

**STABILITY AND CHANGE IN MATERNAL REFLECTIVE
FUNCTIONING IN EARLY CHILDHOOD**

By

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ABSTRACT**STABILITY AND CHANGE IN MATERNAL REFLECTIVE FUNCTIONING IN
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The present study examines stability and change in maternal reflective functioning (RF), namely a mother's capacity to think in mental state terms about her own and her child's emotional experience, in early childhood. The aim of the study was to understand whether maternal RF changes over time and to examine the concept of parental RF in developmental terms. In particular, the study looked at whether the development of maternal RF over time is influenced by either the mother's (measured during the third trimester of pregnancy) or the child's' (measured at 14 months) attachment organization.

The 30-first time mothers in this study, ranging in age from 25 to 40-years-old were administered the Parent Development Interview (PDI; Aber, Slade, Berger, Bregsi, & Kaplan, 1985) at two intervals, when their children were 10-month old and then again when the children were 28-month-old. Maternal reflective functioning was measured using the PDI and scored for reflective functioning (RF) using an addendum to Fonagy, Target, Steele, & Steele's (1998) reflective functioning scoring manual (Slade, Bernbach, Grienberger, Levy, & Locker).

Results indicate that 1) maternal attachment organization was the strongest predictor of change in RF over time and 2) insecure mothers show more change and less stability in their RF than do secure mothers between their children's infancy and toddlerhood. The findings suggest that insecure mothers may be more reliant on explicit, concrete and verbal cues to facilitate and activate their RF than secure mothers, such that they show greater reflective capacities with older, somewhat verbal toddlers than with nonverbal infants. Furthermore, insecure mothers also show greater RF with obviously elevated emotions than with more subtle emotional experiences. Implications for mentalization theory and clinical interventions with parents of young children are discussed.

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TABLE OF CONTENTS

		Page
Abstract		iv
Acknowledgments		vi
List of Tables		viii
Chapter One:	Introduction	1
Chapter Two:	Literature Review.....	5
	I. Mentalization and reflective functioning: Its role in the parent-child relationship	5
	II. Parental Reflective Functioning	11
	III. Is reflective functioning a stable trait or a relationship and context-specific capacity?	14
	IV. Overview of development from infancy to toddlerhood	24
	V. The Parent Development Interview	30
	VI. Summary and general aims of the study	34
Chapter Three:	Methods	36
	I. Sample	
	II. Setting	
	III. Procedures	
	IV. Measures	
Chapter Four:	Results	45
Chapter Five:	Discussion	62
Appendix		100
Reference		103

List of Tables

		Page
Table 1:	Frequency of RF Scores on the PDI at Time 1(10months).....	46
Table 2:	Frequency of RF Scores on the PDI at Time 2 (28months).....	46
Table 3:	Change in RF Ratings on the PDI from Time 1 to Time2.....	48
Table 4:	RF Score Discrepancies on the Overall Sample.....	49
Table 5:	Within-Group Mean Change in Maternal RF by Maternal Attachment Status	51
Table 6:	Mean Change in RF from Time 1 to Time 2..... by Mother Attachment Classification	51
Table 7:	Within-Group Mean Change in Maternal RF by Child Attachment Status	53
Table 8:	Mean Change in RF from Time 1 to Time 2..... by Child Attachment Classification	53
Table 9:	The Influence of Mother and Child Attachment Status on Change in RF	54
Table 10:	Estimated Marginal Means by Attachment Status.....	54
Table 11:	Mean RF on the PDI Demand Questions..... by Child and Mother Attachment	56
Table 12:	Mean Change in RF on the PDI Demand Questions..... by Child and Mother Attachment	58
Table 13:	Maternal Attachment and Within Group Change in Maternal RF at the level of the PDI Demand Questions	59

CHAPTER ONE

Introduction

[...] parenthood, supplied by memories of past experiences, is timeless. Yet it is (like any living process) under the inescapable domination of time. Time means change and change requires adaptation. - Therese Benedek, 1996

Each time I think I have it under control, she changes and her stage, I guess, her developmental stage changes and I feel like I am starting all over again, but, I am getting used to it. It's everyday things. I am just used to like getting, you know, taking out the stroller, getting her ready, getting her dressed, going and doing this, then she is out of that stage, so we have to ... just things like that. Or, just as I got used to dragging bottles around with me and now she eats food and now she doesn't eat baby food, she eats adult food. It's just, every time you think you have it, I think I have mastered it, like now I have it set. Diaper bag is ready to go and I am all set.

And just when I get used to a certain stage, she changes.

- Alice¹, mother of a 10-month old girl

For most parents, the process of adapting to their child's changing developmental needs is complex and demanding. A parent's capacity to tolerate the various stressors of parenting depends, among other things, on a parent's ability to create meaning out of internal experience, both her own and her child's. This is especially true in moments of high emotional intensity and conflict that often accompany the parent-child relationship. Yet, it is during times of transition and change that parents are often caught unprepared and may struggle to navigate their child's changing developmental needs and their own internal responses to them. The confusion created by the conflicting clues in the child's behavior can affect the parent's ability to

¹ Not her real name.

reflect upon and make meaning of what is taking place in the relationship (Kestenberg, 1996).

Recent research has shown that a parent's capacity to understand, think about and engage with their own and their child's emotional experience, a capacity defined as parental reflective functioning (RF), is crucial in predicting socio-emotional adaptation in the child and especially in facilitating development of capacities intrinsic for self and affect regulation. Parents vary in this capacity: in general, a high level of reflectiveness in the parent has been associated with attachment security in the child, as well as positive parent-child interactions (Slade, Grienenberger, Bernbach, Levy, & Locker, 2005; Grienenberger, Kelly, & Slade, 2005).

In recent years the concept of reflective functioning has received increased attention in psychodynamically informed developmental research studies. Yet, it is a concept that remains in need of further clarification and study. Theoretical writings and some research studies, for example, often refer to reflective functioning as a complex and dynamic process (Fonagy & Target, 1998; Diamond, Stovall-McClough, Clarkin, & Levy, 2003). Other research findings, however, seem to suggest that RF functions more as a stable capacity (Steele, Kaniuk, Hodges, Henderson, Hillman, & Steele, 2008). Treatment outcome research with adults and with mother infant dyads, for example, have challenged the notion of RF as a stable capacity, pointing instead to its dynamic and changing properties. These inconsistencies raise the question of how RF might be different in different relationship situations or how context-specific factors could impact the nature and quality of RF within a single relationship (i.e. patient-therapist or mother-child relationship).

For the most part, but with a few notable exceptions, treatment studies that examine changes in RF as a result of clinical intervention do not consider domain-specific properties of RF, treating it instead as a uniform capacity. A number of recent studies, however, attempted to tease out specific properties of RF and found vacillations depending on the context and relationship to the other (Diamond, Stovall-McClough, Clarkin, & Levy, 2003), as well as between general capacity for RF and symptom-specific RF (Rudden, Milrod, Aronson, & Target, 2007; Schechter, Myers, Brunelli, Coates, Zeanah, Davies, Grienenberger, Marshall, Mccaw, Trabka, & Leibowitz et al., 2006). These studies suggest that more attention should be given to the nature of RF within a given relationship, especially when used as an indicator of change in clinical interventions. The current study takes the view that reflective functioning within a context of a “live” relationship, such as the patient-therapist or parent-child relationship (as opposed to a memorialized representation of a relationship), follows its own trajectory of change depending on the relationship factors specific to the dyad under consideration. That is, RF is more fluid and it evolves and fluctuates from the impact of the dynamics of the real relationship.

The purpose of the present study was to examine the nature of RF in the context of the parent-child relationship in a non-clinical sample of first time mothers. Doing so will allow to obtain a more clear picture of RF, without having to account for the potential impact that psychopathology might have on reflective capacities. More specifically, the study looked at the impact of developmental changes in the child on maternal reflective functioning over a period of eighteen months trying to answer the question of what maternal reflective functioning looks like during different

developmental periods. The study aimed to determine whether RF in the context of an evolving parent-child relationship remains more stable or changes in accordance with the child's developmental needs. In particular, the study looked at whether the development of maternal RF over time is influenced by either the mothers' or the children's attachment organization. Although RF has been studied in the context of the parent-child dyad, these studies have not addressed how factors specific to the parent-child relationship influence parental reflective capacities. For instance, the child's developmental spurts are known to influence the mother's emotional state and interactions with the child, and as such may represent an important potential of influence on RF. However, at this time there has not yet been an examination of *how* developmental changes in the child influence and shape maternal reflective capacities.

The present study is the first to explore the impact of development on parental RF and to suggest the bi-directional nature of parental reflective capacities. From the intervention point of view, it seems important to understand processes responsible for change in RF since it bears implication for how treatments aimed at enhancing RF are designed. As such, taking a closer look at the determinants of change of RF within a given dyad is the necessary next step.

CHAPTER TWO

Review of the Literature

I. Reflective functioning and mentalization: Its role in the parent-child relationship

Reflective functioning refers to the psychological processes underlying an individual's mentalizing capacity (Fonagy, Target, Steele, & Steele, 1998) or "the process by which we realize that having a mind mediates our experience of the world" (Fonagy, Gergely, Jurist, & Target, 2002, p. 3). Introduced in the early 1990s, the concept of mentalization is a creative integration of psychoanalysis, attachment theory and cognitive science and is primarily devoted to examining normal capacity as well as distortions in mentalization due to trauma and psychopathology (Fonagy, Steele, Moran, Steele, & Higgitt, 1991; Fonagy, Steele, Steele, Leigh, Kennedy, & Matoon, 1995; Fonagy et al., 2002).

Some of the ideas for Fonagy's and colleagues theory of mentalization are found in Mary Main's concept of *metacognitive monitoring*, her term for a capacity to "step back and consider (one's own) cognitive processes as objects of thought and reflection" (1991, p. 134). In her research with adults using the Adult Attachment Interview (AAI) (George, Kaplan, & Main, 1985), a narrative measure of attachment representations, Main observed that some mothers when describing their childhood experiences with their parents would exhibit lapses in the self-monitoring of their attachment story, manifested in incoherent statements, incompatible or contradictory models of experience, or poorly integrated feelings about these experiences. These lapses in metacognition were linked to maternal adult patterns of attachment security

and insecurity, namely the secure/autonomous pattern, the dismissing pattern, and the preoccupied pattern (Main, Kaplan, & Cassidy, 1985), which in turn, were then linked to the child's attachment organization and capacity for metacognition. Insecurely attached mothers fail to notice that their attachment stories are incoherent or internally inconsistent, whereas securely attached mothers, even those who have suffered trauma as children, are able to remain coherent and internally consistent when describing their childhood experiences with their parents. Main's initial research findings, later replicated by other researchers (i.e. Fonagy, Steele, & Steele, 1991, Benoit & Parker, 1994) set the scene for the idea that a mother's capacity to think about and reflect upon her own thought processes was related to the quality of her attachment experiences not only with her own parents, but also her child.

Fonagy and colleagues have significantly expanded on Main's concept of "metacognitive monitoring" and suggested that in addition to the ability to observe one's own thought processes in a coherent and organized way metacognition also indicates the capacity to envision the psychological state of the other beyond the observable behavior (Fonagy et al., 1991; Fonagy et al., 2002). In so doing, these researchers introduced an important interpersonal and intersubjective element to Main's concept of metacognitive monitoring where "both a self-reflective and an interpersonal component [...] ideally provides the individual with a well-developed capacity to distinguish inner from outer reality, pretend from "real" modes of functioning, and intrapersonal mental and emotional processes from interpersonal communications" (2002, p. 25).

In Fonagy and colleagues' conceptualization (2002) mentalization or reflective functioning – the term used to operationalize the presence of mentalizing processes in

language - is an essential human capacity that allows an individual to perceive and understand one's own and another's intersubjective narrative in terms of underlying mental states and intentions. In the broadest sense mentalization emphasizes the importance for all human relationships being able to put oneself in the mind of the other. It serves important interpersonal functions, making other people's behavior meaningful and predictable. It is intrinsic to forming genuine connections with others, enhancing one's capacity to respond adaptively to a variety of situations, and making it possible for an individual to engage with his own and another's internal experience without defensive distortion or disavowal (Fonagy et al., 2002; Slade, 2005).

Mentalization theory has a strong developmental component and emphasizes the importance of parental reflective functioning for children's social and emotional development, particularly the development of the capacities crucial to self and affect-regulation. While children are born with the potential for developing the capacity to make meaning of mental states, this capacity is an "intra-psychoic and interpersonal achievement" (Fonagy et. al., 1995, p. 251) and comes into full being within a secure and containing parent- child relationship (Fonagy et. al., 1995; Fonagy et al., 2002; Slade, 2005). In insecure attachment, reflective functioning becomes "[...] subject to the vicissitudes of conflict and anxiety and consequent defensive disruption" (Fonagy et. al., 1995, p. 251).

Parents play a crucial role in the child's development of mentalizing capacities. A parent who is able to hold in her own mind an image of her child as a thinking and feeling being makes it possible for the child to discover his own internal world (Slade, 2005, p. 271). "The child needs an adult [...] who will "play along," so that the child

can see his fantasy or idea represented in the adult's mind, re-introject this, and use it as a representation of his own thinking (Fonagy et al., 2002, p. 266). Ideally, through *contingent* (accurate representation of the child's feeling state) yet *marked* (slightly exaggerated version of what the child is feeling) mirroring the parent will reflect back to the child an appreciation of his internal states, together with her adult capacity to manage these states, thus transmitting to the child a sense that emotions are manageable and can be dealt with (Fonagy et al., 1995; Gergely & Watson, 1996). The essential elements of this process are the parent's capacity to receive the child's, often confusing and contradictory, communications and in her own mind make them meaningful so as to then return them back to him in now recognizable and tolerable form. In this way, the parent's reflective capacities facilitate the child's development of his own "reflective self," a self that becomes the internal observer of mental life (Fonagy et al., 1991, p. 202). For normal development to take place, a child needs to experience a "mind that has *his* mind in mind," which creates the context for secure attachment and the child's ability to know and understand himself and his important others.

A parent's capacity for reflective functioning is what allows her to regulate and represent in meaningful ways her own and her child's emotional experiences. A highly reflective parent is open to a wide variety of feeling-states in her self, which, in turn, allows her to recognize her child's emotional expressions as meaningful communications to her. Parents are able to convey their sense of recognition of the child's emotional experience through a variety of modalities including verbal (e.g. what the mother says), vocal (e.g. how she says it and the accompanying tone of voice), physical (e.g. how she holds and touches the baby) and visual (e.g. facial expression)

(Fonagy et al., 1995). In this way, a parent's capacity for containment of the child's intense affects limits the degree to which the child has to resort to defensive strategies to maintain a relationship with the parent. Insecure attachment develops when a child has to habitually rely on defenses to protect himself from the intrusive presence or the neglectful and depriving absence of the caregiver. In such cases, the child internalizes his caregiver's state of mind. Thus, the concept of reflective functioning allows for thinking about the role of affects in the parent-child relationship and, in particular, about the impact of parental capacity for affect regulation on the child's attachment status (Fonagy et al., 1995).

Reflective functioning appears to play an important mediating role in the intergenerational transmission of attachment patterns. In their original research, Fonagy and his colleagues (Fonagy, Steele, Moran, Steele, & Higgitt, 1993) established that parents with high reflective capacities – that is, parents who could speak in a coherent and meaningful way about their childhood relationship with their own parents - are more likely to receive a classification of security on their Adult Attachment Interviews (AAIs) and were also more likely to have securely attached children than parents with low reflective capacities and histories of insecure attachment. Moreover, a parent's reflective functioning is more predictive of child attachment security than parental attachment classification. For parents whose attachment history has been marked by trauma or abuse, reflective functioning is thought to serve as a protective buffer against activation of trauma-related emotions in the relationship with the child. In fact, traumatized mothers who nonetheless have high reflective capacities are more likely to have children who are securely attached to them, whereas traumatized mothers

with limited reflective capacities are more likely to have children with insecure attachment (Fonagy et al., 1991; Fonagy et al., 1995). In this way, the parents' capacity to reflect on their own past experience is what protects the child from being the container of that experience and facilitates their developing secure attachment. In their subsequent research with clinical populations, Fonagy and his colleagues (Fonagy, Leigh, Steele, Steele, Kennedy, Mattoon, Target, & Gerber, 1996) were able to demonstrate the impact of failures or distortions in reflective functioning on the development of severe emotional disorders, mainly more serious types of personality disorders, such as borderline conditions.

However, while Fonagy's work on mentalization emphasizes the presence of reflective functioning in parents as crucial to children's development, the initial testing hypothesis in the studies discussed above was not about parental RF, but the *general capacity for reflective functioning* and its representation in adults' AAI narratives of past attachment relationships. In this context, RF was assessed using a consolidated and relatively stable representation. In his research Fonagy did not look at the capacity of the parent to reflect on their developing relationship with the child, a capacity likely foreshadowed by the parent's ability to reflect on the relationship with their own parents, but that is also possibly different from it in some significant ways (Slade et al., 2005). At this time, however, we do not yet know if and how reflective capacities differ from one relationship to another or are informed by the dynamics of a particular relationship. Thus, while Fonagy constructed a theory on the importance of parental reflective functioning for children's development, he did not provide a measure to assess RF in the context of a parent-child relationship.

II. Parental Reflective Functioning

The work of Arietta Slade and her colleagues was initiated in order to respond to this gap in Fonagy's research. Using the Parent Development Interview – an interview that captures parents' representations of their current and evolving relationship with their child – Slade and her colleagues were able to measure directly parental reflective functioning and examine a possible link between how parents speak about their children and their actual interactions with them, as assessed by the Strange Situation (Slade et al., 2005). As defined by Slade (2005), parental reflective functioning refers to the parent's capacity to “keep the child in mind” and is described as the parent's ability to reflect on and represent in a coherent and organized way their child's internal experience across a range of affect states. At the heart of this capacity is the parent's role as the “[...] mediator, reflector, and moderator of the child's mind” (p. 273). Slade points out that “[...] a parent's capacity to describe and contain complex mental states within the context of a relationship that is full of current feeling (not all of which is positive) is particularly crucial for a range of later developments in the child“ (Slade et al., 2005, p. 293).

The scoring of RF in parental narratives was developed keeping in mind the unique qualities of the parent-child relationship. What immediately sets parental RF apart from measures of RF in other relationship contexts such as adult's memorialized representations of significant relationships is its placement within the developmental context. Slade makes it clear that reflective functioning in parents must be examined using development as a background. “It is much easier”, she explains, “to figure out what a 2- or 3-year-old is thinking and feeling than it is to figure out what a 6- or 12

month-old is thinking and feeling. Indeed, the latter is, under many circumstances, quite difficult, if not impossible” (2005, p. 278). In other words, Slade seems to suggest that a certain developmental trajectory exists for the development of parental RF and the child’s age plays a crucial role in it. A 2 or 3-year old child is much more able to challenge actively a mother’s way of thinking about him with his own thoughts and ideas. Thus, with an older child, unlike a younger one (i.e. infant) a mother is less able to give free rein to her projections of who the child is and who she wants him to be. Furthermore, parental RF measures reflective capacities within an ongoing and live relationship between a parent and a child. It studies representations of a relationship that is continuously changing and evolving. In that sense, a reflective parent should be “actively searching for understanding of their child as opposed to having a more elaborated picture that is indicative of mentalization on the AAI” (Slade et al., 2005, p. 293). In other words, parental reflective functioning refers to a parent’s capacity for emotional as well as psychological flexibility in accommodating to new information about the self-as-a-parent, the child and their ongoing relationship. This is a complex process and one where intense and often contradictory emotions are an ever-present reality of the parent-child relationship. In this study the possibility that parental reflective capacities change with demands from this evolving relationship is being explored.

In their research, Slade and her colleagues demonstrated an association between maternal reflective functioning and maternal and child attachment patterns. Furthermore, their findings revealed that maternal RF plays a crucial mediating role in the processes by which a mother’s state of mind with respect to attachment is

transmitted to her child, a relationship that was previously not fully understood in the research on intergenerational transmission of attachment (van Ijzendoorn, 1995). As described by Fonagy in his theoretical writings on the role of RF in parent-child relationship, the capacity for making meaning of mental states is how parents are able to interrupt the intergenerational cycle of trauma and provide their children with a secure environment in which to grow up in (Fonagy et al., 1991; Fonagy et al., 1993). The work of Slade and her colleagues provided evidence to support this relationship empirically. Thus, a mother with a secure attachment history is more open to exploring her own mind which in turn frees her capacity to engage with the psychological world of her child (Fonagy & Target, 2005). Slade and her colleagues were able to show that a high level of reflectiveness in the parent is correlated with security of attachment in the child, as well as positive parent-child interactions (Grienenberger et al., 2005, Slade et al., 2005). In particular, they found that mothers who were able to reflect on their children's mental states were better able to handle their child's expression of negative feelings without themselves becoming overwhelmed and affectively dysregulated (Grienenberger et al., 2005).

Several other studies have found that maternal reflective functioning correlated positively with a range of developmental outcomes in the child. Maternal RF was positively correlated with a child's attention, social skills, and adaptability, and negatively with parent distress, parent-child relationship difficulties, and child withdrawal (Levy & Truman, 2002). Two studies by Schechter and his research group revealed a set of surprising findings about the relationship between severity of maternal PTSD symptoms and maternal RF (Schechter, Coots, Zeanah, Davies, Coates, Trabka,

Marshall, Leibowitz, & Myers, 2005; Schechter, Myers, Brunelli, Coates, Zeanah, Davies, Grienberger, Marshall, Mccaw, Trabka, & Leibowitz, 2006). While a history of trauma generally inhibits or distorts reflective capacities, at least as has been previously measured by the AAI (Fonagy & Target, 2005; Fonagy et al., 1996), in the Schechter and colleagues studies (2005, 2006) maternal trauma did not have the expected impact on lowering RF within the context of a parent-child relationship. Fonagy and Target (2005) have suggested that a mother may be able to “protect a specific relationship with the child from the more general impingement of traumatic experience upon her mentalizing capacity” (p. 338), suggesting that a greater openness to change and modification may be implied in RF within the parent-child relationship. Likewise, these findings offer preliminary evidence of the co-created nature of parental RF where the child is an active agent of influence in activating or in some cases, as illustrated by Schechter, shutting down maternal reflective capacities. This point will be examined in greater detail further below.

III. Is reflective functioning a stable trait or a relationship and context - specific capacity?

As described, reflective functioning refers to an individual’s capacity to reflect accurately on her own and others internal experience and to understand this experience in mental state terms. And as research has demonstrated, this capacity is related to one’s ability to regulate affect, and serves a protective function for people with histories of trauma. Until recently, reflective functioning was thought of as a relatively stable capacity that would generalize, with a more or less equal degree of fluency, to different situations and across different relationship contexts (Fonagy et al., 2002). This

understanding of RF produced research that focused on examining reflective functioning as a one-dimensional construct without considering its more complex and dynamic properties. However, there is increasing evidence that RF might be more fluid and dynamic than previously thought, particularly when assessed in the context of a “live,” as opposed to a memorialized, representation of a significant relationship.

A number of recent studies, for example, have observed that despite its implied stability RF may nevertheless be *open* to change and modification. Impairments in reflective functioning, either as a result of trauma or other adverse conditions, have been shown to respond to therapeutic intervention and thus allow for change to occur at the representational level with respect to attachment. This has been supported by a number of psychotherapy studies aimed at enhancing reflective capacities in adults (Bateman & Fonagy, 2004; Diamond, Stovall-McClough, Clarkin, & Levy, 2003) and in the context of mother-infant intervention work (Schechter et al., 2006; Slade, 2002; Slade et al., 2005). Furthermore, some of these studies have recognized that reflective functioning is a context-specific capacity that can exist in some situations but not others.

In the last decade, Fonagy and his colleagues have directed their efforts to creating treatment programs that aim to improve deficits in patients’ reflective capacities. These efforts resulted in the development of empirically validated mentalization-based treatment (MBT) programs in which “the mind of the patient becomes the focus of treatment” (Allen & Fonagy, 2006, p. 192; Bateman, 2004). While initially MBT programs were meant for treating borderline patients, they have been extensively applied to other clinical populations and integrated into other therapeutic approaches (Allen & Fonagy, 2006; Diamond, Stovall-McClough, Clarkin,

& Levy, 2003; Fearon, Target, Sargent, Williams, McGregor, Bleiberg, & Fonagy, 2006; Sadler, Slade, & Mayes, 2006; Slade, Sadler, & Mayes, 2005). Mentalization-based treatment requires explicit attention to mental states in the therapeutic process with the aim of helping the patient develop the capacity to “bear unbearable states and to convert them into bearable experiences” (Bateman & Fonagy, 2003, p. 208; Allen & Fonagy, 2006). Despite the fact that mentalization-based treatment is manualized, the nature and quality of the patient-therapist relationship is crucial to its success. Just as security and safety in the parent-child relationship are necessary precursors for the development of reflective capacities in childhood so are security and safety a vital component to the development of reflective capacities in psychotherapy (Allen, 2006, p. 19). Preliminary outcome data on the MBT indicate that this type of treatment is effective in improving mentalization and in reducing acute symptoms in patients with severe forms of borderline pathology (Bateman & Fonagy, 2004).

Given that the patient-therapist relationship plays a central role in MBT treatment raises the question about how factors specific to this relationship influence and affect the patients’ improvement in their reflective capacities. Following Fonagy’s emphasis on the interpersonal nature of the mind implies that the patient and therapist would impact each other in their efforts to experience and understand something together. These efforts are mutually constructed and are made up of an ongoing dialogue between two minds that are in direct relationship to each other. In this way, reflective functioning is indisputably a dyadic process.

Diamond and colleagues (Diamond et al., 2003), in their longitudinal study of mentalization – informed, transference focused psychotherapy with borderline patients,

examined the co-created and dynamic nature of reflective functioning in the patient-therapist relationship. They found variations in therapist's reflective capacities from patient to patient and from time to time with a given patient. In their case description of the same therapist treating different patients these authors observed significant variations in the quality of the therapist's reflective functioning. In the first case, the patient's and the therapist's RF mirrored each other and did not change over the course of the treatment year. In the 2nd case, the quality of the patient's RF changed from rejecting reflection to a rudimentary capacity to consider mental states in self and other after the first year of treatment, while the therapist evidenced a sophisticated and nuanced appreciation of mental states, but was able to adjust his quality of RF to the patient's pace.

These findings suggest that the quality of the therapist's mentalizing of the patient is closely linked to the patient's capacity to improve his mentalizing skills. The therapist too "skilled" in his mentalizing and who knows the patient's mind better than the patient himself achieves less than satisfactory treatment results (Fonagy, 2003). In Diamond and colleagues' view, the quality of mentalization in a therapeutic dyad "may be seen as a *bidirectional process in that the therapist's and patient's capacities for reflective function are mutually and reciprocally influential*" (italics mine, Diamond et al., 2003, p. 254). Diamond and colleagues further suggest, "reflective function is not a static intrapsychic concept, but instead may be the result of an unfolding transaction between patient and therapist that is itself in dynamic flux over the course of therapy" (p. 255).

The dynamic processes described by Diamond and her colleagues in adult patient-therapist relationship seem also to occur in parent-child interventions. Several relationship-based early intervention treatment studies linked maternal RF to positive changes in her representations of the child and better parenting practices, and revealed that maternal RF is open to change and modification especially if treatment addresses deficits in reflective capacities within the first few years of the child's life, as this is a period in a parent-child relationship that is filled with the most potential for change (Pajulo, Suchman, Kalland, & Mayes, 2006; Schechter et al., 2005; Schechter et al., 2006; Slade, Sadler, de Dios-Kenn, Webb, Currier-Ezepchick, & Mayes 2005; Slade, 2002; Slade, Sadler, & Mayes, 2005).

Slade and her colleagues (Slade et. al., 2005) developed a mentalization-based home intervention program, called "Minding the Baby" (MTB), for disadvantaged mothers with histories of trauma and their infants aimed at helping mothers "keep the baby in mind" – physically, emotionally, and relationally – through enhancing their reflective capacities (Slade, 2002). Slade and her colleagues believe that the relationship between the mother and the therapist is the key component to facilitating the development of the mother's reflective capacities; with the therapist holding the mother in mind, the mother can begin to know herself, and, in time, come to know her child in all its complexity (2005b). In particular, the mother's developing capacity to separate her child's experience from her own projections is a target outcome of the MTB intervention (Salder, Slade, & Mayes, 2006). Previous preliminary results on the MTB data reveal that maternal reflective functioning improves 24 months following the start of the intervention (Patterson, 2005; Sadler, Slade, & Mayes, 2005). Results from the

recent MTB data (Slade, 2009) indicate that mothers receiving the MTB intervention had a higher percentage of children who are securely attached and showed significant change in their RF levels whereas the control group had a higher percentage of children in the disorganized attachment category.

Early interventions aimed at enhancing RF were also found to be effective in the work conducted by Schechter and his research group (Schechter et al., 2005; Schechter et al., 2006) where they explored the dynamics of maternal reflective functioning in a sample of mothers with PTSD symptoms and their 8 to 50-month-old children. In particular, they found that when mothers experienced their children as a traumatic reminder or a major life stressor, their PTSD symptoms interfered with their capacity to reflect upon their relationship with that particular child. In fact, over half of the mothers in the sample described dealing with their toddler age children - especially around management of negative emotions - as their greatest source of stress (Schechter et al., 2006, p. 326). It is possible, these authors conclude, that some mothers have the capacity under non-stressful conditions to be reflective within their own given range, but that when posttraumatic stress is triggered, this capacity to reflect in the moment of stress becomes impaired.

In their second study using the same sample of traumatized mothers and their toddlers, Schechter and his colleagues (Schechter et al., 2006) documented changes in maternal RF following a single clinician assisted session of video-feedback intervention. Mothers were asked to respond to a videotape of themselves and their child in a moment of separation. To activate their RF, mothers were asked to think about what they and their child might be feeling and thinking during a given moment on the tape (p. 433).

For many mothers in their study their trauma history prevented them from accurately reading their children's emotional reactions in the moment they were being expressed. Results indicated a significant decrease in mothers' negative representations of their children following the intervention. The authors attributed the rapidity of mothers' response to the intervention to their exposure to their own avoided mental states of helplessness and distress via seeing them on the child's face in the present moment. That is, these mothers, it seems, required concrete and visual feedback in order to reclaim their negative representations and see their children as more separate from them.

Furthermore, these studies suggest that even mothers who are able to understand their children as having separate minds can fluctuate in their capacity to do so especially when confronted by an experience with the child that is too reminiscent of a trauma in their own past history. In other words, Schechter and his group seem to imply that a woman's capacity to reflect on her trauma maybe different from her overall RF skills in emotionally neutral situations. These results further highlight the idea that viewing RF as simply a uniform capacity without accounting for contextual factors may be too simplistic.

The idea that mentalization may vary depending on the context and that individuals may be reflective in some situations but not others was also approached by Rudden, Milrod, Aronson, & Target (2008) who conducted a study that measured reflective functioning in panic disordered patients and explicitly differentiated between *general RF skills* and *panic-specific RF skills*. These authors state "although some patients with panic disorder evince a global kind of not knowing about their inner lives, others are quite perceptive about their own mental states and those of others, with the

exception of the inner conflicts that precipitate their symptoms (p. 187).” Accordingly, these authors write, this discrepancy in RF skills is not surprising given that RF “is a synthetic ego function that seems likely to be affected by unconscious conflict and compromises, as are other ego functions such as the capacity to tolerate affects (p. 187).” The findings of this study showed that patients with panic disorder have a lower Panic Specific RF than general RF, and that their general RF is not necessarily impaired.

The results of the above studies are of particular relevance to the present study as they suggest that mentalization is not a one-dimensional process, but a complex experience that is highly context dependent. In the context of an ever changing parent-child relationship, parental reflective capacities are not etched in stone and can fluctuate depending on the dynamics of the “here and now” interaction with the child. Taken together these studies point to the importance of considering situational influences on RF especially as these can actively impact the trajectory of an individual’s reflective capacities.

What becomes clear from the above discussion is that reflective functioning within the context of a “live” relationship, such as the patient-therapist or parent-child relationship, follows its own trajectory of change depending on the relationship factors specific to the dyad under consideration. In other words, RF is more fluid, and it evolves and fluctuates from the impact of the dynamics of the real relationship. However, in spite of the evidence pointing to the domain specific properties of RF, there has not been a lot of examination of how RF might be different in different relationship situations or how context specific factors could impact the nature and quality of RF within a single relationship. While Diamond and her colleagues suggest that evaluation

of reflective functioning in the patient-therapist relationship necessitates consideration of “the profile of patient’s and therapist’s reflective functions in relation to each other [since] ... each patient-therapist dyad may generate its own unique patterns of reflective function” (Diamond et al., 2003, p. 253) at present there are no studies on how factors specific to the parent-child relationship influence parental reflective capacities. From the intervention point of view it seems important to understand processes responsible for change in RF since it bears implication for how treatments aimed at enhancing RF are designed. As such, taking a closer look at the determinants of change of RF within a given parent-child dyad is the necessary next step.

In the parent child-relationship the child’s developmental spurts are known to influence the mother’s emotional state and interactions with the child (Benedek, 1959) and as such may represent an important potential of influence on RF. However, at this time there are no studies examining how developmental changes in the child influence and shape maternal reflective capacities. The present study is the first to explore the impact of development on parental RF and to suggest the bi-directional nature of parental reflective capacities.

As was described earlier, Fonagy’s theory of RF highlights the parent’s role in shaping the child’s emerging reflective capacities and inner world while the child’s impact on the parent is only implied by way of the emphasis on the intersubjective roots of early development and the child’s biologically based propensity towards sharing of affects (Fonagy et al., 2002). In other words, while Fonagy’s theory of mentalization suggests the dyadic nature of RF, it does not explicitly describe how the adult’s capacity to understand one’s own internal experience is shaped and influenced by the interaction

with the other in this case how a parent's reflective capacities are affected by the child. However, as is well known from infancy research, the parent-child relationship is made up of multiple fields of influence that act together to create the dyadic situation (Beebe & Lachmann, 1988; Benedek, 1959, 1970; Seligman, 2003; Stern, 1985, Tronick, 1989). All these authors agree that babies are born with a capacity to attune to other minds as evidenced in their behavior. Observational studies have documented the highly synchronized nature of interaction between infants and their parents where the infant can start and stop an interaction with the parent, which implies that they can participate and share, in however rudimentary way, in the intersubjective dialogue with another mind (Stern, 1985). For example, Beebe and her colleagues' (2000) work on how mother and infant pairs coordinate interactions through vocal rhythm coordination and attachment provided a way of understanding how mother and child both impact and organize their interactions with each other (Beebe, Jaffe, Lachman, Feldstein, Crown, & Jasnow, 2000).

The basic hypothesis on which this study is based is that parental reflective capacities cannot be considered in isolation and without giving consideration to the contributions of the child. That is, the child plays an active role in activating maternal reflective capacities through the contribution of his particular affective, cognitive and temperamental processes, among other factors. The child's growth and development, and the parent's response to it, affect one another, while both parent and child are also being shaped through these mutual interactions. These interactions then shape the quality and organization of parental RF in very distinct ways. Importantly, the mother-child relationship is obviously not an equal one and the mother is aware of the child's

subjectivity long before the child is able to perceive his mother as a subject with her own internal world. At the same time, the mother's capacity to make sense of her child's thoughts and feelings is impacted by her relationship with a particular child. Despite the relational nature of the mentalization theory and emphasis on the dyadic nature of mental states, it does not examine explicitly the parent-child relationship as a bidirectional process made up of reciprocal behaviors between parent and child (Diamond et al., 1999), nor does it consider this interplay when attempting to investigate the inter and intra personal processes between parent and child.

IV. Overview of development from infancy to toddlerhood: Impact on the mother, the parent-child relationship and parental reflective functioning

One of Bowlby's outstanding contribution was to understand the bidirectional nature of the parent-child relationship (1969/1982, 1973, 1979, 1980, 1988). As children instinctively seek comfort and security from their parents, so parents instinctively provide care for their children. As such, parenting representations become bi-directional, and, as research shows, representations become more complex and elaborate over the course of the child's development and reflect a blending of the parents' conscious and unconscious perceptions and fantasies about the child and his actual personality (Benedek, 1959; Slade & Cohen, 1996).

The first two years of a child's life represent the greatest potential for change for mother and child as both members of the dyad go through complex developmental reorganizations (Slade, 2002). For the mother, it is a time of developing a sense of herself as a mother to her particular child as well as an opportunity to re-work and let go of old conflicts and anxieties (Benedek, 1959; Trad, 1990). For the child, the early

experiences of being cared for set the scene for later development (Fonagy, 2002; Belsky, 2001). The first few years, thus, are a time of great vulnerability as well as opportunity for the dyad given the relative fluidity of the relationship still in formation (Barandon & Broughton, Gibbs, James, Joyce, & Woodhead, 2005). The child's progression through different developmental periods may pose additional challenges to his parents. Some parents are much more comfortable with a small baby, but are worried about dealing with an active toddler, or vice versa (Barandon et al., 2005). Benedek (1970), for example, points out that parenthood, like any living process, exists "under the inescapable domination of time" (p. 185). In her view, parenthood is a developmental process that implies "continuous adaptation to [...] changes within the self of the parent parallel to, and in transaction with, changes in the child and to his expanding world" (p. 185). As a child moves through each critical developmental period, his parents have to develop new ways of thinking and feeling to keep pace with him. Through witnessing the child's developmental shifts parents often come face to face with their own childhood struggle, which may involve profound internal changes (Benedek, 1959; 1970). In a similar vein, Stern (1991) suggests that a mother's representation of her child includes a time line, with a direction of change (p. 178). According to Stern, while mothers begin to form representations of their children during pregnancy, these undergo a process of elaboration and change once the child is born and continue to change throughout the child's development as milestones are reached and stages passed (p. 179).

It is during these times of transition that parental reflective capacities are especially crucial to the parent's ability to respond flexibly and adaptively to the child's

changing developmental needs. At the same time, developmental changes in the child call for different capacities in the mother at different moments of the child's development and of the parent-child relationship (Slade, 2005, p. 271). A mother with an infant, for example, draws on very different sources of understanding to make meaning of her infant's behavior than a mother of a toddler, whose active thinking about and engaging with her child replaces the more intuitive imagining of the earlier period. Thus, the nature of the mothers' reflective capacities parallel the differences in the developmental needs between the two phases in the child's development. Indeed,

“It is the mother's observations of the moment to moment changes in the child's mental state, and her representation of these first in gesture and action, and later in words and play, that is at the heart of sensitive caregiving, and is crucial to the child's ultimately developing mentalizing capacities of his own” (Slade, 2005, p. 271).

Winnicott (1951) suggests something similar when he describes a mother who gradually “fails” her baby because of the baby's growing ability to encounter his experience without his mother's active presence at his side: “The good-enough mother [...] starts off with an almost complete adaptation to her infant's needs, and as time proceeds she adapts less and less completely, gradually, according to the infant's growing ability to deal with her failure” (p. 238). What this means is that a gradual change occurs in the child's capacity to perceive his mother as a person with her own subjectivity, which alters the mother's response to the child and their relationship in profound ways. In the present study, I assume that some mothers are better able to handle such changes than other mothers.

The baby's discovery of the world outside the intimacy of his relationship with his mother and a shift to a more differentiated way of relating brings a new set of

challenges and opportunities for both mother and child. Unlike a time of “absolute dependency” when the baby’s needs, for the most part, have to be intuited by the mother, during the “relative dependency” of toddlerhood the baby can give a more active clue, some sign that can be read and responded to by the mother (Winnicott, 1963). This is based on a shift in the mother and the baby simultaneously and is the beginning of a different kind of relating between the two. Inevitably, this involves the baby having to bear more frustration, as both mother and baby have to adapt to this expansion in their way of being with each other (Barandon et al., 2005). The mother’s capacity for attunement to the baby’s changing developmental needs also depends on being able to bear the baby’s rage in the face of frustration (Barandon et al., 2005, p. 19). Thus, “every transition from one phase to the next generates aggression. Parents and children blame each other for each step in their progressive separation, but each new phase brings on a reconciliation, a rapprochement on a new level of coexistence” (Kestenberg, 1996, p. 292).

Support for considering developmental processes in the study of the early parent-child relationship dynamics can be found in the two studies conducted by Slade, Aber and their colleagues (Slade, Belsky, Aber & Phelps, 1999; Aber Belsky, Slade, & Crnic, 1999) using the Parent Development Interview. In both studies maternal representations were observed to change in response to the demands of the relationship with a particular child and the more general context of parenting.

In the first study, Slade and colleagues (1999) looked at a sample of 125 middle and working class mothers and their firstborn sons over an 11- month period, from the time the children were 10-months of age up until they were 21-months old. The study

sought to examine the interrelations between ways a mother represents her relationship with her son, her “attachment state of mind” and their observed interactions. Results indicated that the quality of a mother’s current state of mind in regard to her childhood attachment experiences was related to how she thinks and feels about her child and their relationship. At the same time, mothers whose representations of their relationship with their children were characterized by expressions of joy and pleasure, engaged in smooth and coherent interactions with their children. Alternatively, mothers who evidenced more negative affect in their representations of the relationship were less sensitive and attuned in their interactions with the child. Contrary to expectation, however, a mother’s state of mind with respect to her own attachment history did not predict the quality of her interactions with her child. Instead, as described, the mother’s representations of the *current relationship with the child had more predictive power in shaping the quality of the interaction*. While this study did not explicitly tease out the effect of the child’s age on maternal representations about the child, the authors suggest that theoretically it is likely that the child’s own characteristics (i.e. his personality and the developmental period he is in) have a powerful effect on shaping the parents’ thoughts and feelings about the child, which in turn influences the nature and quality of the parent-child interactions (Slade et al., 1999).

The second study (Aber et al., 1999) using the same sample of mothers and their firstborn sons examined specifically the impact of developmental dynamics on mothers’ representations of their relationship with their children. The study followed the children from the time they were 15 months until they were 28 months of age. The study sought to determine the degree of stability and change in both the structure and individual

differences in maternal representations of their relationship with their toddler-age children. Since toddlerhood is characteristically described as a “developmental epoch of dramatic change,” these authors were interested in how the changes in the child impact the structure of maternal representations over the course of toddlerhood (Aber et al., 1999). In particular, the study assessed maternal representations along affective dimensions that are typically present in the relationship between mothers and their toddler-age children: representations of joy and pleasure, of anger, and of guilt and separation distress. Results indicated a number of changes in mothers’ thoughts and feelings about their sons in the context of overall stability in maternal representations across the 13- month developmental period (i.e. 15 to 28 months).

These authors conclude that it is likely that mothers who have more coherent representations of the relationship with their toddlers at 15 months are better able to monitor and reflect on the meaning of their own and their child’s experience at 28 months even at moments of anger. Given these findings, the study concludes that although there is some stability in parental representations, this stability can be affected by a number of factors, including developmental changes in the child and maternal ability to reflect on and regulate negative affect.

The picture that emerges from above descriptions portrays how inevitably complex the elaboration of a parent-child relationship really is. The processes of change and growth in the child as well as the parent’s increased familiarity with the child and with herself-as-a-parent-to-this-particular-child affect the parent child relationship in profound ways. Thus, mentalization about an ongoing relationship is likely informed by the changes in that relationship. As representations evolve, the feelings and thoughts

about this relationship also undergo a process of transformation and change. In this way, the parent-child relationship is dominated by an ongoing need to adapt anew. With that in mind, it is reasonable to hypothesize that a mother's capacity to reflect on her changing, developing relationship will be affected by these changes, by her getting to know the child better, and by the ways in which this relationship triggers memories of her concerns similar to her child's.

V. The Parent Development Interview (PDI)

In order to examine changes in maternal reflective functioning over time this study used the Parent Development Interview (PDI; Aber et al., 1985) and scored it for reflective functioning using an addendum to Fonagy and colleagues' (Fonagy, Target, Steele, & Steele, 1998) reflective functioning scoring manual (Slade et al., 2004). Fonagy and Target (2005) observed that a measure such as the PDI is especially useful in assessing the quality of parental reflective capacities within the parent-child relationship because "it is likely to give a more stable, cross situational index of individual differences in mentalizing within the relevant context [since] it estimates mentalization as an aggregate across many episodes of interaction" (p. 355). In this sense, RF on the PDI allows for a detailed examination of a parent's strengths and weaknesses along different domains that pull for parental reflective capacities.

First, the PDI is described, and then the explanation of the RF scoring system for use with the PDI is presented.

The PDI is a 45-item semi-structured clinical measure organized around open-ended questions aimed to capture various aspects of mothers' representations of the relationship with their child (Slade et al., 1999). The PDI is a validated and widely

used measure of the parent-child relationship (see Slade, 2005 for review of research on the PDI; Aber et al., 1999; Hermelin-Kuttner, 1998; Slade et al., 1999). The PDI examines maternal representations of parenting along three separate, but interrelated dimensions: the mother's experience of herself as a mother, her representation of her child and her representation of their relationship. In particular, the PDI assesses a mother's capacity to describe, flexibly and coherently, "moments of interaction and relatedness" between herself and the child as a way of assessing the mother's affective experience of parenting (Slade et al., 1999, p. 613). Thus, the PDI focuses specifically on the dynamics between the parent and the child, as opposed to independent representations of the child and of the self as a parent (Slade et al., 1999).

The scoring system of the PDI allows for a detailed study of the various parenting themes captured by the interview. It also allows for tracking shifts in the mothers' representational capacities across different periods of the child's development, which is the primary interest of this study. It is anticipated that different developmental periods would capture different aspects of the mothers' representational capacities. These differences would likely have something to do with the unique tasks of each developmental period for mother and child. The advantage of using a measure such as the PDI, especially with parents of young children, is that it provides a view of a relationship that is "currently being formed, and that is still evolving. In addition, it is a relationship that evokes strong feelings and reactions in the present. It taps into experiences that are live and immediate, and into representations that are still being constructed" (Slade, 2005, p. 278).

The questions on the PDI are organized around different emotionally charged situations related to parenting. Mothers are asked to describe times when the child felt rejected or upset, thoughts about separations from the child, as well as moments in their relationship they experienced as especially pleasurable or difficult. Mothers are also asked to come up with five adjectives to describe their child and then to provide illustrations of each. Other questions focus more specifically on the mother's experience of being a parent to her child and ways in which she – as a parent - is either similar to or different from her own parents. In addition, mothers are asked about specific feeling states such as feelings of happiness, joy, neediness, anger and guilt, as well as, their awareness of how these impact the child and their relationship (Slade et al., 2005). Throughout the interview parents are asked to continuously reflect on the meaning of their child's thoughts, feelings and behavior across different situations, as well as their own thoughts and feelings evoked in these different contexts. As such, the PDI is especially sensitive to picking up on areas of conflict in the mother-child relationship as mothers' responses can range from coherent and fully elaborated depictions of the relationship with their child to responses that are sparse and without vitality or are so disorganized and dysregulated as to be difficult to follow and make sense of.

Measuring RF on the PDI

RF on the PDI is scored using a continuous scale ranging from -1 to indicate a failure of defenses and regulation, to 9 to capture full or exceptional reflective capacities. The middle point of the scale receives a score of 5 and is used to describe

“average or ordinary reflective capacities” (Fonagy, Target, Steele, & Steele, 1998; Slade et al., 2005).

Parents with low reflective capacities give little evidence of understanding their child as having a complex inner world. Such parents have limited ability to think in mental state terms and their descriptions of their children focus on either physical, behavioral or personality descriptions of them (Slade, 2005). Thus, when asked to imagine what their child might be thinking or feeling in a particular situation, these parents seem unable to think beyond what is observable and to conceive of their child’s behavior as a meaningful attempt at communicating his internal experience. This inability to think about their child as a feeling and thinking person extends to their difficulty with attributing psychological meaning to their own behavior and experience (Slade, 2005). When asked, for example, whether they have ever experienced certain feelings in relation to their child, such as anger or guilt, these parents seem unable to look internally. Thus, parents who receive a low score on RF suffer from a general inhibition in their reflective capacities. They simply cannot engage in the intersubjective dialogue with their children. In other words, mothers with low reflective capacities “simply will not or cannot enter their child’s experience as a means of understanding them, and [...] do not use their own internal experience as a guide to sensitive responsiveness” (Slade, 2005, p. 278). Clinically, such parents are usually described as “highly defended, and [resorting] to primitive means of blocking out or distorting their child’s internal life (Slade, p. 278).

In the middle range are parents who evidence a general ability to think in mental state terms. They seem to understand that their child’s thoughts and feelings may differ

from their own. The capacity to link their child's thoughts and feelings to his behavior or to other mental states is what makes it possible for a response to be considered truly reflective. A reflective mother is able to conceive that her own thoughts, feelings and behavior can have an impact on the child's and vice versa. At the same time, she is able to tease apart the complex influence of her own internal world and her child's without confusing the boundaries between herself and her child (Slade, 2005). In other words, a reflective mother is able to empathize with her child's experience, but without over identifying with it.

VI. Summary and general aims of the study

This study investigated the stability of maternal reflective functioning across different developmental periods, namely infancy and toddlerhood. As has been described above, parental RF is likely dynamically quite different from RF in other relational contexts partly due to the impact of developmental changes in the child upon the mother-child relationship. This study assumes that RF within the context of a parent-child relationship is a dyadic process that is influenced and shaped by the unique tasks of each developmental period. For example, some mothers feel intensely gratified by the relationship with a small baby but become anxious when their children move into toddlerhood. For other mothers the raw emotions of their child's infancy stir up their own unbearable anxieties and so they welcome their toddler's emerging autonomy. And still other mothers are able to enjoy their child's growth and development with minimum conflict and anxiety or their own difficulties generalize throughout their child's development. In other words, parents differ in their capacities to make the

important shifts in adaptation to the child's changing developmental needs. Each developmental stage has its gratifications and losses for the mother. As such it is not expected that parents' reflective capacities will remain the same.

Given that at present there are no other studies examining the developmental phenomenon of RF in parents, the current study was organized around a series of open-ended questions about stability and change in maternal RF rather than a set of hypotheses. The main question addressed the issue of change in RF in the sample of mothers in general. That is, did the mothers' RF change from the time of their children's infancy to the time they became toddlers and if so, what did the change look like? The second question examined the impact of maternal and child attachment status on change in RF at the level of the overall RF. That is, this question looked at whether the development of maternal RF over time is influenced by either the mother's or the child's attachment organization. Maternal attachment was assessed on the AAI when mothers were in the third trimester of pregnancy while the child's attachment was assessed on the Strange Situation Procedure when the child was 14 months of age. The final question considered the influence of maternal attachment status on change in RF with regard to particular affective domains in the parent-child relationship.

CHAPTER THREE

Methods

The present study was based on data collected as part of a larger study of mother-infant attachment, the “Pregnancy Project,” principal investigator Arietta Slade, Ph.D. at the City College of New York. The “Pregnancy Project” was a longitudinal study funded by the National Institute of Child Health and Human Development (RO1-HD24676-05). This research followed sixty-six first time mothers from their last trimester of pregnancy through the second year of their infants’ life and investigated various aspects of mothers’ transitions to parenthood, as well as their developing relationship with their child.

I. Sample:

Participants for the “Pregnancy Project” were recruited during pregnancy by distributing announcements at doctor’s offices, childbirth classes, and maternity shops, as well as advertisements placed in local parent newspapers. Mothers were an average of 31.8 weeks pregnant when they first contacted the project. Participation in the study included three visits to the laboratory during pregnancy, as well as postpartum visits when infants were four, ten, fourteen, and 28 months old. Mothers were reimbursed \$20.00 for their participation following each visit to the research lab. Internal Review Board clearance was granted and all patients signed informed consent.

Participants whose records showed completed data on all of the research measures used in the current study were included in the final data analysis. Thirty mothers with complete research protocols were selected from the total sample involved

in the “Pregnancy Project” and equally subdivided into two groups of mothers: those who attended the 10-month visit to the research lab, the 14-month visit and then again the 28-month visit to the lab.

Participants’ ages ranged from 25 to 40 years, with a mean age of 31.4 years. The sample was predominantly Caucasian (94%); three of the remaining mothers were African-American and one was of mixed racial background. All of the mothers were middle-class, living in the New York City area, most were married and living in stable relationships at the time of data collection. The group was highly educated, with roughly 90 % having graduated from college and over 50 % having pursued some amount of graduate study. They were working as professionals (48%), in public service, business, or white-collar jobs (29%), or as artists (15%). The remaining 8% were either students or unemployed.

All of the participants denied a current history of either physical or psychiatric problems. The babies participating in the study were all healthy at birth (51% girls, 49% boys). Ninety-nine percent of mothers chose to breastfeed, and at one month, 75% reported that breastfeeding was proceeding smoothly, with the remaining 25% reporting mild feeding difficulties. While 23 % of mothers described some feelings of depression at one month, none reported clinical significant levels of postpartum depression.

II. Setting

The data were collected in a research laboratory located on the campus of the City College of New York as part of the “Pregnancy Project”. The lab consisted of two large outer rooms and one smaller inner room. One of the large rooms was set up as a

playroom for the children and used by them under supervision by a graduate student in clinical psychology while their mothers were being interviewed in the adjacent room. The smaller room was separated into two parts by a one-way mirror. On one side of the mirror was video camera equipment set for recording the Strange Situation procedure; on the other side there was a playroom where mother-child interactions took place.

III. Procedures

The current study used data collected at various points during the “Pregnancy Project.” In total women were seen for six visits as part of their participation in the “Pregnancy Project”, they were seen three times during pregnancy and four times following the birth of their child. This study used data collected during the third trimester of pregnancy, 10-month, 14 month and 28-month visits. The attachment status of mothers was obtained from the Adult Attachment Interview (George, Kaplan, & Main, 1985) that was administered during the second visit, while the mothers were still in their third trimester. The level of maternal reflective functioning was assessed from the Parent Development Interviews that were administered during the ten-month visit and then again during the twenty-eight month visit. The ten-month visit also included a videotaped segment in which mothers and their babies engaged in free play together. During the visit when the infant was fourteen-months old, the dyad participated in the filming of the Ainsworth Strange Situation (Ainsworth et al., 1978) to determine infant attachment classification. During the same visit a series of maternal variables were also measured including the Adult Attachment Interview (AAI) (George et al., 1985), the Behavior Symptom Inventory (BSI) (Derogatis, 1979), Crockenberg’s Social Support

Scale (Crockenberg, 1981), and the Caretaking Patterns Questionnaire (Slade, 1987). Each of the instruments and scoring methods used in the present study is described below.

IV. Measures

The present study used three maternal measures and one child measure. The maternal measures included the Adult Attachment Interview, the Infant version of the Parent Development Interview and The Toddler version of the Parent Development interview. The child measure included data from the Strange Situation Procedure. The PDIs' are modifications of the original Parent Development Interview (Aber et al., 1985). The PDI adapted for parents of infants was administered when the child was ten-months-old (Slade et al., 1987). The PDI adapted for parents of toddlers was administered when the child was twenty- eight months old (Aber et al., 1985). The Adult Attachment Interview was administered to mothers during their third trimester of pregnancy. The Strange Situation procedure was conducted with the children and their mothers when the children were 14 months.

A. The Parent Development Interview (PDI)

The PDI (Aber et al., 1985) is a 45-question semi-structured clinical interview that requires approximately 90 minutes to administer. The interview, its scoring criteria and theoretical framework supporting its inclusion in this study were described in detail in the previous chapter. What follows is a brief summary and overview of the measure.

The PDI was originally created to capture a mother's representations of her child, herself as a parent, and her relationship with her child. The PDI is designed

specifically to tap into experiences that are current, and into representations that are still in the process of being formed. The interview is divided into five sections and includes questions that ask the mother to describe times when the child may have felt upset or rejected. There are also questions that ask a mother to choose five adjectives to describe the child, and then asking about the reasons a given adjective was chosen. Other questions focus more directly on the mother's affective experience of parenting, including what makes it pleasurable or difficult. The mother is also asked to think about and describe times when she "clicked" with her child and times when she "didn't click" with her child. The mother is then asked to describe herself as a parent, stating strengths and weaknesses as well as answering questions about specific feeling states such as happiness, neediness, guilt, anger and joy. Next, the mother is asked about her thoughts and feelings regarding separations from her child, as well as about what her child might be thinking and feeling during these separations. In addition, there are several questions that similarly to the AAI ask the mother about how she has been impacted as a parent by experiences with her own parents. Finally, the mother is asked a number of questions about her relationship with her spouse or partner and the ways in which this relationship has been impacted by the birth of the child.

The interview is administered in an informal, conversational manner. Many questions on the PDI have secondary probes to encourage mothers to be as explicit as possible and to give a rich description of their experiences and thoughts about how each member of the mother-child dyad is impacted by the feelings and behavior of the other. For example, the question, "Do you ever feel really angry as a parent?" is followed, if necessary, by the following probes: 1) "What kinds of situations make you feel this

way?; 2) “How do you handle your angry feelings?”; and 3) “What kind of effect do these feelings have on your child?” In order to evaluate the overall quality of maternal representations, the PDI is then scored for maternal reflective function using the coding system described below.

B. Measuring Reflective Functioning on the PDI

Reflective Functioning is scored on an 11-point scale ranging from -1 (negative RF, in which interviews either lack, reject, or distort mentalization) to 9 (full or exceptional RF, in which interviews show an unusually sophisticated and nuanced understanding of mental states in self and others). The scale’s midpoint is a score of 5, which indicates that an individual has an ordinary capacity to make sense of her experience in terms of feelings and thoughts. The addendum to the Reflective Functioning Scoring Manual for application to the PDI (Slade, Bernbach, Grienenberger, Levy, & Locker, 2005) was used to score mothers reflective functioning based on their responses to the questions on the PDI. This addendum follows the same definition of RF that was originally outlined by Fonagy and his colleagues (Fonagy, Target, Steele, & Steele, 1998) in the Reflective Functioning Manual Version 5.0 for use with the Adult Attachment Interview (AAI). Although RF has been extensively studied and scored in reference to the AAI, its application to the PDI has been less frequent. The original RF scale, however, was designed with the intention that it would be applicable to other narrative data sets such as the PDI (Fonagy, Steele, Moran, Steele, & Higgitt, 1993). The judges who coded the 10-month PDIs for RF were advanced doctoral candidates in clinical psychology trained for reliability by Arietta Slade, the first author of the RF manual for the PDI and the Principal Investigator of the

“Pregnancy Project.” The author of this study together with another graduate student, also trained for reliability by Arietta Slade, did the coding of the 28-month PDIs. The judges who coded the 28-month PDIs were blind to the RF levels on the 10-month PDIs. Training for reliability lasted for over one year and all raters have achieved an acceptable level of reliability (.80 agreement or higher on overall RF scores).

C. The Adult Attachment Interview (AAI)

The AAI is a 16 question structured interview that takes 1-1.5 hours to administer. The interview, developed by Mary Main and her colleagues at University of California at Berkley, was designed to reflect the subject’s representation of her early attachment experiences (George, et al., 1985). It asks subjects to describe their early childhood relationship with parents and to provide adjective and examples to describe this relationship. The interview also asks subjects to describe early life stressors such as deaths of significant figures, separations, means of comfort seeking as well as to speculate about why their parents behaved as they did in the past and whether their relationship with their parents changed over time.

The AAI is scored along both categorical and continuous variables. Adults are first rated on the basis of reported experiences with their parents (i.e. the degree to which they felt loved and accepted by their parents etc); they are then rated on questions that assess their attachment state of mind (coherence, rejection, love, anger). On the basis of these ratings as well as the overall reading of the interview, each transcript is then assigned a rating of secure, dismissing, or preoccupied. If discussions of loss or trauma are judged to be unresolved, this is added as a secondary score. All of the AAIs used in this project were previously coded as part of the “Pregnancy Project” and coded

by raters trained for reliability by Dr. Mary Main. The mothers were classified as Secure-Autonomous (F), Dismissing (D), or Preoccupied (E). For the purposes of this study, data analysis was based on the two primary attachment classifications (secure: n = 17 and insecure: n = 11) as there were not enough subjects in each subcategory of insecure attachment to allow for meaningful statistical analysis of the data without collapsing the attachment categories into the two primary ones.

The underlying assumption of the AAI is that the adult's level of security is not based solely on the nature and quality of her early attachment experiences, but rather on the ways in which memories and feelings of those experiences are integrated and organized into a narrative. An adult is judged as secure with respect to attachment when their AAI narrative provides a coherent narrative of their early childhood experiences regardless of the quality of those experiences. Insecure adults with respect to attachment produce AAI narratives that are often poorly organized, incoherent and are full of contradictions and idealization.

The primary use of the AAI in the current study was to examine how maternal attachment state of mind impacts changes in her levels of RF over time.

D. The Ainsworth Strange Situation Procedure

The Strange Situation, a standardized videotaped experimental paradigm, includes eight segments, each approximately three minutes in length, during which the infant is exposed to a number of increasingly stressful situations that are designed to elicit his or her attachment behavioral system. The stressors include being introduced to an unfamiliar setting and an unfamiliar adult, separation from the mother while in the

presence of the stranger, reunion with the mother, being left alone in the playroom, re-exposure to the stranger, and lastly, reunion with the mother after being left alone.

The Strange Situation is widely regarded for its reliability and validity as an assessment measure of infant attachment (Ainsworth et al., 1978). This study utilized the Strange Situation coding procedures (Ainsworth et al., 1978; Main & Solomon, 1990) to determine infant's quality of attachment to his or her mother. Infants were assigned to one of the four primary attachment classifications: Secure, Avoidant, Resistant, or Disorganized. Data analysis in this study was based on the two primary attachment classifications (secure: $n = 17$ and insecure: $n = 11$).

Dr. Jude Cassidy and her research team at Pennsylvania State University previously coded the Strange Situation data as part of the "Pregnancy Project". Dr. Cassidy has published numerous papers that have relied on the Strange Situation data. Dr. Cassidy trained all coders for this study for reliability. The rate of agreement for the attachment classifications among raters was 65 %.

CHAPTER FOUR

Results

The purpose of the present study was to examine stability and change in maternal reflective functioning in early childhood. The 30-first time mothers in this study were assessed for Reflective Functioning on the Parent Development Interview (Aber et al., 1985; Slade et al., 2003) administered at two intervals, when their children were ten-months old (Time 1) and then again when the children were 28-months old (Time 2). In both administrations, the subjects' Reflective Functioning on the PDI was assessed on an 11-point scale ranging from -1 (negative RF, in which interviews either lack, reject, or distort mentalization) to 9 (full or exceptional RF, in which interviews show an unusually sophisticated and nuanced understanding of mental states in self and others) using the Reflective Functioning Scale (Slade et al., 2005). The scale's midpoint is a score of 5, which indicates that an individual has an ordinary capacity to make sense of her experience in terms of feelings and thoughts.

The lowest score given on the PDI at 10-months was a 2, and at 28-months the lowest score was a 4. The highest score given on the 10-month PDI was an 8, and at 28-months the highest score was a 7. Table 1 shows the distribution of RF scores on the PDI at 10 months (Time 1), and Table 2 shows the distribution of RF scores on the PDI at 28 months (Time 2).

Table 1*Frequency of RF scores on the Parent Development Interview at Time 1 (10 months)*

RF Score	Frequency	Percent of sample (N=30)
2	1	3.3
3	4	13.3
4	8	26.7
5	8	26.7
6	2	6.7
7	6	20
8	1	3.3

Table 2*Frequency of RF scores on the Parent Development Interview at Time 2 (28 months)*

RF Score	Frequency	Percent of sample (N=30)
4	2	6.7
5	13	43.3
6	13	43.3
7	2	6.7

1. *Change in Reflective Functioning from Time 1 to Time 2 on the overall sample.*

The first question this study aimed to answer was whether maternal RF would change or remain the same between the child's 10th and 28th month of life. Overall, 25 out of 30 mothers showed change in their RF from Time 1 to Time 2. Table 3 on page 48 displays the magnitude and direction of change in RF over the eighteen-month period on an individual basis. At Time 1 (i.e. 10 months) mothers RF scores fell at average or below average levels, or scores of 4 and 5 respectively. At Time 2 (i.e. 28 months), on the other hand, all of the mothers had average or above levels of RF. Out of 25 mothers whose RF changed, 18 cases showed increase in their RF, and 7 cases showed a decrease in their reflective capacities. In all 5 cases where RF stayed the same over the eighteen-month study period, mothers scored within the ordinary (5) range.

The overall mean RF score for the 10-month old group was 4.93 and for the 28-month group was 5.50. A more formal, statistical assessment of these changes indicates that, on average, the sample of mothers showed a statistically significant increase of more than a half a point in their RF from the time their children were infants (10 months) to the time they became toddlers (28 months) ($x = .57$, $t = 2.17$, $df = 29$, $p = .038$). That is, as a whole the sample of mothers showed increase in their RF over their eighteen-month period, with most mothers having average or higher RF scores at Time 2.

Table 3
Change in RF ratings on the Parent Development Interviews from Time 1 to Time 2

Subject	PD11	PD12	RF Change
1	8	6	-2
2	7	6	-1
3	5	5	0
4	7	7	0
5	4	5	+1
6	7	5	-2
7	4	6	+2
8	4	6	+2
9	5	5	0
10	6	5	-1
11	5	6	+1
12	4	5	+1
13	5	6	+1
14	5	5	0
15	5	7	+2
16	4	5	+1
17	4	6	+2
18	4	6	+2
19	3	5	+2
20	7	6	-1
21	6	6	0
22	3	6	+3
23	2	4	+2
24	7	5	-2
25	5	6	+1
26	3	5	+2
27	5	6	+1
28	4	5	+1
29	3	4	+1
30	7	5	-2
Mean	4.93	5.50	0.57

Forty percent of the sample had scores that were 2 points apart; 40 % had scores that were 1 point apart, and 16.7 % had the same score on both interviews. 3.3 % had scores that were 3 points apart. Table 4 shows the intra-subject discrepancies between scores.

Table 4
RF score discrepancies on the overall sample

RF Change Score	Frequency	Percent of sample (N = 30)
-2	4	13.3
-1	3	10.0
0	5	16.7
1	9	30.0
2	8	26.7
3	1	3.3

2. *Maternal Reflective Functioning and mother's pre-birth attachment status.*

The second analysis considered the relationship between mothers' attachment status (secure vs. insecure) as assessed by the AAI in the last trimester of pregnancy and stability and change in maternal RF from Time 1 to Time 2. This analysis was performed in order to consider in more detail the relationship between attachment and RF. In particular, this analysis considered the longitudinal impact of the mother's attachment state of mind on her reflective capacities over time.

The comparison of changes in the reflective functioning of secure versus insecure mothers revealed that the **secure** group displayed no change in their RF from Time 1 to Time 2 ($x = .01$, $SD = 1.33$). On the other hand, the **insecure** mothers showed more than a 1.25-point increase in their RF over the same interval of time ($x = 1.27$, $SD = 1.49$). Moreover, a formal significance test of the difference between these two mean change scores indicated that they are significantly different ($t = -2.47$, $df = 26$, $p = .02$). In other words, the RF of mothers with histories of insecure attachment showed significant change from Time 1 to Time 2, while the RF of mothers with secure attachment did not. Furthermore, the direction of change in RF for the insecure mothers was change in the direction of increase in RF.

This finding indicates that the increase in RF noted in the first analysis (i.e. overall sample) must be seen as a function of the insecure mothers' increase in RF. That is, when the sample's stability in RF over time was examined along maternal dimensions of security and insecurity, it was the increase in the RF levels of mothers in the insecure sample that determined the increase in RF on the overall sample since the RF levels of the secure mothers remained stable.

The next step considered within group change in RF as defined by the mother's attachment status. Table 5 on the next page shows within group mean change in maternal RF by mother's attachment status. Again using two, single sample t-tests the findings indicated that for **securely** attached mothers there is, as anticipated, no statistical evidence of change in RF from Time 1 to Time 2 ($x = .01$, $t = 0.00$, $df = 16$, $p = 1.00$). In contrast, for **insecure** mothers the more than 1.25-point increment is statistically significant ($x = 1.27$, $t = 2.83$, $df = 10$, $p < .02$). In other words, insecure mothers evidenced more change in their RF over time than the secure mothers. Out of the eleven women with the classification of insecurity on the AAI, 9 showed increase in the RF from time 1 to Time 2, and 2 showed decrease in their RF. Table 6 summarizes the mean change in maternal levels of RF between Time 1 and Time 2 by attachment classification.

Table 5
Within-Group Mean Change in Maternal Reflective Functioning by Maternal Attachment Status

AAI	N	Mean	SD	t	df	sig (2-tailed)
Secure	17	.00	1.22	.00	16	1.00
Insecure	11	1.27	1.49	2.83	10	.018*

Note: AAI = Adult Attachment Interview; $p < .05$

Table 6
Mean Change in RF from Time 1 to Time 2 by Maternal Attachment Classification

Attachment Classifications	Mean RF Time 1	Mean RF Time 2	Change
Mother Insecure	4.18	5.45	1.27
Mother Secure	5.36	5.52	.16

3. *Maternal Reflective Functioning and child attachment.*

The study also examined the relationship between child attachment status and maternal reflective functioning, particularly whether the attachment status of the child (i.e. secure vs. insecure) impacts stability and change in maternal RF over the eighteen-month time period. When secure and insecure children were compared with regard to their mean maternal RF scores, the analysis revealed that the mothers of **securely attached children** display a modest increase in their reflective functioning over the eighteen-month period ($x = .29$, $SD = 1.33$). On the other hand, the mothers of **insecurely attached children** display nearly a one-point increase over the same interval of time ($x = .81$, $SD = 1.51$). However, a formal significance test of the difference between these two mean change scores showed that they are not significantly different (t

= -1.01, $df = 28$, $p = .32$). That is, while the RF scores of mothers with insecure children showed more increase from Time 1 to Time 2 than those of secure children the two groups did not significantly differ in their degree of change in RF over eighteen months.

In order to examine change in RF among mothers of both securely and insecurely attached children more specifically a within-group analysis was performed. Table 7 on the next page displays the relevant data. Based on two, single sample t-tests, this table indicates that for mothers of **securely attached children** there is no statistical evidence of increase in RF over the eighteen month interval, ($x = .29$, $t = 0.81$, $df = 13$, $p = .44$). On the other hand, for mothers of **insecurely attached children**, the nearly one point increment increase is indeed statistically significant ($x = .81$, $t = 2.15$, $df = 15$, $p < .05$). These results indicate that the RF of mothers of children with insecure attachment showed more increase than the RF of mothers with securely attached children. It is of interest to note that not a single mother of the 16 insecurely attached children had the same RF score at both points in time. More specifically, RF increased in 11 out of 16 mothers of insecurely attached children, while RF decreased in five cases from the same group. Table 8 summarizes the mean change in maternal RF levels from Time 1 to Time 2 by child attachment classification.

Table 7
Within-Group Mean Change in Maternal Reflective Functioning by Child Attachment Status

SS	N	Mean	SD	t	df	sig (2-tailed)
Secure	14	.29	1.33	.81	13	.435
Insecure	16	.81	1.52	2.15	15	.049*

Note: SS = Strange Situation; $p < .05$

Table 8
Mean Change in RF from Time 1 to Time 2 by Child Attachment Classification

Attachment Classifications	Mean RF Time 1	Mean RF Time 2	Change
Child Insecure	4.50	5.31	.81
Child Secure	5.42	5.71	.29

4. *The predictive power of maternal and child attachment on change in RF*

In order to determine the relative predictive power of defining attachment with respect to either the child or the mother for the purpose of predicting the degree or amount of change in RF from Time 1 to Time 2, a two-way analysis of variance was conducted. As seen in Table 9 on the next page, the mother's attachment status is the only statistically significant effect in this analysis ($F = 5.43$, $df = (1,23)$, $p = .029$). For comparative purposes the "estimated marginal means" which are directly referenced by these statistical significance tests clearly demonstrate a noticeably larger difference in the means of the two mother attachment statuses (insecure vs. secure, 1.40 vs. .049) than is seen between the means of the two child attachment statuses (insecure vs. secure, .67 vs. .78). Table 10 summarizes the difference in the means by the attachment status. These results indicate that when change in RF is examined by either the maternal or

child attachment status, maternal attachment status has the strongest influence in terms of the degree of change in RF over time.

Table 9
The influence of mother and child attachment on change in RF

Source	SS	df	MS	f	Sig.
Child Attachment	.068	1	.068	.036	.851
Mother Attachment	10.207	1	10.207	5.427	.029*
Child & Mother Attachment	2.386	1	2.386	1.268	.272
Error	43.256	23	1.881		
Total	64.000				

* $p < .05$

Table 10
Estimated Marginal Means by Attachment Status

	<i>Mother Attachment</i>	<i>Child Attachment</i>
Secure	.048 (n = 16)	.667 (n = 12)
Insecure	1.396 (n = 11)	.777 (n = 15)

5. *Change in RF and affective dimensions of parenting*

Given the above findings about the long-term influence of maternal attachment status on RF, the fifth analysis assessed change in RF on several specific “demand²” questions asked during the PDI. These were those questions that asked the mother to reflect on negative aspects of either her own or her child’s emotional experience, or to reflect on challenging relational interactions. The regulation of affect, especially negative affect, within the parent-child relationship is at the center of RF theory. Thus, a parent’s overall strategy for managing emotionally overwhelming situations and the associated anxiety is what determines whether she is able to maintain a mentalizing stance and engage with actively thinking about the situation instead of imposing a premature solution. More specifically, the analysis was conducted to examine the impact of maternal attachment status on change in RF from Time 1 to Time 2 on specific PDI demand questions in order to determine how mothers manage negative affect in the parent-child relationship during different developmental periods. That is, in addition to assigning an overall RF score for each PDI, demand questions that address negative affect were also individually scored for RF. Table 11 on the next page summarizes mean changes in RF at the level of the specific PDI questions and maternal attachment status. On the PDI demand questions are questions that specifically ask the subject to demonstrate her capacity for reflective functioning via probes that are often asked as follow up to many questions (i.e. “How did you feel? How do you think your child felt?”). There were fifteen PDI demand questions, however only eleven of those questions address specifically either maternal or child negative affect. Only eight

² On the PDI “demand” questions are those questions that specifically pull for an individual’s mentalizing capacity and are scored for RF.

questions were included in the analysis due to missing data on three of the demand questions (questions six, eight and eleven from Table 11).

Table 11

Mean RF on the PDI demand questions by mother attachment

RF demand questions on the PDI:	Maternal Attachment	Mean RF from Time 1 to Time 2
1) Can you describe a time when you and C really <u>did not click</u> ?	Secure	-.26
	Insecure	1.50
2) What gives you the most <u>pain or difficulty</u> in being a parent?	Secure	-.26
	Insecure	.63
3) Do you ever feel really <u>needy</u> as a parent?	Secure	.62
	Insecure	1.09
4) Do you ever feel really <u>angry</u> as a parent?	Secure	.53
	Insecure	2.36
5) Do you ever feel really <u>guilty</u> as a parent?	Secure	1.43
	Insecure	2.00
6) When your child is <u>upset</u> what does he/she do?	Secure	-
	Insecure	-
7) Does your child ever feel <u>rejected</u> ?	Secure	-.53
	Insecure	.50
8) Have <u>you ever felt rejected</u> ?	Secure	-
	Insecure	-
9) How do you think your <u>child feels when you leave</u> and when you return?	Secure	.62
	Insecure	1.20
10) How do you feel when you <u>leave</u> your child and when you return?	Secure	.20
	Insecure	1.5
11) Do you ever feel like you are <u>loosing</u> your child?	Secure	-
	Insecure	-

5a. Maternal attachment status and change in RF on PDI demand questions.

The final analysis considered the impact of maternal pre-birth attachment status on mother's capacity to reflect on her own and her child's negative affect over time. Table 12 on the next page illustrates mean change in maternal RF on the specific PDI demands questions by mother's attachment status. The results revealed significant differences in mean RF scores between the **secure** and **insecure mothers** on questions that asked them to reflect on a time when they did not click with their child ($t = -2.49$, $df = 23$, $p = .020$), when they experienced feeling angry as a parent ($t = -2.73$, $df = 24$, $p = .012$) and their feelings about being separated from their child ($t = -2.33$, $df = 23$, $p = .029$). Specifically, the RF scores for **insecure** mothers increased from Time 1 to Time 2 by *one and a half points* on questions that asked them about the time they did not click with their children ($x = 1.5$, $SD = 1.77$) and feelings about being separated from their children ($x = 1.5$, $SD = 1.50$) and nearly *two and a half points* on anger ($x = 2.36$, $SD = 1.74$). Together, these findings illustrate that mothers with histories of insecure attachment showed higher RF levels at Time 2 on questions that asked them to reflect on their own or their child's negative feelings than mothers with secure attachment on similar questions whose RF levels remained stable between infancy and toddlerhood.

Table 12*Mean Change in RF scores on the PDI demand questions by maternal attachment status*

<i>PDI demand questions</i>	<u>Secure</u>			<u>Insecure</u>			<i>t</i>	<i>df</i>	<i>Sig. (2 – tailed)</i>
	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>			
Do not click	15	-.26	1.70	10	1.50	1.77	-2.49	23	.020*
Pain	15	-.26	1.66	11	.63	1.68	1.35	24	.188
Needy	16	.62	1.89	11	1.09	1.37	-.698	25	.492
Guilty	16	1.43	1.99	11	2.00	1.61	-.775	25	.446
Anger	15	.53	1.64	11	2.36	1.74	-2.73	24	.012*
Child rejected	15	-.53	1.92	10	.50	2.27	-1.22	23	.233
Child separation	16	.62	1.40	10	1.20	1.61	-.957	24	.348
Maternal separation	15	.20	1.26	10	1.50	1.50	-2.32	23	.029*

$p < .05$

Finally, a within group analysis of the mean changes in RF and PDI demand questions revealed a number of significant results, particularly in the insecure group. Table 13 on the next page presents the results on the impact of maternal attachment status on within group change in maternal RF at the level of specific PDI questions. As evident from the Table, based on two, single sample t-tests the results indicate that within the secure group only guilt question showed a statistically significant increase in RF ($x = 1.43$, $t = 2.87$, $df = 15$, $p = .012$) with child separation question showing a trend towards significance ($x = .62$, $t = 1.77$, $df = 15$, $p = .096$). A much richer picture emerges when change in the mean levels of RF of insecurely attached mothers is examined. Out of eight questions used in the analysis, all but two showed significant results (see Table 13 below for summary). Again, mothers with insecure attachment showed a much greater pattern of increase in their RF on their own and their child's

negative affect across the eighteen-month study period than mothers with secure attachment who showed more stability rather than change.

Table 13

Maternal Attachment and Within Group change in Maternal RF at the level of the PDI demand questions

<i>SS</i>	<i>PDI demand questions</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig (2-tailed)</i>
<u>Secure</u>	Do not click	15	-.26	1.70	-.604	14	.556
	Pain	15	-.26	1.66	-.619	14	.546
	Needy	16	.62	1.89	1.32	15	.206
	Guilty	16	1.43	1.99	2.87	15	.012**
	Angry	15	.53	1.64	1.25	14	.229
	Child rejected	15	-.53	1.92	-1.07	14	.301
	Mother separation	15	.20	1.26	.61	14	.550
	Child Separation	16	.62	1.40	1.77	15	.096***
<u>Insecure</u>	Do not click	10	1.5	1.77	2.66	9	.026**
	Pain	11	.63	1.68	1.24	10	.240
	Needy	11	1.09	1.37	2.63	10	.025**
	Guilty	11	2.00	1.61	4.11	10	.002*
	Angry	11	2.36	1.74	4.48	10	.001*
	Child rejected	10	.50	2.27	.696	9	.504
	Child Separation	10	1.20	1.61	2.34	9	.044**
	Maternal Separation	10	1.50	1.50	3.14	9	.012**

Note: SS = Strange Situation; PDI = Parent Development Interview

*p < .01; ** p < .05; ***p < .10

Summary of the findings

In this study, the findings revealed that maternal and child attachment patterns (secure, insecure) were linked significantly to the degree of change in levels of RF from 10 to 28 months. That is, mothers with histories of insecure attachment as well as mothers of insecurely attached children showed a statistically significant increase in their levels of RF from 10 to 28 months. On the other hand, the RF levels of mothers with histories of secure attachment as well as mothers of children with secure attachment did not show significant change between 10 and 28 months. The secure groups' levels of RF (mothers and children) remained in the slightly above average range at both points in time. Thus, the findings showed that stability and change in RF are related to patterns of attachment security and insecurity, where *secure attachment* is linked to *stability in RF* over time and *insecure attachment* is linked to *change in the direction of increase in RF* over time. Of particular note is that at 28 months the average RF for the insecure mothers increases to such an extent that it approaches the RF of the secure mothers (secure: $x = 5.71$; insecure: $x = 5.45$).

Further analysis confirmed that it is maternal attachment status rather than the child's that has a significantly stronger influence on the degree of change in RF over time. Insecure mothers had higher RF levels with their toddler age children than they did with their infant age children, while secure mothers' levels of RF remained stable and did not change over time. Given the strong predictive power of maternal attachment status on change in RF over time, the final set of findings examined change in RF on questions that measured mothers' ability to reflect on their own and their children's negative affect. In this study, mothers were asked questions about feelings of guilt,

anger, neediness, maternal and child separation distress, rejection, as well as times the parent did not click with their child and times she experienced pain and difficulty in her relationship with the child. These questions were then scored for RF. The analysis revealed that while mothers in both attachment groups (secure, insecure) showed significant change in their levels of RF on questions pertaining to negative affect, the insecurely attached mothers showed a much greater pattern of change in the direction of increase in RF on almost all questions addressing dimensions of negative affect in parenting included in the analysis. With the exception of a single demand question (i.e. guilt) where securely attached mothers' RF increased, the overall pattern for secure mothers showed stable RF levels from 10 to 28 months. It was anticipated that toddlerhood would be a particularly challenging time for the insecurely attached mothers likely because of their own psychological vulnerabilities and difficulties around management of ambivalence and conflict. Contrary to expectation, however, we can speculate that some aspects of a child's transition into toddlerhood such as developing a more robust sense of self, acted as a catalyst, a developmental push of sorts for these insecurely attached women and propelled their previously less than average RF skills into more fully developed abilities.

The study's findings add to the growing research on the nature of mentalization and raise a number of interesting issues about the development of mentalization in an ongoing relationship, especially a parent-child relationship, which have important implications on how interventions aimed at enhancing RF are designed. In the section that follows the findings are discussed in detail.

CHAPTER FIVE

Discussion

This study looked at stability and change in maternal reflective functioning (RF); that is, how mothers represent and make meaning of their child's emotional experience and their own experience of parenting over a period of eighteen months. The aim of the study was to understand whether parental reflective functioning (PRF) changes over time and to examine the concept of parental RF in developmental terms. At present, no other longitudinal studies of PRF exist, and the current study is the first to look at changes in maternal RF during early childhood, namely during infancy and toddlerhood. This study's hypothesis was that a mother's capacity to see her child as a separate and intentional being will be influenced both by the child's developmental stage, as well as by accompanying changes in the parent-child relationship. It was suggested that mothers would vary in their capacities for RF over time and that some of the differences observed would have something to do with how different mothers adapt to their child's developmental transitions.

Importantly, the current study examined the question of stability and change in parental reflective functioning against the backdrop of maternal and child attachment organization. Maternal quality of attachment was the strongest predictor of change in RF over time. The findings revealed an unexpected pattern of change, however: while maternal mentalization was indeed shown to change alongside developmental changes in the child, it did so *primarily for mothers with a history of insecure attachment*. Securely attached mothers showed stable levels of RF between their children's infancy and toddlerhood and *the quality of their mentalizing did not – for the most part – seem*

to be impacted by their children's developmental transitions. Secure mothers were able to mentalize with an equal degree of fluency about their infants as well as their toddlers, and apart from the slight increase in their feelings of guilt with their toddler age children, maintained average or higher RF skills at both points in time ($X = 5.36$ vs. 5.52). By contrast, however, the RF levels of insecure mothers showed an *increase* from the time their children were infants to the time they became toddlers ($X = 4.18$ vs. 5.45). That is, they found it difficult to hold their *infant* child's mind in mind and became more adept at mentalizing when their children became *toddlers*. Significantly, most of the insecure mothers' RF increased to the point of their being able to acknowledge and name their children's and their own mental states, *especially* negative feelings.

As will be addressed below, the interpretation of this finding is necessarily complex. On the one hand, RF levels changed for insecure but not secure mothers. This does not mean, however, that the secure mothers' RF did not shift in accord with their child's development. In fact, as I will attempt to make clear in the sections that follow, it was the secure mothers who seemed most flexible in their mentalizing abilities, and who were able to successfully mentalize regardless of the nature and organization of their child's cues. That is, RF was quite stable in secure mothers but this stability was flexible and open; for insecure mothers, however, the overall levels of RF shifted from inexplicit (scaled score of 4.18) to average and even higher levels of mentalization (scaled score of 5.45) during the transition into the toddler stage. Thus, it was only when their children were verbal and more explicit about their internal experience that insecure mothers were able to "get it." Secure mothers could far more easily make sense

of the ambiguous, non-verbal, and largely behavioral cues of their infants and their own intense feelings evoked by parenting a young baby than could the insecure mothers, who needed more concrete and verbal cues to make sense of their children's minds and their own feelings.

An additional layer of complexity is provided by the fact that even in toddlerhood, insecure and secure mothers differed in *what* they mentalized. Thus, secure mothers were fairly uniform in their RF scores across affective content, whereas insecure mothers tended to have the highest scores on questions about negative affect, namely *anger*, *guilt*, *separation distress* and *not clicking* or connecting with their child. That is, they were most able to mentalize when it came to talking about conflict, which seemed to be the most salient aspect of their parenting experience during this period. What we cannot know from the present analysis is whether the fact that they could, during the toddler period, acknowledge distress indicates that they could actually modulate and regulate it as effectively as secure mothers. This pattern, however, does suggest, by implication at least, that mentalizing about younger children, particularly preverbal infants, may represent a special set of challenges for parents especially those parents whose own attachment history has compromised their mentalizing skills.

The developmental trajectory of parental RF

These findings raise a number of interesting questions. First among them is whether insecure mothers' mentalizing capacities are lacking in ways that make the infancy period particularly challenging for them. In order to answer this question, it is first necessary to consider what mentalizing capacities are required to make sense of the

infant's experience, and whether these are different from those that are required to make sense of the toddler's experience. Along the same lines, it will be necessary to distinguish the capacities the mother must rely on to make sense of her own experience during her child's infancy, and those that will help her make sense of her own experience during the toddler phase. Thus, it is important to take into account the way the developmental changes in the child interact with the parents' own ability to understand and hold them in mind.

Fonagy and Target (1996) recognize that mentalization is a developmental process and describe a continuum on which young children develop their mentalizing capacities, starting from physical reality where internal experiences are viewed as concrete representations of external reality to fully reflective psychic reality. "Thus, reflective capacity is part of a line of development that starts from the affective attunement of the first months, through the empathic sensing and responding to the mood of another as observed in infants of 8 months, to the understanding of others intentions" (Fonagy et al., 1991, p. 204). The notion of viewing mentalization along a continuum can also be applied to the development of parental reflective capacities with very young children. Although this notion has yet to be theoretically crystallized, Fonagy has pointed in that direction when he observed that most parents execute mentalization in different ways. He noted that some parents "are alert to the earliest indications of intentionality, while others may need stronger clues before they can perceive the child's mental state and modify their behavior accordingly" (Fonagy, 2006, p. 79). Slade (2005) also emphasized that parental mentalization manifests differently depending on the input that a parent receives from the child. She observed that a

parent's re-presentation of the child's affective states "[...] takes place in different ways at different stages of the child's development and of the mother-child interaction" (Slade, p. 271, 2005). Similar to Fonagy, Slade believes that for parents of young children, mentalization skills change in line with the child acquiring a wider repertoire of communication skills. As she argued, "it is the mother's observations of the moment to moment changes in the child's mental state, and her representation of these *first in gesture and action, and later in words and play*, that is at the heart of sensitive caregiving" (italics mine, Slade, 2005, p. 271). Both Fonagy and Slade seem to be implying that the child's age and developmental needs shape parental reflective capacities in some direct and specific ways.

Parental reflective functioning is especially crucial during the formative years of infancy and toddlerhood when children develop the basic capacities for self-organization, affect regulation, and interpersonal relatedness (Slade, 2005). The tasks of parenting during these early years are far from simple, as children communicate primarily through behavioral cues and parents are called upon to decipher these cues as a means of understanding their child's mental states. In this way, parental reflective functioning often involves a parent mentalizing about a child who is in the "throes of developmental changes" (Slade, 2005; Slade et al., 2005). For parents of infants and toddlers, this requires that a parent think developmentally about their child's growing abilities (cognitive, motor, and verbal) and adjust their response and behavior accordingly (Slade, 2005). As Slade observed, a parent has to be "able to *imagine what it feels like to be a young child* while at the same time recognizing that this inference is limited by their inherent developmental disparity" (italics mine, Slade, et al., 2005, p. 3).

Essentially this requires a parent to be able to simultaneously mentally occupy and alternate between consciously reflecting on mental states and attunement in less deliberately observable ways. With infants, mothers rely on more intuitive processes; in this way the mutuality of the relationship lies more in the mother's hands rather than that of the child. For toddlers, who know the mother as a subject with her own mind, the relationship is based on more reciprocity between mother and child.

Differences between how mothers mentalize about infants vs. toddlers

At the core of high parental reflectiveness is the parent's ability to see their child, *even when he is a young infant*, as a complex, intentional being with his own needs and desires that are different from her own (Slade, 2005, p. 276). As will be described below, this process is closely tied to the parent's capacity to attune to and make sense of the different ways that infants and toddlers communicate their intentions - that is their needs, thoughts, and feelings - to others.

It is well recognized that in the mother-infant relationship the interaction is dyadically organized, with both mother and child influencing the patterns of communication (Beebe, et al., 1988; Trevarthen, 1979). Likewise, to paraphrase Winnicott, at the beginning a mother and a baby exist as an interdependent union. This type of early mutuality is likely to influence the mentalizing processes of parents with infants where a mother's capacity to identify enough with the baby and his infantile states so as to allow for intuitive knowing of the meaning of his different communications is how she 'knows' and mentalizes the baby's experience. This is what Winnicott (1965) referred to as primary maternal preoccupation – a special state, an

“illness” as he described it, that a mother succumbs to in the early months of parenting that allows her to intuitively know what the baby needs from her. Fonagy and his colleagues see parental mentalization, especially with younger children, as a process not unlike the one described by Winnicott. They state that RF of parents with very young children, happens largely outside of the parent’s conscious awareness and builds on the mother’s unconscious capacity to gather in the pieces of the child’s self and offer him back an experience of coherence between her mind and his. They write: “[...] unconsciously and pervasively, the caregiver ascribes a mental state to the child with her behavior, treating the child as a mental agent. We assume that this, by and large, is a mundane process, and that it is a process that is preconscious to both infant and caregiver, inaccessible to reflection or modification” (Fonagy et al., 2004, p. 54).

Thus, with infants, mothers must rely on the ability to make sense of the nonverbal, sensory, and bodily cues, cues that are often subtle and fleeting. Shai and Belsky (in press) make a similar point in their recent work describing what they call *Parental Embodied Mentalization (PEM)*. This construct and a method of measuring parental mentalization takes into account the communicative abilities of preverbal infants and refers to the parents capacity to “... implicitly conceive, comprehend, and extrapolate the infant’s mental states [...] from the infant’s *whole body kinaesthetic expressions* and to adjust *their own kinaesthetic patterns* accordingly” (italics in the original, p. 4). Importantly, these authors point out, “reflecting a relational perspective, parental kinaesthetic behaviors are not considered in isolation, but always in reference to those of the infant” (p. 4). Most “good-enough” mothers, to use Winnicott’s term, are quite efficient in reading their infant’s emotional states, and mothers who are attuned

and reflective tend to adapt their own affective states to match their infants (Fonagy et al, 2002). Yet, mothers are often unaware of *how* they know what they know about their infants. This process is largely intuitive and not “consciously” intentional representing, as Bollas (1987) eloquently stated, “the unthought known”.

In the period between infancy and toddlerhood, children transition from being totally dependent “lap babies” into and through the separation-individuation phase of a now walking and talking toddler (Mahler, Pine, Bergman, 1996). This transition marks the shift not only in how mothers and children communicate with one another but also the more subtle, internal shift of the child now recognizing his mother as a subject in her own right with feelings and desires that are separate from his. The change from the more symbiotic way of relating to a more differentiated one also marks the shift in how mothers mentalize about their now more verbal children. A verbal child makes matters much more certain for his mother than a preverbal baby whose cues about his distress are inexplicitly marked. This is a time when the child acquires the capacity to teach the mother something about his needs, through his growing communication skills and better motor control. Also, with the child’s subjectivity now imposing itself more actively on the mother, there is less room for the mother to “shape” her child according to her own needs and instead she finds herself in a back and forth process of negotiating her mind against that of her child’s. With a toddler, the mother “may feel confident that she *‘finally knows, for the first time’* what it is that the child wants” (italics mine, Mahler, Pine, Bergman, 1996, p. 263).

Thus, the mother of an infant is mentalizing about what can only be *implicitly* known and, as described above, inaccessible to conscious reflection whereas the mother

of a toddler, who uses more deliberate means of communication (i.e., pointing, vocalizing) is mentalizing about experience that is, by contrast, fairly *explicit* and thus available for more deliberate reflection.

Explicit and Implicit dimensions of mentalizing and its relevance for parental RF

As described, reflecting on the experience of infants and toddlers requires different types of responsiveness on the part of the parent. That is, mentalization processes in parents of very young children are organized along two poles: explicit and implicit dimensions of mentalization. Fonagy describes mentalization as *explicitly and implicitly* interpreting the actions of oneself and other as meaningful on the basis of intentional mental states such as desires, needs, beliefs and feelings (Allen, 2006). That is, Fonagy recognizes implicit and explicit dimensions of mentalization as two modes of mental functioning that exist on a continuum from each other. These dimensions provide a useful framework for considering the developmental aspects of parental reflective functioning and especially the importance of considering how the child's abilities influence the process by which a parent engages her mentalizing skills.

Explicit mentalizing occurs in a *linguistic, declarative* form and involves active thinking and talking about mental states in the self and others (Allen, 2006). As Allen explains, "we are continually creating stories about mental states. Any feeling calls for a story: What was the situation? What happened? How did you interpret it? What did you do? And any feeling calls for a story about other feelings." (2006, p. 10). Thus, explicit mentalizing is a conscious, deliberate and off-line process that involves

elaborating verbally on internal representations of mental states in self and others (Allen, 2006).

However, mentalization also entails a non-verbal aspect, where mental states may be understood but not fully articulated. That is, while the capacity to interpret the behavior of self and others in mental state terms may be evident in verbal expression, this is not always the case, and mentalization may manifest in ways that are not always immediately observable. Implicit mentalizing connotes precisely this non-verbal, intuitive process, involving mostly non-conscious mirroring behaviors of the other's emotional state that occurs naturally and without much conscious awareness. Implicit mentalizing operates largely outside of "conscious" verbal experience. The growing recognition of this aspect of experience can be seen in the current shift of psychodynamic psychotherapy, where the goal of translating implicit emotional states into more explicit, verbally elaborated ones is beginning to incorporate more recent, relationally based models that highlight the implicit, procedural mechanisms themselves as guiding principles of psychic change³ (e.g. Fonagy, 1998; Lyons-Ruth, 1999; 2000; Stern; 1998). Similarly, research on mother-infant early interactions is rich with examples of nonverbal, affectively charged communications between babies and their mothers organized around highly synchronized patterns of gaze, touch, vocal rhythms and bodily contact (Beebe, Jaffe, & Lachman, 1992; Beebe et al., 2000; Trevarthen,

³ This work is being carried out by the Boston Change Process Study Group (BCPSG) made up of Karlen Lyons-Ruth, Louis Sander, Nadia Bruschiweiler-Stern and Daniel Stern among others who have focused on understanding how the micro-processes of change in the therapeutic relationship are based on implicit, non-verbal elements and how new levels of organization between patient and therapist emerge without using language as a communication. These psychoanalysts-researchers integrate developmental infancy research with psychoanalytic theory to advance a model of psychotherapeutic change that privileges 'implicit relational knowing' (moments of affective meeting between patient and therapist) over more traditional, verbal insights (Lyons-Ruth, Bruschiweiler-Stern, Harrison, Morgan, Nahum, Sander, Stern & Tronick, 1999).

1979). For the most part, adult communication usually incorporates elements of both implicit and explicit moments of mentalization. So, as Lyons-Ruth (2000) notes, “Knowing in the procedural or enactive sense is clearly available from earliest infancy and is active continuously throughout adult life, operating in constant interplay with symbolic forms of knowing and meaning” (p. 90). However, in the case of parent-child dyads, especially when the child is a *preverbal* infant who has not yet mastered language and motility, more implicit modes of interacting and communicating are central. Likewise, Shai and Belsky (in press) point out that “whereas verbal manifestations of the parent’s representations of the child may be meaningful and, thereby, developmentally significant for an older child, it is unlikely that such mentalizing could be directly experienced in a meaningful way by a preverbal infant”(p. 3). While most parents likely naturally shift between both implicit and explicit modes of mentalizing, each of these dimensions is more active depending on the age of the child.

Impact of maternal attachment organization on mentalization

The results of this study indicate that a mother’s attachment organization plays a significant role in the degree to which she can move between implicit and explicit types of mentalizing. We can speculate that secure mothers can integrate implicit and explicit ways of knowing more seamlessly than the insecure mothers. They can shift between intuitive and verbal modes of relating with their infants and, if asked to describe the process during an interview, they can do so by using mental state language with fair amount of ease. That is, secure mothers appear to be more adept at using a range of

cues and sensations to help them imagine and come to know their babies, imaginings that they can integrate and articulate in a verbal, linear way. They can both enter into their child's world, and remain separate from it. And, when their babies are older, they are able to move flexibly into more explicit mentalization, responding to their child's language and symbolic processes, etc. These are mothers who understand the complexities of how people work and have the internal resources to handle a range of difficult and contradictory feelings that arise in their experience of being parents to their children. In this way, secure attachment history and high RF skills provide a mother with a set of internal capacities that help her to cope with the inevitable challenges of parenthood and not become "... unduly upset by the infant's distress and [...] know not to take it personally" (Holmes, 2006, p. 45). It is this ability not to "take it personally" that contributes to the secure mothers' RF remaining stable during their children's periods of transition and change. Indeed, as previous research has shown, mothers with a history of secure attachment are better equipped to think about and reflect on their children's emotional experience, their developing relationship with their child, and their own experience of parenting (Fonagy & Target, 2005; Slade, 2005; Slade et al, 2005). The findings of this study indicate that this ability remains relatively stable over time and is not challenged or disrupted by the developmental demands of the child in the move from infancy to toddlerhood.

By contrast, insecure mothers have a great deal of difficulty with implicit mentalization and even when using explicit mentalizing are more adept at mentalizing negative affect. Insecure mothers, it seems, require more active feedback from the baby in the form of language and more organized behavior in order to create a narrative of

what is taking place between them and their child. These mothers appear to miss the subtle, bodily-based communications from their children. Describing the mental state of a non-verbal child requires a certain degree of ‘imagining’ the other and a capacity to see the child as at once dependent, but also separate. This is in line with Fonagy and Target’s description of mentalization as an “imaginative mental activity” (2008, p. 17). As they explain, the activity is “imaginative because we have to imagine what other people might be thinking or feeling: an important indicator of high-quality mentalization is the awareness that we do not know for sure what is in someone else’s mind (p. 17).” Of course, this is more so the case when dealing with a pre-verbal child.

Tolerating the experience of not knowing “what is in someone else’s mind” is an important marker of high RF. It is possible that what the insecure mothers in this sample could not do with their infant children is take that imaginative leap that would allow them to translate their infants’ inchoate communications into meaningful stories about the baby’s experience. These insecurely attached mothers seemed to lack imagination about the mental world of others and their struggle to imagine their child as having an internal world affected their ability to convey it verbally during the interview (Fonagy & Target, 2008). On the PDI these mothers were unable to describe what their baby might be feeling or thinking in a particular situation. Their children were mystifying and confusing to them, and their answers tended to reflect a limited ability to see an interrelationship between their feelings and behavior and those of their child.

Suchman and her colleagues (in press) provide support for the idea that psychologically vulnerable mothers whose RF skills are impaired may rely on the older children’s more explicit communication skills, such as language, to activate their

mentalizing skills. In their study of 47 methadone-maintained mothers of infants and toddlers in an attachment-based intervention, Suchman et. al. examined maternal mentalization as a two-dimensional construct based on self-reflective and interpersonal-reflective components. That is, they distinguished a mother's capacity to mentalize about her own emotional experience (self-focused RF) from her capacity to mentalize about the child's emotional experience, his behaviors and their relationship (child-focused RF). The study found a positive correlation between the age of the child and maternal mentalization about the child. Suchman and colleagues suggest that in their high-risk, substance abusing sample of mothers, mentalizing about toddlers and older school age children – who have a wider range of cues to communicate with than do infants – maybe easier for mothers than mentalizing about infants. Suchman further notes that self-focused RF, especially when a mother is asked to reflect on her own difficult feelings (i.e. anger, guilt etc) pulls more for *deliberate* and *explicit* mentalizing, whereas child-focused RF, where a mother is asked to mentalize about events that are more remote and are outside of her immediate experience, pulls for more *automatic* and *implicit* mentalizing (p. 17). These findings nicely complement both the quantitative findings reported here, as well as qualitative analysis of the data in this study, where insecure mothers were found to mentalize with greater ease about their own mental processes rather than their children's. There was often a split in these mothers' RF skills when reflecting about themselves vs. their child.

To illustrate this, consider an example from two mothers, a secure mother and an insecure mother, both of whom were asked during the infancy PDI to describe how they figure out what their children want or are feeling. The first mother received an overall

score of “8” or marked RF on the interview and her daughter was securely attached to her at 14 months:

Interviewer (I): How do you know what she wants?

Mother (M): “... well, she is now at a stage where she is, she is in nonverbal ways very expressive, she makes a lot of sounds, you know, you could tell the difference between happy sounds and angry sounds, um, she has a lot of, you know, there is a lot of things she does physically that give you signals about, you know, what she wants or needs. She can point to things. She does things like, you know, if she is tired she will rub her eyes and you know, whimper a little bit. Um... she, you know, I don’t know for someone with basically no vocabulary, no, you know, vocabulary that other people could understand, anyway, she is pretty expressive. She has happy expressions and sad expressions, and you know, all kinds of body language.”

Interviewer: Are there times you feel that you don’t understand your daughter?

Mother: Um, sometimes when I’m feeding her and she doesn’t seem to be wanting anything. She’s eating, she’s pointing to something else, but then you give it to her and she obviously doesn’t want that either. Or, when she ... um oh lately she’s been learning how to put the tops on things and sometimes she gets frustrated and angry in ways that I am not sure I understand. It seems to be that she wants it to get on right, but, uh, but when it doesn’t go on the way she wants it to, she can’t quite get it on she gets sort of mad but I am not really sure if that’s really what the issue is or why she is reacting that way. Um, and occasionally I’ll do something with her or to her, pick her up, for example, and she doesn’t want me to and she’ll get angry. Um and sometimes it’s not clear why.

Contrast this with the response from the second mother, an insecure mother, who received an overall score of “3” or low RF on the interview. Her daughter was insecurely attached to her at 14 months.

Interviewer (I): How do you know what she wants?

Mother (M): She makes noises that are consistent. They are the same sounds, or the same motions.

I: Does your child have moods or emotions that you sometimes have a hard time making sense of?

M: No, sometimes they are difficult to deal with but it’s never a problem making sense of it.

I: Are there times you that feel you don’t understand your daughter?

M: No. Not really. Never.

The responses of these two mothers highlight well the points made above, namely the relative ease with which the secure mother is able to translate her daughter's behavioral cues into stories about what her baby is feeling, stories that are rich with details and a sense of wondering about her baby's experience, whereas the insecure mother had a much harder time doing so. While the insecure mother did indicate that her baby communicates through her behavior she had a very limited repertoire about the possible feelings her baby might be having and for the most part attributed little complexity to her child's experience and communications.

One of the current controversies in the mentalization literature is whether attachment processes in mothers of young infants suppress mentalization; thus, Fonagy and colleagues (2004) suggest that parental RF with very young children is "inaccessible to reflection and modification." That is, these authors seem to suggest that the quality and especially the intensity of the parent-infant attachment relationship may preclude a mother actively thinking and mentalizing about that relationship.

Swain and colleagues make a similar point, but also take it a step further. These authors make an explicit link between how a mother's state of preoccupation with her baby affects her thinking self. They wonder whether "...the state of being preoccupied about the infant functionally equivalent to a diminishment in mentalizing, in effect a temporary suspension of reflective thinking, in order to totally and unreservedly focus on the infant's needs" (2008, p. 270). These authors further suggest that while not mutually exclusive, a mother's capacity to attend to her new baby and the capacity to mentalize "... may occupy different developmental trajectories that call for further empirical investigation" (p. 271). Yet, the infant's very fragility and complete

dependence on the mother for his needs and survival, especially in the first year of life, demands that a mother be in fact “too close” so as to achieve what Winnicott described a state of primary maternal preoccupation that allows for an intuitive knowledge of what her infants needs from her.

Contrary to Swain’s suggestion that maternal state of preoccupation unilaterally impairs mentalization, the findings in this study showed that for secure mothers their close relationship with their infant children *did not* interfere with their RF skills. Instead, as described, these mothers were able to remain regulated from the start of their relationship with their infants likely because they are capable, even under stressful conditions, to remain emotionally connected and deeply identified with their infants yet differentiated enough to maintain their observing capacities. Perhaps then it is not the state of primary maternal preoccupation itself that inhibits or impairs mentalization, but the quality of the attachment relationship and whether the attachment relationship is secure or insecure. For the insecure mothers whose RF levels increased from their children’s infancy to their toddlerhood, their close attachment relationship with their child, at least in infancy, did appear to inhibit their mentalizing capacities. It is noteworthy that six of the eleven insecurely attached mothers fell within the preoccupied attachment category and their mean RF levels were on average higher during infancy ($x = 4.6$) than that of the other insecure attachment categories. That is, even in infancy preoccupied mothers had a nearly average capacity for mentalization. The remaining five insecure mothers (e.g. three unresolved and two dismissive) had lower than average RF skills in infancy ($x = 3$ for unresolved; $x = 3$ dismissive). Significantly, Fonagy et al. (1995) observed that preoccupied mothers tend “to be strong on the mirroring of

affect but poorer on conveying coping with affect. Conversely, dismissing mothers might fail to mirror affects accurately but transmit to the child a sense of stability and coping” (p. 243). It is possible that insecure mothers are mirroring their infants’ affects too accurately and work harder to attune to their signs of distress, but not necessarily regulate it. It may be then that what insecure mothers do with their infants is empathize with their experience rather than actively mentalize about it; their identification and merger with the infant precludes the degree of cognitive processing required for mentalization proper. While mentalization and empathy are overlapping constructs (it is difficult to mentalize without empathy), they are also different in that mentalization proper serves to regulate intense feeling states within the relationship while empathy does not aid with regulation.

To reiterate, secure mothers who are psychologically differentiated can on one hand be deeply immersed in and connected to their infants and on the other hand maintain their separateness from them and be able to reflect on their child’s and their own internal experience. This ability to enter into their children’s experience without losing boundaries is what allowed the secure mothers in this study to remain reflective with both their infant children as well as their toddlers. In the case of the insecure mothers who found it difficult to relate to and know their infant’s minds, the state of being preoccupied with their infants together with their insecure attachment history likely further compromised their mentalizing skills.

*Differences in affective content during toddlerhood for secure and insecure mothers:
The impact of conflict and ambivalence on maternal mentalization*

It is meaningful, given the developmental tasks of toddlerhood, that insecure mothers became more adept at mentalizing when issues of autonomy and separateness take central stage in the mother-child relationship and when both mother and child engage in a more reciprocal process of struggling for recognition of each other's separate subjectivities and negotiation of often conflicting needs (Benjamin, 1990). For the insecure mothers in this study, the child's progression through separation individuation is what likely activated their RF towards their child as well as made them more in touch with their own feelings. That is, insecure mothers appear to be more dependent on their child's recognition of them as subjects with their own minds than the secure mothers who are from early on more confident in their mothering abilities and can better tolerate their child's projections. At the same time, this period of negotiation is a complicated one for both parents and toddlers. For one, the child is now a real person who can actively challenge a mother's thinking with ideas of his own; this brings up ambivalence and conflict for the mother who can no longer imagine her child and their relationship on her own terms, but has to actively struggle with the meeting of their now inherently different minds. Benjamin (1990) eloquently captured the 'danger' for the mother of encountering her child's mind:

“... the child's demands are now threatening, no longer simply needs, but expressions of his or her independent (tyrannical) will. The child is different from her mental fantasy, no longer her object. He or she may switch places with her: from passive to active. The child, not the mother, is now the repository of omnipotence she once attributed to the “good” all-giving mother. How she responds to her child depends on her ability to mitigate such fantasies with a sense of real agency and separate selfhood, on her confidence in her child's ability to survive conflict, loss, and imperfection” (p. 39).

It is interesting, but not surprising, given the challenges of parenting a toddler that in this study insecure mothers RF increased on feelings of *anger, guilt, neediness, separation distress and not connecting or 'clicking' with their child*. Given the argument that insecure mothers need more concrete cues to mentalize we can speculate that these mothers increased RF on negative affect might be due to their being better at mentalizing elevated emotions rather than more subtle emotional experiences. It is particularly noteworthy that insecure mothers showed the most significant change in their RF with regard to their feelings of *anger*. The RF levels of insecurely attached mothers *increased by nearly two and a half points on anger* with seven out of eleven mothers showing a three point or higher increase. Of note is the fact that at 28 months the average RF of the insecure mothers on anger was nearly identical to that of the secure mothers on the same question (secure: $x = 5.52$; insecure: $x = 5.6$). This is a stark increase when compared to the insecure mothers' below average ability to reflect on their feelings of anger during their child's infancy (secure: $x = 5$; insecure: $x = 3.2$). It is possible that these mothers are feeling more depleted by the demands of parenting a toddler who actively challenges his mother and as a result, more angry and possibly less in control of their feelings. It is also likely that the feelings of anger and frustration that are normal in infancy were too threatening and overwhelming to them to articulate in infancy; only when the toddler, in effect, forced the issue could these feelings be verbalized. That is, while they are better able to acknowledge their anger and frustration during the toddler period, it is not clear whether they are able to modulate these feelings any better than they did in infancy where instead of acknowledging anger they disavowed it.

The fact that insecure mothers' RF also increased on their feelings of guilt, that they became more aware of feeling guilty with their toddlers than with their infants, may point to the degree of dysregulation they are feeling in their relationship with their toddlers, as well as as to difficulties of tolerating greater degree of ambivalence towards their children and themselves as mothers. As Susan Kraemer (1996) points out, negotiating conflictual feelings towards one's child does not come without an "agonizing struggle" for the mother (p. 766) and it is likely that the insecure mothers are especially poor at tolerating conflict in themselves. Likewise, while insecure mothers are more activated by the relationship and can name their feelings better during this period, they are also feeling more stretched emotionally, they may lose control with their children more and hence experience an increase in their feelings of guilt. Thus, it is impossible to really know if the insecure mothers will be able to maintain their increase in RF on negative affect with subsequent developmental transitions.

In order to illustrate what is being described, consider the following brief clinical example of an insecure mother named Joan whose RF levels increased from "4" (less than average) to "6" (high average) between infancy and toddlerhood. Joan's interview is a good example of a mother who struggled mightily to know the mind of her infant son who was insecurely attached to her at 14 months. She came across as impatient, stressed and experiencing little pleasure in parenting her first baby. Most impressive, however, was Joan's barely contained anger at everyone around her. Yet, she did not readily admit to feeling angry and instead went to great lengths to deny her feelings and present an overly idealized picture of her relationship with her son. When

asked if she ever felt really angry as a parent, this mother's response showed her unable to tolerate ambivalent feelings towards her baby:

Mother (M): Well, you said really angry. I don't think really angry, no. Angry sometimes. But not really angry.

Interviewer (I): What kinds of situations make you feel this way?

M: Angry? It's been a long time since I have felt angry with him. I think more like it used to be when I felt my needs weren't being met because I was too busy meeting his.

I: How do you handle your angry feelings?

M: *Well, there is not a whole hell of a lot of things you can do when you have a kid who screams all the time.* But. Um. Cry probably. And uh actually I can remember yelling two or three times. But this is like when he was very, very, are we going back that far? I haven't gotten angry in five or six months. So it was back when he was an infant and a terribly difficult one at that. So.

I: Do you ever feel really angry at your son now?

M: Not now, No. I never really did before. When he cried all the time during the day I used to get very angry. I don't know if angry is the right word. That may not be the right word. So I can't say that or remember.

I: How does your anger impact your child?

M: I am not aware it impacts him.

Not surprisingly, Joan received a score of "3" for this response, indicating a low level of mentalizing capacity. Her response is poorly modulated and full of defensive efforts to distance her self emotionally from processing how her anger affects her son. She backpedals on her responses and even when pressed by the interviewer denies that her feelings have an impact on her son. When this mother was asked the same question again, eighteen month later, her response is strikingly different:

Interviewer (I): Do you feel really angry as a parent?

Mother (M): Yeah, of course I do (Laugh).

I: And what kind of situations make you feel that way?

M: Getting angry last night, but it's – I find things that I get angry about are things that are really (inaudible), it's because mainly that I am tired and I have less patience so I get angry. You know, or if he is being stubborn and he won't do something that he really needs to do – activity that makes me angry.

I: How do you handle your angry feelings?

M: Well, if it's something that he is doing wrong and I need to show him, we have time out. A lot of times it's time out for me as well. That way I remove myself and I can like typograph – and put everything into like focus. Like wait a

minute, “your anger is not proportionate to what’s really going on.” That’s really what happens.

I: What kind of effect do you think your angry feelings have on your son?

M: Well, I think he knows I am angry, you know, *because he verbalizes it.* And what happens is every time he has a time out, then we discuss it right afterwards and, you know, why and why Mommy was angry, but still she loves you, you know. I try very hard, you know, I can be angry, you can be angry, but we can also love each other at the same time.

It is noteworthy to point out that Joan is explicit in stating that the way she knows that her anger impacts her son is because he “*verbalizes it.*” She needs her son’s active input, his own words, to let her know what he is feeling. Joan was given an RF score of “6” on the above response, meaning above average RF and it is clear that in contrast to her earlier response she is now much better able to reconcile and acknowledge contradictory feelings in herself. Moreover, Joan is aware that her behavior with her son is often affected by feelings unrelated to what is going with him, and she actively struggles to control herself. At the same time, Joan is equally aware of the tenuous nature of her insights when she says, “I feel like it’s a constant struggle to be, to be the kind of parent I wanna be. It doesn’t come naturally. You know, because I didn’t have that kind of a parent. So for me it’s – I am checking myself. And I know I slip sometimes.” Not surprisingly Joan is often racked with guilt for losing control at her son:

Interviewer (I): Do you ever feel really guilty as a parent?

Mother (M): Yeah, yeah, like when I get mad at him and it’s not proportionate to, you know, because of – I have had a hell day and I take it out on him, then I feel guilty, cause I can’t believe it.

I: Are there other situations that make you feel guilty?

M: [...] I feel guilty when my husband and I fight in front of him, very bad I feel.

I: What kind of effect do you think it has on your child?

M: It has a horrible effect on him because usually he’ll say: “stop that.” “Stop arguing.”

We can only wonder of course whether Joan would be able to mentalize about and experience similar level of guilt without her son's active reflection back to her of her behavior.

As expected, secure mothers maintained average or higher RF with both their infants as well as their toddlers and they did not substantially change in their ability to acknowledge their negative feelings with the exception of *increase in their feelings of guilt* with their toddler age children. This finding is consistent with the general notion in mentalization literature that an individual's capacity for reflective functioning is crucial to her ability to regulate intense feeling states (Fonagy et al., 1996, Fonagy et al., 2002). In the particular context of a parent-child relationship then, it should not be surprising that a parent with a history of secure attachment would be better able to deal with and regulate intense affects, especially negative ones. After all, a core aspect of parental reflective functioning is the parents' ability to recognize, hold and regulate a range of feelings, both positive and negative, in themselves and their children (Slade et al, 2002).

With regard to the secure mothers' increase in their guilt feelings, this particular finding may be understood through Winnicott's insight regarding the capacity for concern. As he eloquently put it, the word "concern" is "used to cover in a positive way a phenomenon that is covered in a negative way by the word guilt" (1963, p. 73). According to Winnicott, a sense of guilt is "anxiety linked with the concept of ambivalence, and implies a degree of integration in the individual ego [...]" (p. 73). And indeed, if one is to think about parental mentalization as developing in stages, it may be the case that as secure mothers become more familiar with their parenting roles and with their children they also, and not surprisingly so, feel more concern or guilt

about how they “mother” their children. Concern, Winnicott, writes, “refers to the fact the individual *cares, or minds*, and both feels and accepts responsibility” (p.73). For the insecure mothers on the other hand, as suggested, their increase in their feelings of guilt is likely due to how disrupted they feel by their feelings of anger in their relationship with their toddler age children.

Overall, these results suggest that there is a dynamic relationship between the increase in negative affect for the insecure mothers and their feelings of guilt. However, it is only through repeated measures of parental reflective functioning over the course of the child’s development that we may really learn if the observed increase in the RF levels of the insecure mothers indicates improved mentalization rather than unstable RF capacities characteristic of psychologically vulnerable individuals. For instance, adolescence may be an especially challenging developmental period for the insecure mothers. The capacity to look beyond the observable, frequently fluctuating mood and behavior of the adolescent demands not only flexibility on the part of the parent, but also an ability to infer the meaning of behavior on the basis of often implicit and unclear communications. Given that insecure mothers in this study found it difficult to translate the implicit cues of their infant children, we could hypothesize that these same mothers are also likely to struggle with their adolescent children whose communication style often requires from the parent a fine tuned ability to read between the lines. Clearly, further ongoing study of parental RF in different developmental contexts is necessary.

Rethinking the current definition of parental mentalization

The findings from this study suggest that mentalization is a complex phenomenon that takes place in many channels and on many levels, including non-verbal, implicit understanding of self and other as well as explicit, verbally mediated ones. Thus, the data highlights the importance of thinking about mentalization in broader ways that emphasize its different components depending on the type of the relationship. For instance, the research by Suchman et al. (in press) discussed earlier has provided empirical support for the multidimensional nature of parental mentalization where *explicit parental RF* as measured on the basis of verbal responses to an interview, revealed the presence of two separate RF dimensions (i.e. child-focused and self-focused RF) that were found to have implications for mother-child relationship dynamics during the infancy and toddler years. The work of Shai and Belsky (in press) suggests further elaborations in mentalization theory, and stresses that "... exclusive reliance on verbal processes may fail to fully capture mentalizing processes" especially in parent-infant interactions (p. 1). These authors view parental mentalization as a dyadic process and stress the importance of focusing on kinaesthetic bodily movement between parents and infants when assessing the quality of their relationship. The findings of this study support the idea of viewing *parental mentalization* as a process that is different from the more general capacity for reflective functioning. In this view, parental mentalizing processes are organized by and make use of the different communication means employed by infants and toddlers, the implicit, nonverbal mode and the explicit, verbal mode.

Because of the differences in communication between infants and toddlers, one can assume that mothers naturally adjust their way of mentalizing about their children in line with their developmental abilities gradually shifting from nonverbal, intuitive means of making sense of their child's behavior and intentions to more verbally symbolic explicit means. Following this line of thought, in contrast to implicit and explicit dimensions of mentalization in adults, in parental mentalization explicit and implicit dimensions of mentalizing manifest in ways that are unique and specific to the parent-child relationship and are dependent on the patterns of communication between parents and children. This study's findings suggest that a parents' history of attachment likely plays a role in how well a parent can integrate the two modes of functioning and have access to the verbal representation of her affective state.

The findings of this study suggest a more nuanced perspective on mentalization, in which parental mentalizing is not a one-dimensional, static capacity, but a more complex, bidirectional process that pulls for different cognitive and emotional capacities in the parent depending on the developmental stage that the child is in. Within this perspective, parental mentalization is viewed on a continuum along which parental reflective capacities develop, moving from implicit, intuitive and nonverbal mentalization to explicit, verbally - mediated mentalization. This continuum would be in tandem with the child's own developmental trajectory, from the preverbal time of infancy to the increasingly verbal time of toddlerhood. At the same time, this continuum is not a linear progression but rather each dimension of mentalization is activated according to the mode of communication between parent and child and the quality of the parent-child relationship.

Implications for parent-infant psychotherapy

This study's results are especially meaningful when examined in the context of current trends in parent-infant psychotherapy where treatment focuses on improving parental RF. Research has noted that high maternal RF is associated with a number of positive outcomes for the child as well as the parent-child relationship (Fonagy & Target, 1996; Slade, 2002; Slade et al, 2005). At present, there are a number of dyadic treatment models that are based on Fonagy and colleagues' concepts of mentalization and reflective functioning, and aim at enhancing parental reflective capacities (Slade, Sadler, Mayes, 2005; Slade et al, 2005). However, while most of these programs are geared towards the very young children in the first three years of life, they do not explicitly discuss the impact that developmental changes in the child exert on parental RF. These interventions also tend to not differentiate between the dimensions of mentalization or between how parents mentalize about their infants vs. their toddlers, and treat it instead as a uniform capacity in the parent that is separate from the contribution of the child.

This study's findings suggest that it would be important to pay closer attention to developmental factors when working with parents with compromised RF skills, who might require more guidance with putting feelings to words, as it appears that parents have different ways of responding to their children depending on their age and developmental period they are in. As the findings of this study suggest, secure mothers have no trouble translating their infants' somatic and sensory experiences into words, whereas insecure mothers' ability to link bodily sensations to words is more compromised. Interestingly, at present there are an increasing number of mentalization

based parenting treatment models that rely upon “video feedback” as a technique to help mothers become more adept at reading their infant’s behavioral, bodily and implicit cues as a gateway to understanding his mental states (Bert, Cooper, Hoffman, Marvin, 2007; Schechter et al., 2006; Slade et al., 2005). Embedded in this model is an implicit understanding that “the knowledge of mental states, thought so crucial to responsive caregiving, is preceded and indeed founded upon an understanding of physical states (Slade et al., 2005, p. 78). In this model, a mother meets with a clinician and observes an earlier recorded interaction with her child. With the clinician’s guidance, the mother is helped to think through and make sense of the interaction as well as observe and notice her infant’s non-verbal cues. In essence, by watching the tape attention is drawn to that which was previously unknown for the mother so that she can experience an “empathic shift” with regard to her child’s emotional world (Bert et al., 2007). In the Schechter study discussed earlier (Schechter et al., 2006), mothers were found to change their negative attributions of their children following just one session of a video feedback intervention. One could argue that for psychologically vulnerable mothers, such as the insecure mothers in this study, verbal meaning making alone is not sufficient to fully appreciate their negative interaction patterns with their child and then modify them. That is, for change to take place mothers first have to become aware and explicate what they are doing implicitly through seeing themselves interact with their child on a video so that they can then reorganize it through verbal means. Like the insecure mothers in this study who became more reflective when their children became more verbal and concrete in their communications, so too the “video feedback” model recognizes that mothers with compromised RF skills need external and often concrete

and very specific feedback to activate their mentalizing capacities. In this way, the use of “video feedback” introduces a new observing position from which new thoughts can emerge for the mother (Britton, 1989).

Even parents who have fairly well - developed reflective capacities are susceptible to anxiety as they are called to deal with, and adjust to, their child’s developmental transitions. When anxiety becomes overwhelming, it can negatively impact the ability to mentalize and cause parents resort instead to a more concrete interpretation of their own and their child’s behavior. The parent may slip, in Fonagy’s terms, from a reflective stance to the “psychic equivalence mode” with little consideration for the internal meaning of the child’s behavior. That is, parents may not be always prepared to accept the timing of their child’s growth and development and as a result may react defensively. Likewise, the parent can regain her mentalizing ability when both parent and child regain their equilibrium and adjust to the changes that are taking place in the child’s development, and, consequently, in their relationship. Therapeutic interventions with mother-child pairs at risk can be especially helpful here. That is, every move forward in development throws the mother-child pair into a state of disarray and temporary chaos. Parent-child interventions, then, can also focus on the mother’s subjective response to change. Is she ready to “lose” her previous way of being with her child to a new one? Does the mother experience her child’s change as an opportunity for moving on and as growth, or as abandonment and displacement? Obviously different mothers have different ways of tolerating change and transition in the relationship with their child. Whether a mother allows herself to mentalize the pain

and frustration that come with change, in essence to engage in thinking about what the transition means to her and her relationship with her child is what matters.

Limitations of the Study and Directions for Future Research

A number of factors have to be considered in order to properly evaluate this study's findings. The first issue has to do with the limitation of measuring parental RF along a single dimension that uses one final "overall" score to explain what is clearly a much more complex and dynamic process. Future research should aim to refine the current measures of RF so as to capture the multidimensional nature of mentalization. For example, the findings of this study suggest, by implication at least, that mentalization in parents manifests in both explicit, verbal ways as well implicit non-verbal ones. Yet, most of the current research evaluations of parental mentalization treat parental RF as an exclusively *narrative* and *verbal* capacity in the parent and do not take into account the developmental significance of the child's communicative abilities and how these affect the parent's mentalizing skills (Meins, 1999, 2001; Schechter, 2005; Slade, 2002). With the exception of Shai and Belsky's work on *Embodied Parental Mentalization* (PEM) that was discussed earlier, current means of evaluating parental RF do not take into account the different ways that parents and infants communicate with each other (Shai & Belsky, in press). Thus, it would be useful to expand the current RF scoring system to include measures of implicit and explicit dimensions of RF in order to assess mentalization processes in parents of very young children more accurately. For instance, one way of doing so maybe to combine and compare non-verbal, implicit manifestations of mentalization (through a measure such as PEM that uses videotaped mother-infant free-play interactions) with the RF levels of explicit, narrative based

measures of mentalization in order to observe how these two modes of functioning interact within an individual. Thus, future research using this study's data might attempt measures of implicit and explicit dimensions of RF using narrative PDI data from secure and insecure mothers at 10 and 28 months and comparing these to embodied manifestations of parental mentalization using the PEM measure described by Shai and Belski on video-taped mother-child interactions. Having a clearer understanding of how mentalization processes manifest in parents of very young children will aid with refining intervention models that aim to increase parental RF levels.

The current study represents the first effort in examining maternal mentalization over time. The findings highlight the importance of considering parental RF alongside developmental changes in the child and of considering the bidirectional nature of parental mentalization. Additional longitudinal studies are necessary in order to understand more fully the meaning of the observed stability and change in RF in this study. In particular, further research is needed to determine the meaning of the increase in negative affect in the insecure mothers and whether the observed increase in their RF skills would be sustained at other developmental points or whether it would continue to fluctuate thus suggesting ongoing instability in the mentalizing capacity of those with insecure attachment organization. As suggested earlier, adolescence, with its upsurge in primitive drive material, maybe an especially demanding time for the insecure mothers that is likely to strain their mentalizing skills.

Another direction for future research suggested by this study is to extend the inquiry into the nature of mentalization by examining the developmental trajectory of RF beyond early childhood. Most of the theoretical writings on RF today focus on its

development in young children and discuss its relevance for later development. In Fonagy's studies, discussion of the development of RF is limited to studies with children up to the age of six (Fonagy and Target, 1996a, 1996b, 1997). And while a number of treatment outcome studies examine how RF develops and changes in adults as a result of clinical intervention, mentalization is not approached and examined as an ongoing developmental process (Kotov, 2002). The results of this study suggest that mentalization in parents is indeed an ongoing developmental process and that parents mentalize differently depending on the age of the child. As has been discussed, the relationship of parents with their child involves an ongoing process of transformation and change, as the child's development requires that parents grow along with their child and flexibly modify their responsiveness to their specific developmental needs. While there may be parallel developmental trajectories between regular RF and parental RF, it is suggested here that it is more likely that not only parental RF follows its own trajectory of change but that the two dimensions of RF (i.e. implicit and explicit) tap into different processes of mentalization in parents of young children. Further research is necessary in order to test the validity of this hypothesis. Parents, and especially first time parents likely develop their RF capacities parallel to developmental changes in their child. This study's findings about stability and change in RF support, by implication, the hypothesis raised by this project that parental RF is a dynamic and ever-changing system that is highly dependent, not only on the parent's individual history, but on the particular properties of the live relationship between parent and child. It is a complex, bidirectional process that is continuously impacted by the "unfolding transaction" between parent and child (Diamond, et. al., 2003).

An important aspect of parenting is the parent's capacity to bear loss in her relationship to her child. Interestingly, the parents are asked on the PDI whether they ever feel like they are losing their child. Embedded in this question is the issue of whether the parent has the capacity to tolerate and manage change, both in themselves and in their child, as well as their ability to acknowledge and reflect on it. Future research might include examining parental RF beyond toddlerhood to include other developmental periods and milestones. One way to examine RF more closely in relation to the child's development, would be precisely to focus on the parent's ability to transition along with their child and let go of earlier representations (i.e. of the child as infant, the child as toddler, and so on) for the sake of forming new and more complex ones. As Fonagy pointed out, some parents are attuned to the earliest indications of their child's intentionality, while others require stronger indication (i.e. language) before they can understand their child's mental states and modify their response accordingly. Future investigations into the nature of parental mentalization might attempt to isolate more specifically the differences in how parents mentalize about younger children vs. older ones as well as the difference in how implicit and explicit dimensions of mentalization interact with the child's developmental transitions.

This study looked at changes in maternal RF in the relationship to a single child. A future area of research might include measuring maternal RF in relation to different children in the family. Given the transactional nature of the parent-child relationship and the argument about the dynamic nature of RF, it is not clear whether a mother's RF skills will be the same with different children in the family and whether parenting multiple children will have an impact on her RF skills. Each mother-child relationship

is unique and different and is made up of “two interacting subjectivities in interplay with one another (Holmes, 2006, p. 46).” Starting from infancy, children develop both general and highly idiosyncratic schemas of being in a relationship with a particular person. It is possible then that a mother’s RF patterns will be shaped and organized by the qualities unique to her relationship with a particular child and her RF skills will vary from child to child. Further research is necessary to determine the nature of stability and change in RF in a single relationship. Fonagy and colleagues (2004), for example, point out that,

“[...] reflective capacity in one domain of interpersonal interaction should not be expected to generalize to others. Reflective function does not begin as a general capacity, but is a particular skill tied to the task and domain where it is learned – a specific category of relationship. Reflective function as a skill maybe more or less present in situations as a function of contextual support and emotional states that push an individual up or down a developmental strand. [...] Unevenness across situations is likely to remain prevalent even in adults” (p. 60-61).

At present, there are few studies examining the issue of cross-situational stability in RF skills within a single individual in two separate, live ongoing relationships. A study by Diamond and her colleagues reviewed earlier (2003) found that the same therapist treating different patients showed variation in their RF skills depending on the contributions of both therapist and patient to the therapy situation. In the future research on parental RF, it might be useful to assess how mother’s RF differs from child to child. For instance, it would be interesting to compare the RF of first time parents with those who are more experienced at parenting in order to see the ongoing development and change in parental RF.

Finally, most investigations into the nature of mentalization do not consider influences beyond the dyadic relationship (i.e. mother-child), raising the question about

whether factors beyond the dyad may impact the development of parental RF especially in parents of young children. Most mother-child pairs are part of a wider social and familial world made up of partners, grandparents and friends among others. Most significantly, the mother-child relationship takes place within a context of a more complex three-person relationship i.e. the mother, the father and the child (Baradon et al., 2005). Whether the father is a literal father, present from the beginning or a representational father (absent, but present in the child's and mother's minds) the triadic relationship exists from the beginning of life (Green, 1986; Barandon et al., 2005) and as such the relational space created by the triad may potentially play a role in how mother's develop their observing capacities in relation to the infants. Future research on parental RF might consider incorporating measures of social support into assessment of maternal RF over time. For example, many women in this study reported experiencing a heightened level of stress in their relationship with their partners, with many often complaining of experiencing limited emotional support from their spouses. In their description of the development of reflective capacities Fonagy and colleagues write:

[...] reflective function would be seen as not simply a property of the person, but of the person and situation together, because all skills are composed of both the person's activities and the situations or context within which these occur. Furthermore, the development of a skill is not seen as progression along any singular path, determined by maturation. Rather, reflective function, as a skill, evolves through varied pathways, molded by many dynamically interacting influences, such as the individual's emotions, social interaction, family relationships and environment etc. (Fonagy et al., 2004, p. 60).

Thus, in this model Fonagy sees RF as an evolving, context-specific and interpersonally driven experience (Kotov, 2002). This study's finding that insecure mothers found mentalizing about their toddlers easier than mentalizing about their infants raises the

question of whether mothers who were preoccupied with and experienced stress within their relationship with their partners were less available to reflect on their children. An interesting area of future investigation on parental reflective functioning may include a study of the level of spousal support in the early months of infancy and its impact on maternal RF over time. For example, is there a relationship between low maternal RF in infancy and mother-infant dyads where the parental couple is replaced by the mother-infant couple? The current structure of the PDI where mothers are asked to describe how the nature and quality of their relationship with their partners changed since their child's birth lends itself nicely to investigating the impact of the mother's capacity for triadic relationship (mother, father, child) on the development of her RF capacities over time.

Concluding Remarks

In the last 20 years the concept of mentalization has evolved from being conceptualized as a trait-like ability to a more complex and dynamic process that is at the heart of an individual's capacity to form meaningful relationships with others. As suggested by the findings of this study mentalization has its own developmental process where the nature and quality of the relationship together with each partner's unique contribution to this relationship (which is itself determined by one's history) impact one's ability to perceive and respond to the subtle and often non-verbal communications of the dyadic partner. Even though this study has specifically suggested the presence of implicit and explicit dimensions of mentalization within the parent-child dyad, mentalizing processes are likely to show an equal degree of complex

variation in any relationship and can inform the therapeutic interactions. Thus, this study highlights the importance of assessing an individual's mentalizing capacity in the context of a specific relationship. A more precise understanding of the nature of mentalization within a relational context is important for establishing guidelines for therapeutic interventions.

APPENDIX A

THE PARENT DEVELOPMENT INTERVIEW

Instructions: For the next hour or so I will be asking you a series of questions about your relationship with your child. If you have more than one child, try to answer the questions with the child in mind we are talking about today.

A. VIEW OF THE RELATIONSHIP

1. Could you describe your child to me?
2. Could you describe yourself as a parent?
3. How do you think your child is both like and unlike you?
4. I'd like 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? (Take adjectives one by one and ask for an illustration)

B. AFFECTIVE EXPERIENCE OF PARENTING

1. What gives you the most joy in your relationship with (child)?
2. What do you like most about (child)?
3. When do you feel most "with" your child?
4. Do you ever feel intensely happy as a parent? What kinds of situations make you feel especially happy? What kind of effect does it have on (child) when you're feeling particularly happy?
5. 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 he/she felt?)
6. 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 he/she felt?)
7. What gives you the most pain or difficulty in being a parent?
8. Do you ever feel really needy as a parent? What kind of situations make you feel this way?

9. How has having (your child) changed you?
10. Do you ever feel really angry as a parent? (Probe if necessary: What kinds of situations make you feel this way? How do you handle your angry feelings? How do you think these situations effect (your child)?)
11. Do you ever feel really guilty as a parent? (What kinds of situations make you feel this way? How do you handle these guilty feelings? What kind of effect do these feelings have on (your child)?)
12. When (your child) is upset, what does he/she do? How does that make you feel? What do you do?
13. How do you figure out what your child wants or is feeling?
14. Does your child have moods or emotions that you sometimes have a hard time making sense of?
15. Are there times you feel you don't understand your child?
16. Are there times in your relationship with your child that you feel he or she has the upper hand? (Query: How does this make you feel? How do you handle it?)
17. Does your child ever seem to need to be by himself / herself?
18. Can you describe a situation when your child hurt or disobeyed you?
19. Do you think (your child) ever feels rejected? (Query: How do you handle that?)
20. Dow do you think your child's relationship with you is affecting the development of his/her personality?

C. PARENTAL REACTIONS TO TYPICAL INFANT/TODDLER SITUATIONS

1. How does your child feel when you're busy and can't pay attention to her?
2. How does your child feel when you are able to devote considerable time and attention to him/her?
3. How does your child do in exploring the world and solving problems on his/her own?
4. How does your child do when she can't explore or solve problems without your help and support?

5. Are there times when your child wants to do something and she can't quite figure it out and needs you to help her with it?

D. SEPARATION

Let's talk about times when you and (your child) are separated from one another.

1. Can you describe a typical routine separation?
2. How do you think your child feels about these separations?
3. How do you feel when you are separated from your child?
4. What kinds of reports do you get about your child's response while you're away?
5. How does your child feel when you get home?
6. Can you describe the kinds of separations that your child might experience as some what more stressful than a routine one? (How do you think the child felt?)
7. What's the longest you've been separated from your child?
8. Has there ever been a time in the child's life when you felt as if you were losing her a little bit?

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