resumes after a move to relational or exploratory play which lasts more than 10 seconds, the play is recorded as a new episode. If symbolic play/role play resumes with the same set of toys after a move to exploratory or relational play within 10 seconds, the play is recorded as a continuous episode. (Exceptions: see pretend acts linked by physical and narrative bridges).

2. **Mother initiated/Child initiated play:**

Code Mother/child initiated play for the highest level of play that occurs within each 15 second interval:

Child initiated: those in which the child supplies both the object and the idea for the play.

Mother initiated: those in which both the object and idea are supplied by the mother, or in which either the object or the idea is supplied by the mother.

Coding Hints:

If the child begins a pretend act, and the the mother adds to it later, the act is still coded as child initiated.

If the child performs a pretend act that is mother initiated, has a break in play (so the two acts are coded separately, i.e. not as a sequence), and then continues the theme of the previous pretend act without their mother's help (either in supplying toys or the idea) the first act is coded mother initiated, and the second is coded as child initiated.

If the mother brings over the box of blocks, for example, but the child takes them out by him/herself, it is coded as child initiated; if the mother hands the child the toys he/she then uses, it is coded as child initiated.

If in a single 15-second interval, there are two acts of the same level, one which is child initiated and the other is mother initiated, code the interval as child initiated. (Because that is the highest level that the child is playing at in that interval).

Dyadic Symbolic Play Scales
March 14, 1993

Annelie Hansi Hartmann
Arietta Slade, Ph.D.
Virginia Picchi

28 Month Symbolic Play Coding Manual

This coding scheme was developed to assess the quality of children's play at 28 months in two videotaped experimental conditions beginning with a 10 minute episode where the mother is occupied filling out brief questionnaires while her child is free to play on his own, followed by another 10 minute episode where the mother is instructed to play with her child as she would at home.

The coding scheme is multidimensional and is designed to yield the following information about the quality of the children's play as well as qualitative features of the mother-child interaction.

1) the total number and duration of discrete play episodes evidenced during each of the two experimental conditions.

2) an indication of whether play was mother or child initiated.

3) an assessment of the child's cognitive/developmental performance in play using a modified version (Morris, 1992) of the Belsky & Most development-of-play scale.

4) a rating of the quality of the child's involvement in play using a 5 point Quality of Involvement Scale.

5) a rating of the quality of the child's affect in play using the 5 point Quality of Affect Scale.

6) a rating of the quality of the mother-child interaction using the 5 point Quality of Dyadic Interaction Scale.

7) a rating of the overall coherence of the child's play using the 3 point Coherence of Play Scale.

All ratings are to be scored on a separate coding sheet for each 10 minute episode, thus yielding two summary sheets for each dyad. The coding sheets are divided into 15 second

intervals and coding should begin at the first full minute of each episode. Additional space is available on each sheet for comments.

Coding Procedures

Coding symbolic play should proceed in the following manner:

1. Identifying play episodes.

Begin by coding the mother occupied condition and review the entire 10 minute segment to get oriented to the child's play activities. Place behaviors that form a unit for the child (participants) into a single codeable play episode, allowing length of episode to vary. Draw a box on the coding sheet using the 15 second time intervals to delineate each discrete play episode. Record the starting and ending time of each episode in the upper corners of each box, and write a brief description of the play theme or toys used inside the box.

The criteria for beginning an episode are as follows: a) the child picks up a toy and begins a bout of extended exploration and manipulation of the play materials or begins to enact a pretend sequence, b) there is a clear shift in focus from one set of play materials or theme to another, or c) there is a stated intention to pretend or play with a particular toy followed by a successful search for the toy. If the mother suggests an activity or begins a pretend act, the timing begins when the child responds, either physically or verbally.

The criteria for ending an episode are: a) the child drops the object or set of objects he is playing with, b) there is a clear shift in focus away from the objects he was playing with, c) the child begins to play with a different set of toys in a manner that is not linked to the previous play activity. If the child resumes playing with a particular set of toys after an interruption that lasts more than 10 seconds, the play is coded as a new episode. If the child resumes play with the same toys after an interruption that is less than 10 seconds, the play is recorded as a continuous episode.

2. Mother initiated/child initiated play.

For each play episode delineated on the coding sheet, determine whether the play was mother or child initiated. Indicate this by writing a **C** or an **M** at the start of each episode.

The play is child initiated if the child supplies both the object and idea for the play.

The play is mother initiated if both the idea and object are supplied by the mother or, if either the object or idea is supplied by the mother.

Additional coding hints: If the child begins a play act and the mother adds to it later, the act is still coded as child initiated.

If the child performs an act that is mother initiated, has a break in play (so that the acts are coded separately and not as a sequence), and then continues the theme of the previous play act without the mother's help (either in supplying the idea or the toy), the first act is coded mother initiated, and the second as child initiated.

3. Coding cognitive/developmental level of play.

The next step is to review the tape again specifically looking at each discrete play episode in order to determine the child's performance at play using a 21 step level of symbolic play code developed by Morris (1992). This coding scheme is an adapted version of the Belsky & Most development-of-play scale for use with older toddlers. Ratings of play level are to be recorded in the 15 second intervals directly corresponding to each discrete play episode. Any given episode can include a combination of play behaviors at different levels. The purpose of recording all levels evidenced during a discrete play episode is to yield information about the child's cognitive processes while at play. For example, a child may begin an episode with an extended period of simple manipulation of the play materials and then move on to use these same materials in a more symbolic manner without an interruption in play. Thus, the child would move from a lower to a higher level of play within that episode.

A determination of the highest level of play displayed in each episode is then made and summarized in the space provided on the coding sheet. The summary section is designed to include information about: a) the total number of play episodes displayed in each experimental condition, 2) the duration of each play episode, and 3) the highest level of play exhibited during each episode.

4. Coding the quality of the child's involvement in play.

While reviewing the tape, determine the quality of the child's involvement in play using the 5 point Quality of Involvement rating scale. This rating scale is not event based i.e., tied to discrete play episodes, but rather is intended to capture the quality of the child's

involvement in play during the course of the entire 10 minutes. The child's involvement is likely to fluctuate i.e., it is unlikely that a child will display a high level of sustained engagement with the toys for the entire ten minutes. A rating of the quality of the child's involvement should be made for each 15 second interval, yielding a total of 40 scores for quality of involvement in each experimental condition. When making the ratings, be sure to pay attention to subcategory discriminations and enter the appropriate rating and suffix on the coding sheet. Keep in mind that it is a rating of the child and not the mother.

5. Coding the child's affect in play.

The quality of the child's affect is coded following the same procedures described above. A rating of the child's affect using the 5 point Quality of Affect rating scale, is made for each 15 second interval and recorded in the space provided on the coding sheet. A total of 40 ratings are made for each experimental condition. Again keep in mind that this is a rating of the child's and not the mother's affect.

6. Coding the quality of the mother-child interaction in play.

An assessment of the mother-child interaction in play is made using the 5 point Quality of Interaction scale. Here, a single rating is made for each 15 second interval, in the mother involved experimental condition. This will yield a total of 20 ratings. (* It is important to note that this scale is applied to only one experimental condition for this data set. When applied to other data sets, this scale may be applicable to a variety of situations/experimental conditions.)

7. Coding overall coherence of play.

This 3 point rating scale is event based, and is designed to assess the degree of coherence of play behaviors and/or themes executed by the child. A rating of overall coherence is made for each discrete play episode - that lasts a minimum of 30 seconds - delineated on the coding sheet.

A sample coding sheet is included to demonstrate how the scores outlined above should be entered.

Quality of Involvement Scale

This is a 5 point rating scale to assess the quality of the child's involvement in play at fifteen second intervals during each experimental condition. It includes the following criteria:

- the degree of self-directedness vs. need for parent to encourage/motivate the child to play.
- the child's persistence and ability to stay focused on play.
- the degree to which the child is able to follow through with an episode of play (play theme) vs. fleeting interest and less involved exploration.
- the child's spontaneous interest in the toys.

Subgroups within each point on the rating scale are determined by the child's (**a.**)inclusion (**b.**), or exclusion of the mother in play:

5 Very Involved

The child shows spontaneous interest in playing with and exploring the toys. Child displays good focus and persistence and is able to create and "stay with" a play theme, and/or sustain an extended bout of exploration of the toys. There is an sense that the child is "very busy" and fully engaged in play, displaying an overall sense of mastery and/or motivation:

a. Child is highly engaged in play while simultaneously maintaining a degree of relatedness with the mother. There is the sense that the child has the capacity to play alone while clearly acknowledging the mother's presence.The child may engage in verbal or behavioral referencing of the mother.

b. Child meets the criteria of high involvement but his behaviors are not inclusive of the mother. Here there is the sense that the child has created a solitary play space despite the mother's presence in the room.

4 Involved

The child displays spontaneous interest in playing with the toys and exploring. Child is able to focus and be persistent while at play, and does have the capacity to carry out a play theme, however what distinguishes a 4 from a 5 is a small degree of distractedness present in the child's play.

a. Child needs minor encouragement from mother to continue playing, and may more actively engage mother.

b. The play sequence is interrupted by a temporary break in interest and focus, as the child's attention is briefly drawn to something else.

A 4 is distinguished from a 3 by the weaker impact of the disruptions on the play. This is indicated by the relative ease with which the child is able to maintain the play sequence in spite of the disruptions, with or without mother's help.

3 Moderately Involved

The child's overall orientation and focus is still predominantly directed toward playing with the toys, but there is a greater degree of distractibility: Disruptions have a greater impact on play--either in terms of duration or strength. The child is still able to maintain the play sequence, yet has more difficulty doing so.

a. The child is unable to successfully follow through with a play sequence without more active encouragement and involvement on the part of the mother. The child may display more help-seeking behaviors or behaviors that solicit maternal involvement.

b. The child displays a temporary disruption in play due to environmental distractions. This may cause a period of indecision or inactivity, however the child's interest and overall orientation to play remains apparent. There is a spontaneous renewal of play activity without mother's help.

What distinguishes a 3 from a lower 2 rating is evidence of the child's ability to sustain interest in self-directed play despite temporary distraction. For example, the child may initiate a play theme, then shift his focus to the mother's activity, attend to this for a while, then spontaneously resume his original play. If the child does not return to the original play activity, and clearly loses interest in playing due to distractors, he should be given a 2 rating and not a 3.

In order to receive a 3 rating there should be evidence that the child is a) less likely to easily "drop" an ongoing activity than a 2 rating, and b) is able to re-direct his or her

attention and resume playing with interest and engagement after brief interludes of distraction and loss of focus.

2 **Distracted**

The child displays some interest (either spontaneously or with encouragement from the mother), and will begin to play with and explore the toys, but he will "drop" that activity easily and quickly. There is little sense of ongoing investment or involvement. The child more frequently displays sudden indecision or inactivity than a 3 rating. Play is easily interrupted due to:

a Child becoming preoccupied with the mother (verbally and/or behaviorally). He seeks encouragement and adult initiation/intervention and cannot remain interested in the toys or engaged in a play theme.There is only fleeting engagement in play.

b Child is preoccupied with environmental distractors. This can include competing/sudden interest in new toys, activities, or other environmental stimuli which disrupt the flow of play.

1 **Unable to Play**

The child displays a minimal interest in the toys and is completely unable to play alone or with mother. No extended manipulation or "follow through" is evident. It is almost as if the child doesn't know what to do with himself. This may be due to over- or under-stimulation, which interferes with the child's ability to self-regulate and stay focused in play:

a The child's ability to play is completely disrupted due to his preoccupation with maintaining contact with mother. He repeatedly makes bids for her attention or actively repels her. He may exhibit any of the following mother-oriented behaviors: enlisting her support and encouragement, withdrawing from her, or resisting her.The child may appear to be overstimulated by the degree and nature of the mother's involvement, or, conversely, be unable to receive enough stimulation.

b. The child's interest in or attention to other things interferes with his ability to stay focused in play. This can be due to the child being overwhelmed by physiological needs or other environmental impingements. He can be either overstimulated, such

that he cannot selectively attend to play; or withdrawn, showing absolutely no interest in the toys.

NA - To be coded in instances where the child is not playing due to circumstances beyond his/her control.

Quality of Affect

This 5 point rating scale assesses the degree of pleasure the child derives from play, and the quality of his emotional investment in the play activity. This rating is based on observations of the child's overt affective displays; facial expressions, tone of voice. body movements, verbalizations of feeling states. It is a rating of hedonic tone ranging from experiences of pleasure (high ratings of 4 & 5) to experiences of distress and displeasure which interfere with the child's capacity to enjoy playing. Such experiences are understood to be in part caused by the particular interpersonal and cognitive/organizational demands of each experimental condition. It is also a rating of the quality of the child's expressiveness with respect to particular feeling states e.g. the intensity, vigor and pervasiveness of his emotional display.

A high rating of 5 is given to a child who exhibits spontaneous positive affect (enthusiasm and delight) while at play, and whose affective displays are uninhibited and clearly "playful." Low ratings of 2 and 1 are given when a child displays overt negative affect or clear frustration and distress.

5 Enthusiasm/Delight

The child's pleasure at play is apparent. He spontaneously displays positive affect, and the play is marked by energy and enthusiasm. The child's affect is visibly uninhibited and "playful." There are overt signs of the child's delight, such as smiling, exclamations of pleasure, descriptive language expressing his enjoyment and/or engagement

4 Positive

The child is making a positive emotional investment in the play activity and his contentment and/or concentration are apparent. There are displays of pleasure or contentment, but they are not as intense or ebullient as those which receive a 5 rating. A state of inner satisfaction can be inferred from various overt behavioral displays: sustained and concentrated play bouts, positive verbalizations and/or facial expressions.

3 Neutral

The child's affect is neither overtly positive nor negative. The child's momentum, energy and emotional investment in the play are unremarkable. His body movements and verbalizations indicate neither pleasure nor displeasure. Here it may be difficult to infer the child's internal affective state i.e., whether he is contemplative or bored, quietly happy or unhappy.

2 Negative Affect

The child may appear whiney, irritated, restless or anxious. He may display hostility and aggression or appear to be wound up and overstimulated. Affective displays which appear positive, but have a manic or driven quality, must not be confused with the contented happiness of a 5 rating. In such cases the child appears to be anxious rather than playful. The child's tone of voice, facial expression and verbalizations are flat or negatively tinged. He may appear listless—showing no apparent signs of "playfulness"—or over--stimulated. More extreme and intense manifestations of the above mentioned behaviors should be given a 1 rating.

1 Distressed

The child may be very frustrated and clearly annoyed, or perplexed and anxious. In general, negative affects are more extreme and all encompassing than those which receive a 2 rating. They can be due to physiological or environmental factors. For a rating of high distress, there is a sense that the child has entered into an uncomfortable affect state from which he would be unable to recover without adult intervention. A child receiving a 1 may display a range of strong negative emotions, including crying, fighting, or extreme apathy.

Quality of Dyadic Interaction

This 5 point rating scale measures the extent to which observations of mother and child at play can be characterized as a mutually shared and enjoyed enterprise. Play interactions that are of a reciprocal nature (mid-point rating of 3), depict dyads where both mother and child contribute to the play interaction in a manner which functions to enhance and embellish a mutually shared play theme. There is a sense that mother and child experience each other as competent and interested play partners. The extreme ends of this rating scale characterize a marked imbalance in the interaction, favoring one or the other partner. At these ends, there is a disruption in the dyadic engagement, reciprocity, or communication between mother and child, and one partner dominates: A score of 5 is given when the mother dictates and controls the play sequence at the expense of the child's participation; a score of 1 is assigned when the child is dominating the sequence, either playing virtually alone while the mother remains disengaged or insisting on his own agenda at the expense of any maternal input. Here the child does not spontaneously include the mother in play and may actively block her participation. At the two less extreme points on the scale (2 and 4), interest and attention may be directed toward the other, but a certain degree of distance is apparent between mother and child.

This rating takes into account:

1) the nature of the mother's involvement in play i.e., her intrusiveness or disengagement vs. her ability to follow her child's lead,
2) the child's involvement in play and his willingness to include the mother as a play partner,
3) the quality of [verbal and gestural] communication between mother and child and whether or not they function to facilitate play,
4) the reciprocity of the play enterprise i.e., the degree to which mother and child are able to define and negotiate a mutually shared play space vs. having one or the other partner dominate.

5 Mother dominating / Child uninvolved

There is an imbalance in the interaction as the mother consistently insists on directing the play. She either ignores or overrides the child's initiatives, so that he can only remain a passive observer or follow her lead. There is a sense that she wants the child to perform and "look good" for mommy and/or the observers. She

may also have an overwhelming need to play herself. The child either withdraws and appears apathetic, is quietly compliant, or responds to the mother's intrusive behavior with active defiance and resistance.

4 Mother directing / Child less involved

Here, it is evident that both mother and child are interested in playing together and are making attempts to engage the other in a more satisfying way, but the mother takes the lead in setting the play agenda and providing both the ideas and objects for play. Although the mother clearly demonstrates an eagerness to engage in play, and the child more actively participates, mother's efforts may at times seem out of synch with either:

a) the child's self-generated activity (e.g., the child has begun to play with a set of toys and is attempting to introduce a play theme but the mother does not pick up on this and continues her own activity with an expectation that the child will join her) or,

b) the child's cognitive/developmental capacity to incorporate and fully engage in play she has initiated e.g., the mother may be encouraging the child to play at a higher level than he is capable of and is less flexible about tailoring her activity to his developmental level and stated interests. The child may attempt to join in this play, however his behavior appears to be more compliant in nature than is characteristic of mutual and collaborative involvement. The child may at times disengage from play to observe the mother's activity, or he may actively attempt to refocus the mother so that she will join in his play.

Despite the mother's tendency to take the lead in play, there is a greater sense of reciprocal engagement than with a 5 rating. The mother may display a willingness to redirect her focus or alter the level of play to better accommodate her child, or the child more actively contributes to the play. The exchange between mother and child is less reciprocal than a 3 rating however Play, from the point of view of the child's activity and contributions, are less elaborate. Additionally, a certain degree of frustration may be evidenced by one or both partners.

3 **Reciprocal Interaction**

Both mother and child contribute to the interaction and the play is a shared, mutually constructed and enjoyed experience. . Here the mother displays a capacity to follow the child's lead and enter into his play, oftentimes expressing spontaneous delight over his activity. Similarly, the child shows a willingness to include the mother in play and derive pleasure from her participation. Flexible give and take allows both mother and child to introduce play themes that enhance, extend or embellish play and incorporate each other's ideas.

2 **Child directing/ Mother less involved**

As with a 4 rating, there is an overriding sense that both partners are interested in playing together and are making attempts to engage each other, but the child takes the lead in setting the play agenda and providing both the ideas and objects for play. He may directly or indirectly communicate to the mother that he wishes her to remain at a distance and participate only marginally in his ongoing activity. Mother is relegated to the role of observer or passive participant.

1 **Child dominating/ Mother uninvolved**

Mother's attempts to be included are rebuffed or ignored. The child neither accepts the mother's suggestions, builds on her ideas, nor allows her to introduce herself as an active participant or role player. He may accept her involvement in following his lead, but does not allow her to embellish or enhance the play. Mother either retreats and appears apathetic, escalates her attempts to be included, or is quietly compliant.

No score

Any play that is considered non-interactive will be coded as no score. In these sequences, mother and child are occupying separate play spaces though they may be in close proximity. Parallel play which completely excludes the participation of the other will be a no score. In this instance, mother and child may create parallel but non-overlapping play spaces, however their activities are not connected by an overarching and mutually created play theme.

Solitary play, or no play at all, on part of mother or child also fall into this category.

Coherence of Play Scale

This 3 point rating scale assesses the level of organization of the child's play and takes into consideration both cognitive/ideational and behavioral dimensions of the child's play activity. Coherence of play is an event based rating scale to be coded for all discrete play episodes that last a minimum of 30 seconds. This will insure that an adequate sampling of behavior is observed so that raters can score the child along this dimension of play. Coherent play refers to the child's ability to:

1) adopt a play theme e.g., tea party, whether it be his own idea or one supplied by the mother.

2) select, or aid in the selection of, objects that serve as props for the execution of this theme e.g., gathering cups and plates from the larger assortment of toys available,

3) execute the play theme in a temporally and sequentially appropriate manner e.g., making pretend tea, pouring it into the cups and drinking it, and

4) demonstrate the ability to follow through with the stated play theme so that there is a clear beginning, middle and end to the play sequence.

A child's play may be highly coherent regardless of the cognitive/developmental level of play observed. His ability to engage in sophisticated symbolic play is not in and of itself an indicator of coherence. For example, a child may decide to play with the pop-beads in a functional-relational manner: He selects the beads as the focus of play and proceeds to string loose beads together to form a chain. He completes the chain and puts it over his head The child has a clearly stated and observable goal for his play and effectively uses the objects (beads) to accomplish this goal in an organized and appropriate manner. Furthermore, he brings the task to completion before moving onto a different activity. The child may incorporate objects and/or ideas supplied by the mother into his play. As long as this is consistent with the originally stated play theme and embellishes it, such activity would be considered coherent. In sum, a certain degree of planfulness and follow-through are essential in order for play to be scored as coherent.

Incoherent play by contrast, is play that does not form a logical whole, regardless of its duration or developmental level. It is manifested in either a general lack or organization or active disorganization. Incoherent play is marked by frequent stops and starts, little evidence of planfulness and follow through, and no apparent overarching theme, goal, or organizational structure. It is suggested to the observer in play episodes that have a random

quality; objects are used in an unintegrated manner and it is unclear what the child is "playing at.". This may be due to the fact that the child is indecisive, unable to attend for an extended period of time, or overstimulated. or that the mother's behavior is experienced as intrusive and/or distracting. The child may be unable to follow through with a play theme he has started and/or use the toys in a manner which facilitates the execution of a play theme. Increased disorganization/confusion in the play activity may result from maternal input, even when this input is consistent with the play in progress. Here the child is unable to flexibly incorporate the ideas and/or objects supplied by the mother into an ongoing play theme. The child may appear confused, may disengage from play, or abruptly interrupt play without having a new activity in mind.

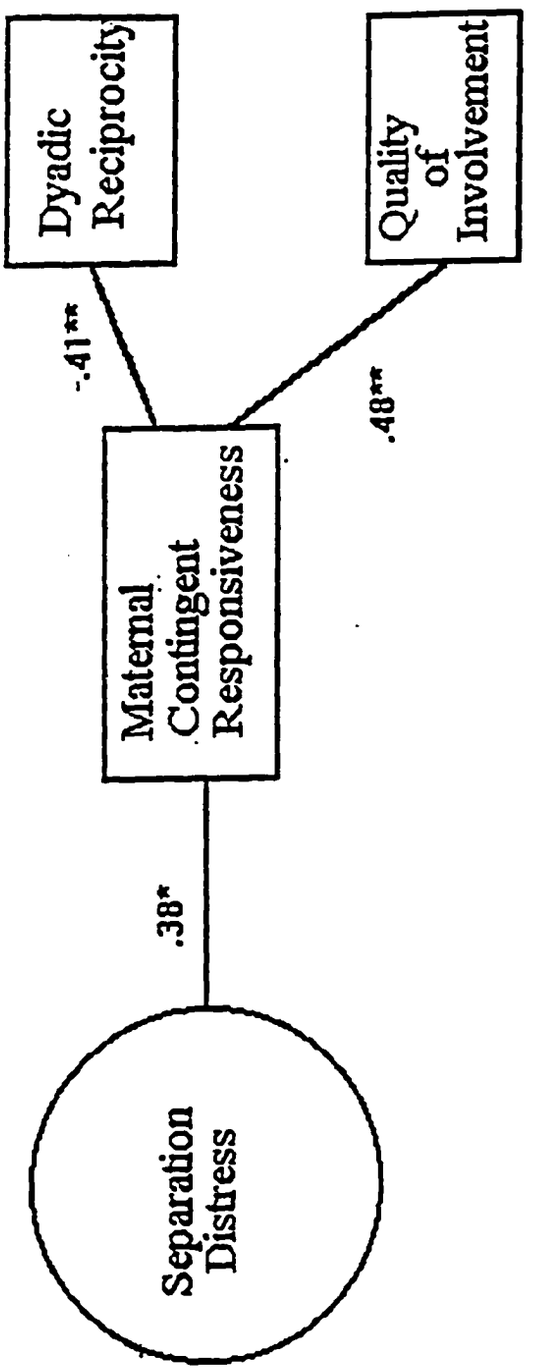
Coherency of play is a rating of the child's activity not the mother's. The mother may attempt to provide an organizing structure for her child's play, or, conversely, may actively attempt to redirect or otherwise disrupt it. The child may or may not be responsive to the mother's intervention, but what is of ultimate concern is the child's play itself. Keep this in mind while coding; it is the child's level of organization with respect to play that is being coded, not the mother's. Within each point on the rating scale, a distinction should be made as to whether the child exhibited coherent or incoherent play on his own (**a.**), or whether it was notably influenced by maternal input (**b.**). This rating scale is event based, therefore the number of scores assigned for this dimension of play will vary from child to child and should directly correspond with the number of identified play episodes that lasted a minimum of 30 seconds. The three points on the rating scale are as follows:

3 **Highly coherent**
- a. mother assisted
- b. child alone

2 **Coherent**
- a. mother assisted
- b. child alone

1 **Incoherent**
- a. mother assisted
- b. child alone

APPENDIX D



References

Aber, J.L., Belsky, J., Slade, A., & Crnic, K. (in press). Stability and change in maternal representations of their toddlers: A study of first-born boys. Developmental Psychology.

Aber, J.L., Slade, A., Berger, B., Bresgi, I. & Kaplan, M. (1985) The Parent Development Interview.

Ainsworth, M.D.S, Blehar, M.C., Water, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the strange situation. Hillsdale, NJ, Erlbaum.

Baruch, K., (1991). The influence of the mother-child relationship on the emergence of symbolic play. Paper presented at the Biennial meeting of the Society for Research on Child Development.

Beizer, L. & Howes C. (1992) Mothers and Toddler: Partners in early symbolic play: Illustrative Study # 1. In C. Howes, O. Unger & C. Matheson (eds.) The Collaborative Construction of Pretend. State University of New York Press, Albany.

Belsky, J., & Cassidy, J. (19..). Attachment: theory and evidence. In M. Ritter & D. Hay (Eds.), Development through life.. London: Blackwell Press.

Belsky, J. & Most, R. (1981). From exploration to play: A cross-sectional study of infant free play behavior. Developmental Psychology, 17, No.5, 630-639.

Belsky, J. Gardunque, L., & Hrncir, E., (1984). Assessing performance, competence and executive capacity in infant play: Relations to home environment and security of attachment. Developmental Psychology, 20, 406-417.

Benedek, T. (1959). Parenthood as a developmental phase: A contribution to libido theory. Journal of the American Psychoanalytic Association, Vol. 7, 389-417.

Benedek, T. (1970) Parenthood during the life cycle. In E.J. Anthony & T. Benedek (eds.), Parenthood: Its psychology and psychopathology. Boston: Little, Brown.

Benedek, T. (1970) The family as a psychologic field. In E.J. Anthony & T. Benedek (eds.). Parenthood: Its psychology and psychopathology. Boston: Little, Brown.

Benjamin, J. (1988). The bonds of love: psychoanalysis, feminism, and the problem of domination. Pantheon Books, New York.

Benoit, D., & Parker, K. (1994). Stability and transmission across three generations. Child Development, 65, 1444-1456.

Bibring, G.L., Dwyer, T.F., Huntington, D.C., & Velenstein, A.F. (1961). A study of the psychological processes in pregnancy and of the earliest mother-child relationship. Psychoanalytic Study of the Child, Vol. 16, 9-24.

Bowlby, J. (1982) Attachment and Loss, Vol. 1, Attachment, 2nd edn.. Basic Books, New York.

Bretherton, I. (1990). Communication patterns, internal working models, and the intergenerational transmission of attachment relationships. Infant Mental Health, Vol. 11, No. 3, 237-252.

Bretherton, I., Biringen, Z., Ridgeway, D., Maslin C., & Sherman, M. (1989). Attachment: The parental perspective, Infant Mental Health Journal, Vol. 10, No. 3, 203-221.

Bretherton, I & O'Connell, B. (1984) Toddler's play, alone and with mother: The role of maternal guidance. In I. Bretherton (Ed.) Symbolic play (pp.337-368).

Bretherton, I, B. O'Connell C. Shore, & E. Bates. (1984). The effect of contextual variation in symbolic play: Development from 20 to 28 months. In I Bretherton (ed.), Symbolic play (pp 271-298). New York: Academic Press.

Bretherton, I. (1984). Representing the social world in symbolic play: Reality and fantasy. In I. Bretherton (Ed.) Symbolic Play (pp1-39). New York: Academic Press

Bretherton, I. (1989). Pretense: The form and function of make-believe play. Developmental Review, 9, 383-401.

Bretherton, I. (1979). Relationships between cognition, communication, and the quality of attachment. In E. Bates (Ed.) The Emergence of Symbols: Cognition and Communication in Infancy. (pp.223-401)

Fonagy, P., Steele,H., Steele, M. (1991). Maternal representations of attachment during pregnancy predict the organization of mother-infant attachment at one year of age. Child Development, 62, 891-905.

Fonagy, P., Steele, M., Moran, G., Steele, H., & Higgitt, A. (1993). Measuring the ghost in the nursery: An empirical study of the relation between parents' mental representations of childhood experiences and their infants' security of attachment. Journal of the American Psychoanalytic Association, 41 (4), 929-989.

Fonagy, P., Steele, M., Steele, H., Leigh, T., Kennedy, R., Mattoon, G. & Target, M. (1995). Attachment, the reflective self and borderline states: The predictive specificity of the adult Attachment Interview and pathological emotional development. In S. Goldberg, R. Muir & J. Kerr (Eds.) Attachment Theory: Social, Developmental and Clinical Perspectives, (pp. 233-279) Hillsdale, NJ: Analytic Press.

Fonagy, P. and Target , M. (1996). Playing with reality: I. Theory of mind and the normal development of psychic reality. International Journal of Psychoanalysis. 77, 217-233.

Fonagy, P. and Target , M. (1996). Playing with reality: II. The development of psychic reality from a theoretical perspective. International Journal of Psychoanalysis. 77, 459-479.

Fraiberg, S., Adelson, E. & Shapiro, V. (1988). Ghosts in the nursery: A psychoanalytic approach to the problems of impaired infant-mother relationships. In S. Fraiberg (ed.) Clinical Studies in Infant Mental Health: The First Year of Life. New York: Basic Books.

Galenson, E. (1980). Characteristics of psychological development during the second and third years of life. In S. Greenspan & G.H. Pollock (Eds.) The Course of Life: Psychoanalytic Contributions Toward Understanding Personality Development. Vol. I. Infancy and Early Childhood. NIMH.

George, C. & Solomon, J. (1989). Internal working models of parenting and security of attachment at age six. Infant Mental Health Journal, 10, 222-237.

George, C., & Solomon, J. (1993). Toward a theory of caregiving. Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans, LA.

George, C., & Solomon, J. (1996). Representational models of relationships: Links between caregiving and attachment. Infant Mental Health Journal. Vol. 17, No. 3., 198-216.

Greenspan, S.I., & Lieberman, A. (1980). Infants, mothers and their interaction: A quantitative clinical approach to developmental assessment. In S. Greenspan & G.H. Pollock (Eds.) The Course of Life: Psychoanalytic Contributions Toward Understanding Personality Development. Vol. I. Infancy and Early Childhood. NIMH.

Greenspan, S.I., & Lieberman, A. (1994). Representational elaboration and differentiation: A clinical-quantitative approach to the clinical assessment of 2-to-4 year olds. In.A. Slade & D.P.Wolf (Eds.) Children at play. (pp. 3-32). Oxford University Press.

Harmon, R., Suwalsky, J., & Klein, R. (1979). Infant's preferential response for mother versus unfamiliar adult. Journal of the American Academy of Child Psychiatry, 437-449.

Hartmann, A.H., Slade, A., & Picchi, V. (1993) Dyadic Symbolic Play Scale.

Jennings, K. & Connors, R. (1989). Mother's interactional style and children's competence at 3 years. International Journal of Behavioral Development, 12 (2), 155-175.

Lieberman, A.F. (1996). Aggression and sexuality in relation to toddler attachment: Implications for the caregiving system. Infant Mental Health Journal, Vol 17(3), 276-292.

Lieberman, A.F. (1993). The emotional life of the toddler. The Free Press.

Mahler, M.S., Pine, F., & Bergman, A (1975) The psychological birth of the human infant. New York: Basic Books.

Mahler, M.S., Pine, F., & Bergman, A. (1996). The mother's reaction to her toddler's drive for individuation. In E.James Anthony & Therese Benedek (Eds.) Parenthood: Its Psychology and Psychopathology, Jason Aronson Inc.

Main, M., & Goldwyn, R. (in press). Interview-based adult attachment classifications: Related to infant-mother and infant-father attachment. Developmental Psychology.

Main, M.; Kaplan, N. & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation. In Growing Points of Attachment Theory and Research, ed., I. Bretherton & E. Waters. Monographs of the Society for Research in Child Development, 50: 66-104.

McDevitt, J.B., & Mahler, M. (1980). Object constancy, individuality, and internalization. In S. Greenspan & G.H. Pollock (Eds.) The Course of Life: Psychoanalytic Contributions Toward Understanding Personality Development. Vol. I. Infancy and Early Childhood. NIMH.

Morris, P. (1991) Revised version of Belsky & Most developmental-level of play scale. (manuscript).

Piaget, J. (1945). Play, dreams and imitation in childhood. New York: Norton.

Sanville, J. (1991) The Playground of Psychoanalytic Therapy. Hillsdale, NJ: The Analytic Press.

Slade, A., (1987). Quality of attachment and early symbolic play. Developmental Psychology, 23, No.1, (pp. 78-85)

Slade, A. (1994). Making meaning and make believe: Their role in the clinical process. In.A. Slade & D.P.Wolf (Eds.) Children at play. (pp. 81-107). Oxford University Press.

Slade, A., (1986). Symbolic play and separation-individuation: A naturalistic study. Bulletin of the Menninger Clinic, (pp.542-563)

Slade, A. (1987). A longitudinal study of maternal involvement and symbolic play during the toddler period. Child Development , 58. (pp.367-375)

Slade, A., & Aber, J.L. (1986, April). The internal experience of parenting toddlers: Toward individual and developmental differences. Paper presented at the International Conference of Infant Studies, Los Angeles, CA.

Slade S. & Aber J.L, Cohen, L.J., Fiorello, J., Myer, J., DeSear, P., & Waller, S. (1993) Parent Development Interview Coding System. Manuscript .

Slade, A., Belsky, J., Aber, L.J., & Phelps, J.L. (1998, in press). Maternal representations of their toddlers: Links to adult attachment and dimensions of mothering. Developmental Psychology.

Slade, A., & Bergman, A. (1988) The clinical assessment of toddlers. In C. Kestenbaum & D. Williams (eds.) The Assessment of Children and Adolescents (pp180-196). New York University Press, NY.

Slade, A., Dermer, M., Gerber, J., Gibson, L., Graf, F., Siegel, N., & Tobias, K. (1995, March). Prenatal representation, dyadic interaction, and quality of attachment. Paper presented at the biennial meetings of the Society for Research in Child Development, Indianapolis, IN.

Solomon, J., & George, C. (1996). Defining the caregiving system: Toward a theory of caregiving. Infant Mental Health Journal, 17, 183-197.

Sroufe, L.A., & Fleeson, J. (1986). Attachment and the construction of relationships. In W.W. Hartup & Z. Rubin (eds.) Relationships and development (pp 51-71). New York: Erlbaum.

Tamis-LeMonda, C. & Bornstein, M. (1991). Individual variation, correspondence, stability, and change in mother and toddler play. Infant Behavior and Development, 14, 143-162

Tracy, R.. Farish, G., & Bretherton, I. (1980, April). Exploration as related to infant-mother attachment in one year olds. Paper presented at the International Conference on Infant Studies. New Haven, Ct..

van IJzendoorn,M.H. (1992). Intergenerational transmission of parenting: A review of studies in non-clinical populations. Developmental Review, 12, 76-99.

Weinberg, K.M., Tronick, E., Cohn, J., & Olson, K. (in preparation) Boys and girls: gender differences in emotional expressivity and self-regulation during early infancy.

Weinberg, K.M., Tronick, E. (1992) Sex differences in emotional expression and affective regulation in 6-month old infant. Pediatric Research, Vol. 4, Part 2.

Weinberg, K. M. (1996). Infant gender differences in social-emotional development in the first year of life. Paper presented at the Istituto di Studi Filosofici, Naples, Italy, November 11, 1995

Werner, H. & Kaplan, B. (1963) Symbol Formation: An organismic-developmental approach to language and the expression of thought. New York: Wiley.

Winnicott, D.W. (1965) The maturation processes and the facilitating environment. New York: International Universities Press.

Winnicott, D.W. (1971) Playing and reality. New York: Basic Books.

Wood, D., Bruner, J.S., & Ross, G. (1976). The role of tutoring in problem solving. Journal of Child Psychology and Psychiatry, 17, 89-100.

Zeanah, C.H., & Anders, T.F. (1987) Subjectivity in parent-infant relationships: A discussion of internal working models. Infant Mental Health Journal, Vol. 8, No. 3., 237-250.

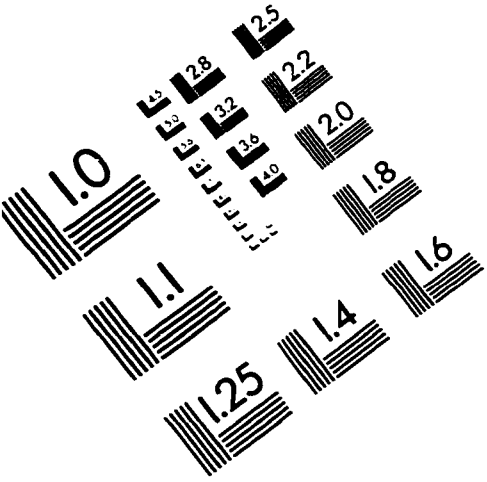
Zeanah, C.H., & Barton, M.L. (1989) Introduction: Internal representations and parent-infant relationships. Infant Mental Health Journal, Vol. 10, No. 3., 135-141.

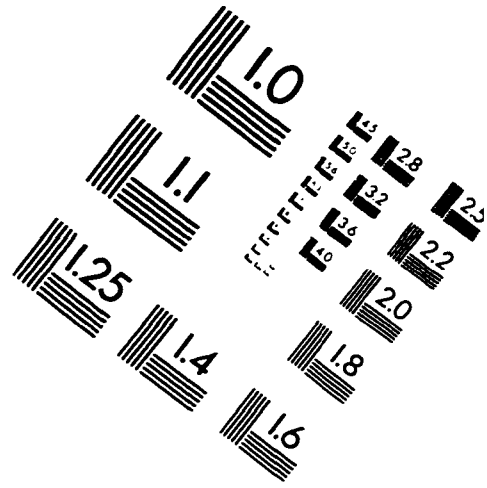
Zeanah, C.H., Benoit, D., Hirschberg, L., Barton, M., & Regan, C. (1995). Mother's representations of their infants are concordant with infant attachment classifications. Developmental Issues in Psychiatry and Psychology, 1, 9-18.

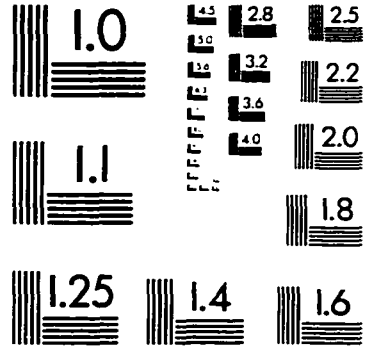
Zeanah, C.H., Benoit, D. (1995) Clinical applications of a parent perception interview in infant mental health. In K. Minde (Ed.) Infant Psychiatry, Child Psychiatric Clinics of North America., Vol. 4, No.3., 539-554.

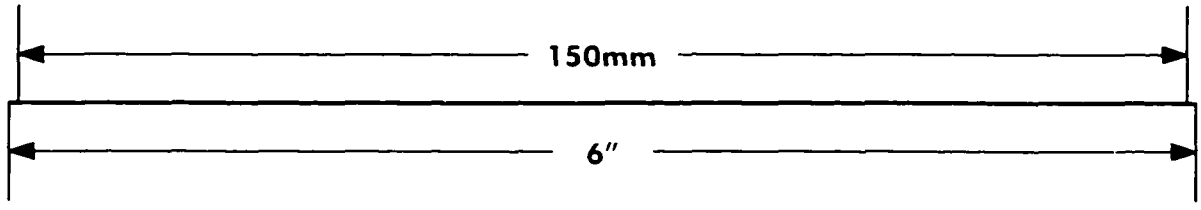
Zeanah, C.H., Benoit, D., Barton, M., Regan, C., Hirshberg, L.M., & Lipsitt, L.P. (1993). Representations of attachment in mothers and their one year old infants. Journal of the American Academy of Child and Adolescent Psychiatry, Vol. 32:2, 278-286.

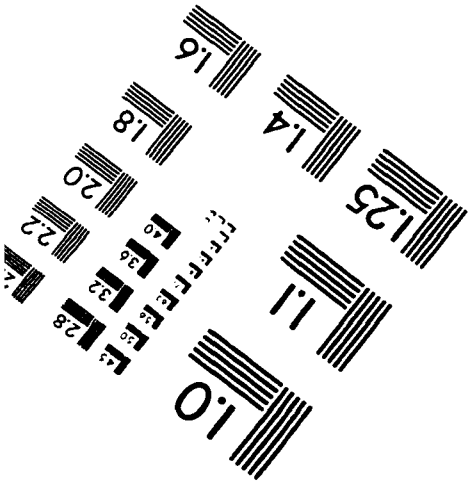
IMAGE EVALUATION
TEST TARGET (QA-3)

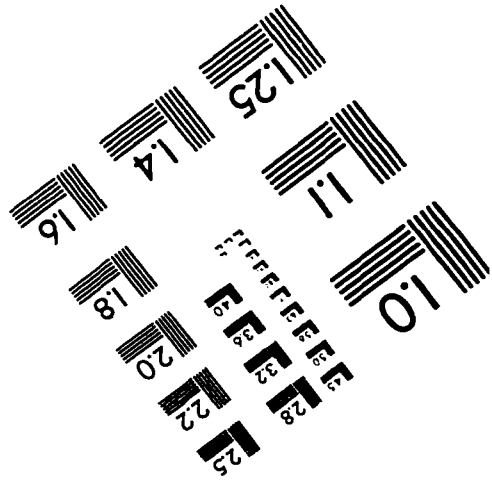












APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989