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Levels of Processing in Parent-Child Relationships: Implications for Clinical Assessment and Treatment

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During the past decade, attachment research has shed new light on the nature of parent-child relationships and their potential contribution to child and adolescent psychopathology. Researchers have linked insecure states of mind in the Adult Attachment Interview to increased risk for a variety of symptoms in adults (Dozier, Stovall, & Albus, 1999) while patterns of insecure parent-infant attachment have been associated with increased risk for child and adolescent psychopathology (Greenberg, 1999). Despite the progress in understanding the relation between attachment and psychopathology, research findings have had several notable limitations for clinicians working with children and their parents.

First, available research methods for assessing attachment are labor intensive and often beyond the resources of most practicing clinicians. Second, and perhaps most important, research methodologies such as the Strange Situation and Adult Attachment Interview provide a narrow and rather limited understanding of how attachment processes contribute to the emergence of psychopathology. More specifically, both methodologies focus on the individual child or parent and fail to describe or account for the nature of the current parent-child relationship.

Third, these methodologies cannot be used with children and young adolescents. The Strange Situation is restricted to use with infants up to the age of 18 months while the Adult Attachment Interview can only be used with subjects who are at least 15 years old

In order to address these limitations, we propose a model of parent-child relationships that is based on the notion that parents and children process attachment information at multiple levels. At the individual level, both the parent and the child have formed internal working models (IWM) or expectations for the other person and for the self. For the child, these models guide appraisals of the parent's availability and responsiveness, and organize strategies for maintaining the relationship. For the parent, expectations guide their evaluation and reaction to the child's behavior. At the interpersonal level, parents and children engage in a series of interactions and communications. At this level both the parent and child send and receive signals. Problems in communication can occur both in terms of how clearly and congruently partners send signals and in terms of how sensitively and accurately signals are read. Finally, at the meta-cognitive level, the parent's capacity for monitoring self and other may facilitate

communication and the degree to which IWM are open to revision and updating. By adolescence, the child becomes increasingly capable of also monitoring self and other in the parent-child relationship (Kobak & Cole, 1994; Selman, 1980).

We believe that our levels of processing model can integrate constructs and findings from attachment research into a more comprehensive understanding of cognitive and emotional processes in parent-child relationships. In doing so, this model should address several major issues. First, it should provide clinicians with a guide to identifying attachment issues in parent-child relationships. Second, the model should account for the increased developmental complexity in attachment relationships that occur during the post-infancy period. Third, the model needs to address the parent's ongoing contribution to the attachment relationship. Without a clear understanding of the parent's contribution, we believe that efforts to apply attachment theory and research to child psychopathology will be seriously limited.

In this chapter, we will describe our levels of processing (LOP) model and then use it to distinguish between secure, anxious, and distressed parent-teen relationships. These three types of relationships represent a continuum of risk for child and adolescent psychopathology and can serve as a heuristic guide to clinical assessment and treatment. Whereas in secure relationships, cognitive and emotional processes operate to protect the child from the various stresses encountered over the course of development, in anxious relationships the child is vulnerable at times of stress and is at a higher risk of developing symptoms that will require professional attention. By the time many children reach treatment, their parent-child relationships are no longer simply anxious, but may be actively distressed and these distressed relationships often become a major impediment to symptom reduction. Our LOP model provides a way to describe the dynamics of secure, anxious and distressed parent-child relationships. These descriptions can provide the clinician with a guide for assessing children and their parents and for establishing treatment goals that increase security in the relationship.

Levels of processing in the parent-child relationship

A LOP model of parent-child relationships can be used to describe and integrate the major findings and constructs from the past two decades of attachment research including internal working models (Bretherton, 1985), attachment strategies (Main, 1990), open communication (Bowlby, 1988), states of mind (Hesse, 1999) and reflective function (Fonagy & Target, 1997). We believe that an adequate understanding of parent-child relationships must consider the individual level at which internal working models (IWM) of self and other organize feelings and cognitions in the relationship, the interpersonal level at which communication is exchanged, and the meta-cognitive level at which parents, and eventually children, become capable of establishing a perspective on IWM and communication between self and other. In addition to integrating existing findings, a comprehensive LOP model of the parent-child relationship also points toward major gaps in our understanding of parents and children.

The Individual Level—IWM of Self and Other

At the core of attachment theory is Bowlby's (1969/82) account of the child's attachment system and how it develops within the context of the parent-child relationship. According to the theory, children develop motivational or behavioral control systems that foster the formation and maintenance of a parent-child attachment bond (Cassidy, 1999). The emotional significance of this bond is evident in the child's enjoyment in maintaining contact with the parent, and conversely, in the extreme fear, anger, and sadness that accompany perceived threats to the relationship or disruptions of the bond (Bowlby, 1973). Bowlby also introduced the notion that individual differences in personality could be traced to the child's internal working models (IWM) of their caregivers' availability. Children whose IWM confidently forecast caregiver availability and responsiveness would feel secure, while those that lacked such confidence would feel anxious and at times, angry.

Beginning in the 1960's, Ainsworth's studies of mothers and infants at home and in a laboratory situation illustrated the complex interplay between the infant's IWM's and their strategies for maintaining the attachment relationship. Ainsworth found that infants' IWM's of their mother's availability could be inferred from how infants organized their behavior in the Strange

Situation (Ainsworth, Blehar, Waters, & Wall, 1978). Infants judged secure showed a pattern that reflected an IWM that confidently forecast maternal availability in the novel situation created by a laboratory environment. These infants actively used the mother as a safe haven at times of distress, and as a secure base for exploration. Infants judged anxious or insecure were restricted in the use of their mother as secure base and safe haven, reflecting underlying cognitive schema or IWM that forecast uncertainty or negative expectation about maternal response.

IWM, or expectations for the mother's availability organizes the child's strategy for regulating the attachment system (Main, 1990) and for maintaining the attachment relationship (Main & Weston, 1982). IWM serve as filters of both parent and child behavior in ongoing interactions. These filters guide appraisals of core issues such as whether the parent is perceived to be available and responsive to the child and whether the parent views him or herself as a competent caregiver. These core appraisals of self and other in the parent-child relationship in turn organize emotion, cognition, and strategies for maintaining the attachment bond. For the most part, these appraisals and interpretations operate automatically and outside of awareness (Bowlby, 1980). In this respect, IWM are similar to core cognitive schemas that form the basis for contemporary cognitive behavioral therapies (Safran & Segal, 1990).

Infant attachment patterns in the Strange Situation illustrate how IWM organize feeling and behavior. Whereas infants who were confident in the mother's availability actively communicated distress and sought comfort, infants whose IWM forecast rejection or inconsistent response developed secondary strategies that either minimized or maximized attachment feelings and behavior (Main, 1990). It is clear then, that, IWM carry enormous emotional significance for the child. If the child's IWM forecasts an available and responsive parent, he or she will feel secure and will enter situations with confidence, knowing that the parent would respond if called upon for help or support. Alternatively, if the child anticipates that the caregiver will be rejecting, neglecting or physically inaccessible, he or she will feel anxious, angry, or sad.

During the toddler and early childhood period of development, the child is also forming an IWM

of self. This IWM of self guides the child's appraisals of his or her abilities to succeed in day-to-day challenges and to gain support from others. Both theory and research suggest that the appraisal of the parent as available supports an appraisal of the self as worthy of support (Bowlby, 1973) and as confident and competent in situations involving challenge (Sroufe, 1988). Thus, an IWM of the parent that forecasts parental availability supports the development of an IWM of self that forecasts successful outcomes in challenging situations.

Our LOP model suggests that the construct of IWM should be extended to parents as well as their children. From this perspective, not only are children's interpretations influenced by IWM but also parents' interpretations of their children are guided by IWM. Attachment researchers have only begun to consider the parent's IWM of the child (George & Solomon, 1999). Theoretically, the parent's IWM should guide parental behavior and regulate the parent's caregiving behavioral system. The biological functions of the caregiving system include protecting the child and fostering the child's preparation for adult roles that ultimately increase the likelihood of reproductive success. In this respect, the parent's motivation to protect the child and facilitate the child's learning complement the child's need for the parent to serve as a safe haven from danger and a secure base to support exploration.

In contrast to the child, the parent's IWM of self precedes the development of the parent's IWM of the child. As a result, the parent's IWM of self may bias perceptions of the child and the development of an IWM of the child in complex ways. In situations, where the parent's has an IWM of self as worthy and competent, he or she may be free to more fully attend and adapt to the needs of his or her child. Such a model of self may also increase the parent's abilities to manage the child's anger or oppositional bouts, both of which are an integral part of the child's growing capacities for self-regulation.

The Interpersonal Level—Reading and Sending Signals

The notion that individual differences in IWM could be assessed in the first 18 months in the Strange Situation has captured the imagination of researchers interested in later periods of

development (Crowell, Fraley, & Shaver, 1999; Hazan & Shaver, 1987; Main, Kaplan, & Cassidy, 1985). As a result, Ainsworth's patterns of attachment have been turned into a theory of personality across the lifespan. Unfortunately, this focus on IWM as a core feature of personality has come at the expense of another aspect of Ainsworth's work that focused on the interpersonal communication between mothers and their infants (Kobak, 1999). For Ainsworth, the infant's IWM or expectations for a parent's availability went hand in hand with her observations of mother-infant interaction at the interpersonal level. Infants with IWM that forecast mother's availability in the Strange Situation had mother's who had sensitively responded to their signals during normal day-to-day interaction during the first year of life. Thus, IWM at the individual level was inextricably linked to a pattern of communication at the interpersonal level.

Although researchers have devoted considerable effort to assessing maternal sensitivity in parent-infant relationships, Bretherton (1999) notes that observation of interpersonal communication between parents and older children has been relatively sparse. The lack of research on interpersonal communication stems from both pragmatic and theoretical problems. Pragmatically, assessment at the interpersonal level requires observation of parent-child interaction and this type of research is time consuming and difficult. Theoretically, parent-child communication undergoes a dramatic transformation during early childhood, with the emergence of verbal communication and what Bowlby (1969/82) described as the goal-corrected partnership phase of the attachment relationship (Marvin, 1999). With the emergence of the child as a partner in the relationship, communication consists not only of the parent reading and responding to the child's signals, but also the child reading and responding to the parent's signals.

For the most part, attachment research has failed to take into account the dramatic transformation of the parent-child relationship into a goal-corrected partnership. As the child becomes capable of understanding the parent's goals, delaying his or her own goals, and negotiating compromise, the criteria for a secure parent-child relationship shift from sensitive

caregiving by the parent in infancy to cooperation between parent and children by the end of early childhood (Thompson, 2000). The shift to a goal-corrected partnership, places new importance on both the parent's and the child's abilities to use conversation to resolve goal conflicts and to address the child's needs for safety and learning become an essential feature of a secure relationship. As a result, conversations that conform to Grice's criteria for cooperative or coherent discourse become essential to the child's security or appraisal of the parent's availability (Kobak & Duemmler, 1994). For a conversation to meet these criteria both the parent and the child must effectively express their own concerns, acknowledge the other person's concerns and establish a give and take in situations involving goal conflicts.

The importance of parent-child communication has been demonstrated in studies of adolescents and their parents. The importance of both communicating goals and validating one's partner is assessed in Allen's Autonomy and Relatedness Coding System for parents and their teenage children. Allen has found that relationships in which parents and adolescent demonstrate autonomous assertion of their position while also acknowledging their partner's perspective, lead to higher levels of adolescent ego development and self-esteem (Allen, Hauser, Bell, & O'Connor, 1994). Similarly, mother-teen problem-solving interactions characterized by mothers dominating the conversation and by a mutual lack of perspective taking were associated with depressive symptoms in adolescents over a nine-month period (Kobak et al., 1991).

The Meta-Cognitive Level—Updating and Revising IWM

During the past decade, a great deal of research has emerged from Mary Main's classifications of parents' "states of mind" with respect to attachment in the Adult Attachment Interview (Hesse, 1999). She found that parents who were "free to evaluate" their thoughts, feelings and memories of their own parents were more likely to have infants who were judged secure in the Strange Situation (Main, Kaplan, & Cassidy, 1985). This "freedom to evaluate" involves the ability to access and integrate memories about parents and to consider the effects childhood memories on the self. Interview

questions create opportunities for reflection and for reappraisal of IWM. Main and Goldwyn assessed parents' ability to successfully engage in this task with close analysis of the coherence of parent's discourse in the interview setting (see Hesse, 1999 for review).

Main's discovery of states of mind in the AAI introduced a new level of processing to our understanding of the parent-child relationship. An autonomous state of mind depends upon a meta-cognitive ability to access, monitor and reappraise IWMs of self and/or other. The potential implications of this discovery extend far beyond adults reflecting about their childhood experiences in an interview setting. Theoretically, the meta-cognitive ability that Main described as an autonomous state of mind allows the parent to access information about IWM, check IWM for consistency, and when appropriate to update and revise the IWMs of self and other that guide appraisals during day-to-day interactions.

Much of the processing of relationship information that occurs at the individual level with IWM and at the interpersonal level through signaling and reading partners' behaviors, occurs automatically, without need for reflection (Bowlby, 1980). When IWMs produce expectations for self and relationships that are confirmed, the models are relatively well-adapted or "tolerably accurate" and, by operating automatically, they make less demand on cognitive and attentional resources. However, to remain well adapted IWMs must be open to revision and updating in response to new information.

Bowlby stressed the importance of updating and revising IWMs primarily from the standpoint of the child. In the third volume of his attachment trilogy, Bowlby (1980) focused on the how the loss of an attachment figure involves gradually accommodating unwelcome information about the loss and revising and updating IWMs of self and the world accordingly. In later writings about the therapeutic process, Bowlby focused on the therapist's role in helping adults access and reevaluate their IWMs of self and other in light of new information. The common theme was that outdated IWMs can be the source of problems in adaptation. From this perspective, healthy development requires IWM of self and other to be open to new information. The process of

reevaluating automatic appraisals of an attachment figure or of the IWM from which the appraisals are derived requires some degree of meta-cognitive activity. Expectations of self and other need to be accessed and evaluated.

Our LOP model suggests that the process of updating and revising working models is important not only in situations involving loss and psychopathology, but also as a part of normal development in parent-child relationships. It is hard to overemphasize the potential significance of a parent's meta-cognitive ability to maintaining a secure attachment relationship with his or her child. As the child develops, the parent must continually update and revise their IWM of the child. Much of the challenge of parenting centers on balancing concerns for the child's safety with concerns that the child is learning skills that support his or her autonomy. An accurate IWM of the child, allows the parent to adjust his or her behavior to the child's particular needs and abilities as they grow older. During the phase of early childhood, a part of the child's learning involves the parent gradually increasing expectations for the child to accommodate his or her goals to fit with those of the parent (Kochanska, Aksan, & Koenig, 1995). These maturity demands (Baumrind, 1967) provide an important adjustment in the parent-child relationship that ultimately facilitate the child's learning of frustration tolerance and negotiation skills, both of which are important for maturation.

Our LOP model also points to the role that parents' meta-cognitive abilities may play in monitoring and repairing communications with the child. Parents' IWM of their child are likely to be more accurate and result in more effective parenting when the IWM results from their ongoing experience of reading their child's signals. When the parent's IWM is regularly updated, he or she is more likely to respond to the child in a manner that is well adapted to the child's attachment and exploratory needs. Individual variation between children may also challenge the parent to build an IWM of the child that is well adapted to that particular child's attachment and exploratory needs. However, in most circumstances, the parent's IWM of the child should facilitate their appraisal of the child's needs in a way that leads to effective response and supports the child's appraisal of the parent's availability and responsiveness. Updated IWM's are likely to result in caregiving behavior that

fosters the parent's sense of efficacy and the child's appraisal of the parent as available and responsive.

The notion of "reflective function" further expands the potential relevance of meta-cognition to secure parent-child relationships. Fonagy and Target (1997) define reflective function as "the developmental acquisition that permits the child to respond not only to other people's behavior, but to his conception of their beliefs, feelings, hopes, pretense, plans, and so on." (Fonagy & Target, 1997, p. 679). This capacity for mentalization enables children to "read" people's minds and to attribute mental states to others. Thus, the development of reflective function presupposes the child's ability to differentiate between self and other and to attribute intention to people. This mentalizing ability gives the child the capacity to realize that another person's behavior is "open" to interpretation. In this sense, reflective function creates the possibility of generating new information with which IWM of self and other can be updated.

Fonagy and Target (1997) propose that parents provide a mirror for the child's experience and to the extent that the parent attributes intent to the child, the child will come to understand his own and other experience in terms of mental states. What begins as the parent's capacity to mentalize the child's behavior, eventually becomes a relationship in which the child develops their own capacity for reflective function. Meins (1999) has termed the parent's capacity to mentalize their child's behavior as "mind-mindedness" and has suggested that this meta-cognitive ability plays an important role in maternal sensitivity and the development of a secure attachment. Further, Meins and her colleagues have found longitudinal relations between mother's "mind-mindedness" during infancy, infant attachment security, and subsequent measures of theory of mind when the children were five years old (Meins, Fernyhough, Russell, & Clark-Carter, (1998).

An LOP model not only integrates existing research, but more importantly points to the major gaps in our understanding of parent-child attachment relationships. First, attachment research with older children and adults has focused on processes at the individual level of analysis and in doing so has neglected the interpersonal level of ongoing communication

(Bretherton, 1999). Second, despite the promising work of Meins and Fonagy, the implications of meta-cognition for the parent-child relationship have barely begun to be explored. Third, attachment research has focused primarily on the child and not the parent. As a result, little is known about parenting motivation or how the parent's IWM of the child develops and influences the parent-child relationship. Finally, most research tends to focus on only one or two levels of analysis and as a result, the systematic relationship between levels of processing has not been adequately addressed.

Despite these research limitations, levels of processing can serve as a valuable heuristic for clinicians working with distressed parents and their children. In the remainder of this chapter, we will illustrate how by taking into account the interrelation between the levels of processing, clinicians can be guided in the assessment and treatment of child and adolescent psychopathology. In this sense, it is useful to describe relationships as secure, anxious or distressed. These more general descriptions provide the clinician with a guide for assessment that identifies the degree of distress in the relationship and with an overview of a family's strengths as well as weaknesses. Since clinicians often see anxious or distressed relationships, it is useful to consider secure relationships as a way of illustrating how successful parent-child relationship can manage difficulties and cope with stress. Such a description can also be useful in establishing treatment goals as well as markers of improvement in therapy with more distressed parent-child relationships.

The Secure Cycle in Parent-Child Relationships

The parent's IWM of self as a competent caregiver and the child's IWM of the parent as available and responsive lie at the heart of a secure parent-child relationship. These IWMs provide the basic schemas through which the parent and child interpret and respond to each other's behavior. The child's confidence in the parent's availability biases the child toward viewing the parent's behavior in a favorable light. Such an IWM promotes ongoing appraisals of parental availability and a feeling of security in the child. The parent's confidence in his or her ability to care for the child fosters engagement

and allows the parent to find ways to balance acceptance of the child's needs with firm limits. Together positive expectancies of self and other set the tone, or emotional climate, for how information is processed in the relationship.

Security at the individual level fosters open communication at the interpersonal level. As the child encounters difficulties, challenges, and/or potential conflict with the parent, confidence in the parent's availability allows the child to openly and directly communicate both negative and positive feelings at the interpersonal level (Bretherton, 1990). Direct communications from the child facilitate the parent's task of reading the child's signals and are less open to misinterpretation. As a result, the parent's response is more likely to be sensitive and appropriate. As children enter the phase of the goal-corrected partnership (Marvin, 1999), parental response to a child's signals often involves balancing meeting the child's requests with the parent's own goals and maturity expectations for the child (Baumrind 1967). In the goal-corrected partnership phase, the parent gradually revises his or her IWM of the child to take into account the child's growing ability to tolerate frustration and to internalize parental rules. As a result, parent communications involve establishing a sense of cooperative partnership through negotiation and joint planning. Parents' IWMs are important for reading the child's signals and for guiding the parent in setting appropriate limits with the child. The parent's IWM of self as a competent caregiver will enhance his or her ability to communicate limits clearly and consistently to the child.

Parent-child relationships are subject to ongoing adjustment and challenge as the child develops. Just as in parent-infant relationships, understanding the role of attachment in older children requires close analysis of the patterns of parent-child interaction. The following exchange taken from Haim Ginott's (1971) classic book on parenting illustrates how a secure parent-teen relationship would manage a conflict that is fairly typical of the adolescent period of development.

Mother walks into the house on Sunday evening after being away for the weekend. Her fifteen year old daughter Gloria pounces on her.

Gloria: "Mother! Wait 'til you see the dress that I

bought. It's so gorgeous. I charged it to your account."

Mother: "There is to be no charging in department stores without permission."

Gloria: "But I didn't steal it, what are you so mad about?"

Mother: "There is to be no charging in department stores without permission!"

(Retreats to bedroom and closes door. Thinks to self, "She can't wear that hideous, mini-length ruffled horror, with a plum velvet sash, that looked like a masquerade costume.")

Gloria: (Knocks on door). "Please open up! Wait 'til you see it on me. It fits perfectly on me and it looks so feminine and romantic."

Mother: (Opens door and sees the plum lavender dress). "I can see why you are taken by the dress, but it's inappropriate for school and too expensive."

Gloria: "But isn't the color gorgeous?"

Mother: "Some people like that color, it's not one of my favorites."

Gloria: "Why! I thought you like this color."

Mother: "It's not one of my favorite colors for clothes, though I do like to use it in my paintings. I can see how much you love that dress. It's not going to be easy to return it, could you do it tomorrow afternoon?" (Ginott, 1971, pp. 104-106)

Two aspects of this conversation typify a secure parent-child relationship at the interpersonal level. First, both partners remained engaged in the conversation actively contributing their point of view. Second, the conversation remains cooperative in tone without either the child or parent resorting to angry, belittling, critical or rude comments. In this exchange, the mother deserves much of the credit for maintaining a cooperative tone. Most evident is the mother's confidence in her self as a caregiver and her ability to work at repairing a violation of a rule about using her credit card. Her confidence is evident in her firm assertion of the rule about charging and her ability to contain her anger about the violation. For her part, the daughter although absorbed with her own concerns about the dress

persisted in trying to influence her mother, but was willing to modify her own goals in order to maintain cooperation in the relationship.

The mother also demonstrates how meta-cognition can contribute to maintaining a cooperative conversation. First, meta-cognition creates the possibility of taking into account multiple perspectives on self and other. At the most basic level, empathy with another person or reflective function involves moving beyond the self to consideration of alternative perspectives. This ability becomes a critical feature of the goal-corrected partnership phase of parent-child relationships and is a necessary skill for establishing cooperative conversation. In this conversation, the mother was able to, at several points, acknowledge the importance of the dress to her child. Second, meta-cognition can provide an opportunity to reflect on IWMs at moments when expectations are violated. As such, meta-cognition creates the possibility for accessing automatic appraisals of self and other and for subjecting those appraisals to evaluation. This reappraisal process creates the possibility of identifying misperceptions and apologizing, and the opportunity for the emergence of a new understanding of self and other. This mother was able at several points to reappraise her initial reaction to her daughter and to seek time out as a way of editing her reactions. Thus, in a secure relationship, reflective function makes it possible for both parent and child to accommodate the changes that accompany development in the parent-child relationship.

Open communication also creates new information with which IWMs can be updated and revised. When the child shares concerns and accomplishments with the parent, the parent's IWM of the child can be gradually altered to take into account the child's interests, concerns, sensitivities, and abilities. Further, as the parent communicates his or her own goals, the child can revise his or her IWM of the parent to take into account the parent's concerns, rules, and habits. Updated IWMs of self and other in turn lead to communications in which both parent and child needs are anticipated and taken into account. IWMs of self and other that are "tolerably accurate" promote both the parent's and the child's confidence in the relationship which, in turn, supports more direct and congruent signaling of the child's and parent's goals, and a

greater capacity to empathize with the other person. Updated IWMs that foster realistic confidence in self and other lead to the positive emotions associated with a secure relationship. At times of low stress, such models enhance enjoyment of the relationship. At times of high stress, favorable IWMs of self and other allow the child to view the parent as a potential coping resource and source of support. In short, the parent is viewed as a solution and not a problem.

Even the most secure parent-child relationships will be challenged by miscued communication. The meta-cognitive level of processing can serve an important role in repairing such communications. Meta-cognitive processing can be triggered when the child's behavior violates the normal expectations derived from the IWM. In a secure relationship, the child's non-cooperative behavior is likely to be seen as an exception to the rule and draw the parent's closer attention. Similarly, if a child's IWM biases appraisals of parent's behavior toward availability and responsiveness, a parental behavior that is seemingly inconsistent with the IWM will be either selectively ignored or reinterpreted. In both situations, behaviors on the part of the child or parent that are inconsistent with secure expectations become opportunities for updating IWMs in ways that reduce the likelihood of similar misunderstandings in future interactions. In this respect, miscues and misunderstandings play the important function in secure relationships of triggering reappraisals of IWMs that support their revision.

Although the three levels of processing in our model represent conceptually distinct aspects of parent-child relationships, in actual interactions between parents and children information is processed simultaneously at all three levels. Further, how information is processed at one level influences how information is processed at another level. The diagram in Figure 1 illustrates how the different levels of processing interact in a secure parent-child relationship. Generally, in secure relationships the different levels of processing operate in ways that support each other. For example, at the individual level represented by parent and child IWMs, confident expectations support more direct signaling of needs by the child and a greater capacity for perspective-taking and empathy by the parent. As the child gets older and becomes more of a partner in the relationship, secure IWM allows the parent

to more directly communicate his or her goals and allows the child to understand and empathize with the parent's perspective. At the meta-cognitive level, secure IWMs increase reflective function, empathy and facilitate reappraisal processes. These meta-cognitive abilities in turn can foster more open communication which provides new information with which IWM can be updated. Thus, secure IWMs at the individual level, cooperative conversation at the interpersonal level, and reflective function at the meta-cognitive level interact to create a virtuous cycle that allows IWM to be updated and revised. More accurate IWMs, in turn, foster more open communication and better perspective taking. The relatively smooth interplay of the individual, interpersonal, and meta-cognitive levels provides both parents and child with a sense of confidence, and allows them to approach developmental changes or stresses in the relationship with a sense of optimism.

Figure I The Secure Cycle

The secure cycle facilitates an overall positive emotional climate in the parent-child relationship. When a relationship is secure, conflicts or disagreements are relatively short-lived and often produce opportunities for learning and accommodation within the relationship. Further, disagreements are resolved through a process of negotiation providing both parent and child with an overall sense of a cooperative partnership. In these relationships, both parent and child derive a sense of mutual enjoyment and satisfaction from the relationship. As a result, the relationship is marked by exchanges of positive emotion and by containment of negative feelings.

Levels of processing in Anxious Parent-Child Relationships

In some parent-child relationships the kind of exchange that characterizes a secure cycle is notably absent. Whereas secure relationships are marked by negotiation at times of conflict, and by warmth and positive affect at moments of low stress, insecure relationships are marked by a lack of cooperation and often by a lack of warmth or positive engagement. When children perceive their parents as unavailable or unresponsive, the way in

which information is processed and exchanged between parent and child is fundamentally altered. Instead of approaching interactions with a feeling of security that is derived from confidence in the parent's availability, the insecure child approaches the relationship with feelings of anxiety and anger (Bowlby, 1973). Similarly, parents in insecure relationships may come to perceive their child's behavior as potentially threatening to their sense of competence and to their sense of efficacy in the caregiver role (Bugental, 1992).

Another example from Ginott (1971) illustrates the type of exchange that characterizes an anxious parent-child relationship. Floyd, age 13 enters the living room with a bouncing basketball.

Mother: "Get out of here with that. You'll break something!"

Floyd: "No, I won't!" (Ball hits lamp and sends it crashing)

Mother: "For crying out loud, you never listen to anything I say. You had to break something, didn't you? You are so stupid sometimes."

Floyd: "You broke the washing machine, what does that make you?"

Mother: "Floyd, you know better than to be rude."

Floyd: " You were rude first. You called me stupid."

Mother: " I don't want to hear another word from you. Go to your room this instant!"

Floyd: "Quit trying to boss me around. I'm not a kid anymore."

Mother: "To your room this instant!"

Floyd: "Go ahead, make me."

(Ginott, 1971, pp. 86-87)

This conversation is marked by a lack of cooperation between parent and child. The mother's reaction to Floyd's rule violation of bouncing a basketball in the living room is angry and accusatory. This type of response is more likely when the parent has developed negative expectations for the child and a corresponding sense of failure as a parent. These IWM bias the parent toward perceiving the child's rule violation as threatening and increase the likelihood of more controlling or coercive types of response to the

child. The mother's negative affect sets the tone for an exchange that is likely to elicit defensive responses from the child. As a result, the mother will have relatively little opportunity to state the rule that has been violated or initiate repair processes. Floyd will be given no opportunity to restore a cooperative relationship with his mother.

The child in an insecure relationship faces a dilemma. His IWMs create biases toward perceiving his mother as unavailable and as a result, his appraisals and interpretations of her behavior are likely to create a sense of uncertainty or fear of rejection. Such appraisals are usually accompanied by a great deal of anxiety and anger (Bowlby, 1973). In Floyd's case, his immediate concern was to defend himself against his mother's accusations. His anger found expression in his retort, though his anxiety about his mother's availability remained hidden. This confrontation would ultimately have ended with either physical conflict or disengagement.

Although the immediate source of distress in the relationship could be terminated through disengagement, the child in this situation is likely to interpret this exchange as further evidence for an IWM that forecasts an unavailable and rejecting mother. These appraisals produce more permanent anxiety about the relationship. These negative feelings create a conflict for the child insofar as directly communicating these feelings may threaten the parent and further escalate conflict and the child's anxiety about the parent's availability (Main & Weston, 1982). To cope with this dilemma, Main (1990) has suggested that children strategically alter their thoughts and feelings in order to maintain the attachment relationship. Floyd could dismiss his mother and focus his attention elsewhere or he could precipitate further conflict in order to maintain his involvement with his mother.

The notion of insecure or secondary strategies for regulating the attachment system is illustrated by Ainsworth's descriptions of insecure infant attachment patterns in the Strange Situation procedure. Infants classified as avoidant can be understood as having IWMs that forecast rejection from the parent. As a result, these infants strategically deactivate the attachment system and disengage from the parent at times of stress. In contrast, infants classified as ambivalent have IWMs that forecast inconsistent responding from the caregiver and as a result, they strategically

hyperactivate the attachment system in ways that serve to increase involvement with the parent (Kobak et al., 1993). These infant patterns of disengagement or pursuit at times of stress have also been identified in distressed marital relationships (Johnson, 1996), and may also characterize anxious parent-teen relationships.

Parents may develop complementary strategies for deactivating or hyperactivating the child's attachment system. These caregiving strategies may be most apparent when the parent views the child's behavior as potentially threatening to his or her sense of competence or security. For instance, parents may shift their attention from or attempt to reduce their contact with the child, or they may focus on achievement in ways that complement the child's deactivating strategy. Parents of children with hyperactivating strategies may adopt intrusive efforts to control the child's behavior, or they may appear helpless and attempt to elicit increased involvement from the child. The goal of both types of parent and child strategies is to reduce the immediate perceived threat to the relationship, and most insecure strategies will be maintained if they are effective in stabilizing the relationship.

Although insecure strategies serve to temporarily alleviate parent and child anxiety, they create a number of vulnerabilities for the parent-child relationship at all three levels of information processing. Figure 2 indicates how insecure IWM create vulnerabilities at all three levels of processing. At the individual level, the child's insecure IWMs forecast lack of availability from the parent. At the interpersonal level, the child's insecure strategies distort and restrict communication. Children with deactivating strategies are likely to minimize or downplay feelings of distress and actively divert attention away from their difficulties. They are more likely to disengage from interaction. Children with hyperactivating strategies may show distress in ways that make effective parental response more difficult and less effective. They may be prone to overinvolvement with parents in ways that ultimately prove ineffective and reduce overall exploration. As a result, parents are likely to have difficulty reading the child's signals and empathizing with their goals and needs.

Figure 2—The Anxious Cycle

Distorted communication may also foster parents' feelings of ineffectiveness and frustration and confirm negative expectancies derived from IWMs of self and child. As a result, child behaviors may be perceived as threatening to the parent's sense of competence and the parent's anxieties and worries about the child may be strategically altered. Without opportunity for sharing their concerns with other adults, parents may adopt strategies such as disengagement or overinvolvement to reduce their anxiety (Minuchin, 1974). Patterns of parental disengagement are likely to reinforce the child's IWM of an unavailable parent, while a pattern of overinvolvement, may reinforce an IWM of an intrusive and inconsistently available parent.

As Figure 2 illustrates, insecure strategies may also reduce parents' ability to reflect upon and reappraise IWMs at the meta-cognitive level. Restrictions in parents' ability to think about IWMs of self and other are likely to interfere with their ability to take the child's perspective and to mentalize the child's behavior. This lack of awareness of the child's goals and intentions may make it more difficult for the child to use reflective function and to articulate his or her thoughts and feelings. Parents who lack support from other adults or who harbor doubts about their caregiving competence are more likely to perceive a child's anger or anxiety as threatening. As the parent's anxiety increases, their ability to step back and monitor their own feelings or to consider alternative ways of interpreting the child's behavior decreases. As a result, they are more likely to respond to perceived threats in an automatic and defensive manner (Bugental, 1992) involving some form of flight or fight. These disengaged or coercive responses are likely to reinforce the child's appraisal of lack of parental availability and lead to further distorted expressions of attachment-related anxiety and anger.

Finally, as the child moves beyond infancy into childhood and adolescence, an insecure parent-child relationship may limit the child's development of communication, perspective-taking and negotiation skills (Kobak & Duemmler, 1994). By restricting the parent's own capacities for empathy and reflective function, insecure strategies may limit the degree to which the parent-child relationship facilitates

cooperative problem-solving and repair processes. As a result, the child's opportunities for developing emotion regulation, communication, and reflective function skills are reduced. The child's lack of experience with conflict resolution in the parent-child relationship may also limit the development of reflective function and the understanding of others intentions.

Distressed Attachment Relationships and the Emergence and Maintenance of Child Symptoms

Insecure parent-child relationships create vulnerabilities, particularly at moments of high stress. Stressful experiences can occur both within the parent-child relationship and as a result of other situations, such as peer, school or developmental difficulties. At times of stress, insecure attachments may increase risk for psychopathology by limiting the support for the child and by reducing the parent's ability to understand and respond to the child's difficulties. If insecure strategies are successful in reducing anxiety about the parent's availability, stress can be managed without producing symptoms in the child. This explains why the majority of children in anxious attachment relationships do not develop psychopathology (Greenberg, 1999; Sroufe, 1988). Both parents and children in these relationships can manage school, peer, and emotional difficulties without the emergence of symptoms. Children with deactivating strategies may systematically shift their attention from difficulties to areas of competence and parents are likely to support these strategies. Children with hyperactivating strategies may excessively rely on their parents, and these parents may become excessively involved. Both types of anxious strategies allow the child to cope with difficulties and to maintain a sense that the parent is available and, as a result, they allow the child to maintain some confidence in his or her ability to manage stress.

Risk for child psychopathology is substantially increased when the child's strategies for maintaining the relationship break down. Strategies for maintaining the attachment relationship are most likely to break down when stress reaches unusually high levels. Main and Hesse (1990) have called attention to lapses in attachment strategies in the Strange Situation and have linked these momentary lapses to infants'

experiences the parent as either frightened or frightening. In older children, breakdown in attachment strategies could result from severe difficulties in a parent's ability to serve as a caregiver. Such difficulties may include depression, psychiatric difficulties, marital conflict and threats to abandon the child. If the parent is having such severe trouble, the child's normal anxious strategies for insuring parental availability may fail, creating increased anxiety in the child. Sources of extreme stress, trauma, or loss for the child may also overwhelm the child's coping strategies, exacerbating the child's already heightened anxiety.

When attachment strategies break down, the child is in a situation in which distress is compounded first by the perceived threat to the parent's availability and then by the lack of coping strategies for managing this threat. This compounded fear situation is often accompanied by feelings of anxiety, anger and sadness (Bowlby, 1973). Due to both the high level of negative affect and the lack of open communication with the parent, the child's attachment-related feelings are typically expressed in a distorted and problematic way that makes it difficult for the parent to understand or address the child's concerns. For instance, a child may express attachment-related anger through disruptive behavior in the home and in school settings. Alternatively, the child may show extreme withdrawal or disengagement from the parent and become non-communicative.

The child's symptoms are often identified as problem behaviors. These may range from poor academic performance, disruptive behavior in school, and trouble with legal authorities, to obsessive concern with appearance. These problem behaviors usually draw a parent's attention, and the parent attempts to reduce the problematic behavior. Parents and children who have a secure relationship will have an advantage in addressing these kinds of difficulties and often the child's problems prove to be an opportunity for increased understanding. Parent and children in distressed relationships find managing problem behaviors more challenging. In distressed relationships, the child's disruptive or problematic behavior is more likely to threaten the parent's sense of competence and control (Bugental, 1992). Parents may respond to this sense of threat by increased efforts to control the

child's behavior in coercive forms or by disengaging from caregiving responsibilities. Parental responses, in turn, serve to further confirm the child's fears that the parent is unavailable. This "symptomatic cycle" characterizes many families seeking treatment for child difficulties (Micucci, 1998).

In distressed relationships, the different levels of processing serve to perpetuate distress and symptomatic behavior in the child. At the individual level, the perceived threat to the parent's availability on the part of the child fuels negative feelings and may increase problematic behavior. For the parent, the child's behavior becomes a focus and efforts to control the problem result in increased sense of failure. At the interpersonal level, communication is narrowly focused on the child's problematic behavior and more positive aspects of the relationship are diminished. The child's communications are often mistrustful and non-informative. At the meta-cognitive level, empathy and perspective-taking are reduced, and the ability to repair non-cooperative exchanges is lost. Thus, at a time when the parent would normally serve as a resource for the child in managing stress, the parent-child relationship may actually become a source of stress that further exacerbates the child's symptoms.

Implications for Assessment

By understanding the nature of secure, anxious and distressed parent-child relationships the clinician can be guided in both assessment and treatment of child psychopathology. From the standpoint of assessment, the clinician can determine a family's functioning along a continuum of risk. From the standpoint of treatment, attainable goals can be established that move the family toward more secure relationships and adaptive functioning. These goals can be shared with the family in a way that defines a treatment contract that builds on competence within the family and provides increased understanding of the child's symptoms. Further, by considering multiple levels at which information is processed in the parent-child relationship, the therapist gains increased flexibility in identifying hidden strengths in the family and in choosing points at which to intervene.

Attachment-based assessment of child psychopathology begins considering the possible connection between the child's symptoms and the perceived threats to parental availability. The goal of assessment is to locate the parent-child relationship on the continuum of risk, identify competent aspects of the relationship, and to determine the association between the child's symptoms and the parent-child relationship. Not all child problems will necessarily be linked to anxious or distressed relationships. In more secure relationships, child difficulties may cause strain on the relationship, but parents will find ways to support the child and repair ruptures in the relationship. In such relationships, the child's difficulties are likely to be contained and not contribute to the child's fears about parental availability. Despite difficulties, the parents in a secure relationship are likely to update and revise their IWM of the child while continuing to provide the child with a source of security and support. In these types of situations, parents and/or children may occasionally seek professional help, but these families can often benefit from advice and perspective on the child's difficulties, and treatment is likely to be relatively brief.

In cases where the relationship between parent and child is more anxious or distressed, our LOP model provides a map for assessing the degree of distress. For instance, in observing parent-child communication, the therapist can assess the interpersonal markers of relationship distress such as lack of cooperation, negative exchanges and lack of mutual understanding. Similarly, the therapist needs to assess the degree of reflective function shown by both the parent and the child. Here, parents' and children's abilities to acknowledge their assumptions, access the appraisals, and submit them to reevaluation and reappraisal provide areas of competence on which the partners can build. The capacity for reflective function can be gauged by observing communication. In more distressed relationships, empathy and accommodation are notably absent and are often replaced by accusatory communications or disengagement. The challenge of assessment is in accessing the IWMs that guide interpretation of behavior in the interaction.

Children's strategies for managing attachment anxiety will often make it difficult for them to report on the painful feelings of hurt and

rejection that fuel anger and disengagement. Parents may also have difficulty acknowledging their sense of failure and lack of control with their child. It is often useful, therefore, to meet with parents and children separately. Individual assessments offer the therapist the opportunity to assess the parent's and the child's capacity for reflective function in the context of the safer and more controlled environment created by the therapist. Parents and children differ enormously in their capacities to monitor appraisals and reevaluate situations. Some parents may welcome the opportunity to discuss their thoughts and feelings about their child and about themselves in a caregiving role. Others may find such discussion threatening. Similarly, empathy and fondness for the child may vary, and may indicate the level of distress in the relationship. Often, through the empathy provided by the therapist, both the parent and the child will be capable of acknowledging some of the vulnerability and threat that motivates distorted and accusatory communications in the relationship. These sessions may also provide the therapist with information that allows him or her to better determine the role that attachment and caregiving anxieties are playing in the child's symptomatic behavior.

Initial assessment of the family should take into account current stresses in the life of the child and in the family as a whole, as well as how these stresses are managed in the parent-child relationship. Family stresses ranging from economic hardship and marital conflict, to deaths of grandparents and relatives may make demands on parents' and children's coping resources. In addition, it is important to assess the sources of support for the parent. A supportive adult attachment relationship can provide the parent with an invaluable companion for managing their life stress and parenting difficulties. Alternatively, distress in adult relationships can be an additional source of distress for a parent and can undermine their capacity for coping with children. After assessment of the family's sources of stress and support, the therapist and parent can set priorities for treatment and can determine whether parent-child treatment, marital therapy, or individual treatment for the parent is warranted.

In many cases in which parent-child treatment is chosen, our LOP model provides the basis for a treatment contract. A therapeutic contract should provide the parent and child with a rationale for

treating the child's symptoms by reducing the level of distress in the relationship. The contract should begin by pointing out areas of strength in the relationship that may include positive examples of communication, empathy, or reflective function. It should then provide a link between anxious features of the relationship and the child's symptomatic behavior. This can be done in a way that emphasizes the significance of the parent to the child's emotional security and well-being. Finally, the contract should establish the number of sessions and emphasize that as communication and understanding in the relationship improves there should be a reduction in the severity of the child's symptoms.

Implications for Treatment

Attachment-based treatment has the general goal of interrupting the symptomatic cycle in family relationships and of increasing the parent's acceptance of the child and the child's confidence in the parent's availability. These general goals allow for a wide range of intervention techniques which increase the therapist's flexibility in promoting a more secure relationship. Our LOP model provides a way of organizing intervention techniques and specifying the curative mechanisms available to therapists. In addition, although the child's difficulties provide the central motivation for families seeking treatment, our attachment model suggests that changes in the relationship are likely to be the most effective and long-lasting result of treatment to the extent that they restore the parent's sense of efficacy as a caregiver. This sense of efficacy derives from changing the parent's IWM, or understanding, of the child, improving communication, and providing the parent with increased empathy and a greater capacity for reflective function that will, in turn, improve repair processes in the relationship.

The initial challenge facing therapists working with distressed parent-child relationships is to reduce the negative feelings and interpretations and increase the positive sentiment in the family. The therapist's relationships with the child and parent are essential for moving the family toward more positive feelings. The relationship that the therapist develops with the family needs to serve as a model of a secure relationship in a situation where such security is

lacking. Thus, in her initial interactions with the family, the therapist needs to model empathy and open communication so that the child and parent develop confidence in the therapist's availability and responsiveness. When a secure relationship develops, it is accompanied by feelings of safety, which make it possible for the parent and child to explore and examine their negative appraisals of each other and consider alternative points of view. The idea that security is a precondition for exploration and experimentation has been a central insight derived from the notion of the secure base function of the attachment relationship (Bowlby, 1988).

Once the therapist has established a secure base, most therapeutic techniques can be understood as guided by the therapist's effort to alter the child's and the parent's IWMs of each other from negative appraisals to more positive expectancies that facilitate engagement, communication, and increased understanding. The therapeutic technique of "reframing" (Minuchin & Fishman, 1981) involves having the therapist provide an alternative interpretation of the child or parent's behavior. In an attachment-guided approach such reframing would emphasize the need for support or safety from the parent, and the parent's desire to protect and nurture the child. These interpretations are guided by our understanding of parents' and children's motivations in secure relationships. The success of such interventions is dependent on the extent to which the therapist can help the parent understand negative child behaviors as distorted expressions of more positive attachment needs or, alternatively, on the extent to which the therapist can help the child understand controlling or angry parenting behavior as a distorted expression of legitimate caregiving concerns.

The success of reframing interventions is dependent on the extent to which the therapist has accessed attachment and caregiving needs with the child and parent. Thus, the therapist's ability to establish empathetic and reflective dialogue between the child and parent provides a rich source of new information that can be used in reframing the parent's and as well as child's behavior, and in opening communication. For instance, a child's acknowledgement of their fears that the parent doesn't really care about them, or the parent's acknowledgement of frustration and despair over their inability to help their child, can

provide the foundation on which the therapist can rest her argument for how important the parent is to the child and how important the child is to the parent. These alternative interpretations call attention to the significance of the attachment bond and may create the basis for a new understanding, on the part of the parent, of the child's symptomatic behavior. In addition, the therapist's empathy with both the child and the parent also provides a valuable model of the importance of empathy in maintaining open communication.

The ultimate goal of attachment based therapy is to develop the parent's capacities for empathy and reflective function with the child, which capacities have been modeled by the therapist. The parent's ability to incorporate these capacities into their relationship with the child can be monitored in therapy with parent-child exchanges. The therapist can facilitate reflective function in the parent by intervening in exchanges that are miscued or leading to increased defensiveness, and by asking the parent to stop and reflect on the thoughts and feelings that accompanied the negative interaction. Through repeated use of this "stop the action" technique, the therapist can increase the parent's ability to use reflective function to monitor, reappraise, and repair problematic communications with the child.

Videotaped replay of parent-child interactions offer another useful technique for developing parents' capacities for empathy and reflective function. Replay procedures offer some advantages for increasing the parent's capacity for self-observation and reappraisal. By not having the child present, the parent is given more opportunity for extended reflection on their thoughts and feelings during particular exchanges. This procedure also offers the opportunity for problem-solving with the therapist and for discussion of alternative ways that the parent could manage the interaction. Videotaping also offers the therapist the opportunity to select for discussion interactions that are particularly promising and emphasize moments of positive change as well as more problematic interactions (Marvin, Cooper, Hoffman, & Powell, in press).

Attachment based treatment can work at all three levels of the parent-child relationship in order to find ways to disrupt the symptomatic cycle. By increasing the parent's ability to

monitor communication with the child, to consider alternative perspectives, and to focus on the positive aspects of the relationship, the therapist gradually restores a sense of caregiving efficacy and competence to the parent. As the parent feels more competent, they gain the ability to empathize, to repair interactions with the child, and to revise their IWM of the child. The parent's increased accessibility should gradually restore the child's confidence in the parent and should lead to more direct communication. Thus, when successful, therapy initiates confidence in the parent-child relationship that can be self-sustaining.

Conclusion

In this paper, we sought to bridge the gap between attachment research and clinical treatment of child psychopathology. Much work remains to be done to test the relevance of our levels of processing model. On the research side, the different levels of processing need to be systematically assessed, and markers of secure, anxious, and distressed relationships need to be identified. The LOP model highlights critical gaps in our understanding of parent-child relationships and points toward understanding attachment and caregiving in the context of the parent-child relationship. To the extent that research methods assessing the quality of parent-child relationships are developed, these methods will be very useful to clinicians in assessing families seeking treatment, and in understanding the link between attachment and child psychopathology.

For clinicians, our model provides a general map for assessing and treating distressed parent-child relationships. We view our LOP model as useful insofar as it can specify general principals that should guide assessment and treatment of child and adolescent psychopathology. It is not a standardized treatment for working with a specific age or diagnostic group. Thus, an important test of our model will be the extent to which it can formalize the assumptions that guide current standardized treatments. Hopefully the model would not only account for current techniques and intervention strategies, but it will also allow researchers and clinicians to explicate central curative processes and account for impasses in treatment. Further an attachment-based framework should guide therapists in their work

with populations and age groups for which there are currently no standardized treatment approaches.

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