14 Child maltreatment and attachment theory

Patricia M. Crittenden and Mary D. S. Ainsworth

The study of child maltreatment has grown exponentially in the years since the identification of the "battered child syndrome" (Kempe, Silverman, and Steele, 1962). In that time the area has experienced many of the conflicts and missteps to be expected in an emerging field. Underlying these problems is the lack of a single, comprehensive theoretical approach to child maltreatment (Newberger, Newberger, and Hampton, 1983). It is the purpose of this chapter to examine attachment theory in regard to its adequacy in accounting for the existing data on child abuse and child neglect.

Because child abuse was identified as a social issue earlier than child neglect, it will be discussed first. However, in regard to the early literature, the dichotomy is difficult, and sometimes impossible, to make because cases of neglect or abuse-with-neglect were included indiscriminately under the rubric of abuse. One goal of this chapter will be to disentangle the conditions and consider separately how relevant attachment theory is to understanding them.

The first studies of child abuse focused on identifying the characteristics of abusers. Although abusers were not usually found to be mentally ill, they were often described as more aggressive, punitive, domineering, and inconsistent than nonabusing parents. As more cases of less severe child abuse were reported and investigated, the incidence of clear parental deviance decreased while the evidence for cultural and child influence increased. The societal variables associated with abuse included unemployment, job dissatisfaction, single-parent families, and social isolation of low-income, multiproblem families. More recently, there has been a focus on those charac-

This work was supported in part by grant #90–CA–844 from the National Center on Child Abuse and Neglect to the first author.

teristics of children that may make them targets for abuse. Premature, handicapped, and temperamentally difficult children have all been identified as at risk for abuse (Maden and Wrench, 1977; National Center on Child Abuse and Neglect, 1978; Parke and Collmer, 1975).

Eventually, broader definitions of abuse and increases in both the data base and the types of hypotheses being tested lead to two general conclusions: (1) that all "bad" things were related to abuse (low income, stress, abuse as a child, impoverished neighborhoods, unemployment, infant birth complications or handicapping conditions, limited parental education, and the cultural value placed on physical punishment) and (2) that abusers were not easily distinguishable from nonabusers.

An early attempt by Helfer (1973) to integrate all of this information resulted in the explanation that abuse occurred when a deviant parent of an at risk child was in an especially stressful situation (within a society that encourages violence). Not only has this hypothesis never been tested under conditions that independently assess the several factors, but also very little attention has been given to the probability that these factors are causally interrelated. Neither has the relative influence of the correlates of abuse been investigated satisfactorily. Furthermore, the research has not adequately explained the large numbers of families with one or more risk conditions who do *not* abuse their children. The emphasis has largely been one of identifying as many cases as possible and seeking linear, additive explanations for their etiology.

Our knowledge about neglect is considerably more scant (Wolock and Horowitz, 1984). However, there is evidence that failing to provide adequate care for children (as opposed to providing inappropriate care) is associated with extreme poverty, maternal depression, social isolation, and maternal retardation (Polansky, Chalmers, Buttenwieser, and Williams, 1981; Polansky, Hally, and Polansky, 1976). However, it is not clear that these conditions *cause* neglect. There is certainly evidence that not all low-income or retarded mothers are neglectful, as well as evidence that some economically advantaged and higher IQ mothers are unresponsive to their children's needs. Again, one contribution that a theoretical perspective could offer would be to tie these conditions together logically in ways that would predict and explain the pattern of occurrence of neglect.

More recently, investigators have pursued a more sophisticated approach than the single- or additive-cause models described above. Both Garbarino (1977) and Belsky (1980) have proposed comprehensive ecological models of maltreatment. However, such models replace naive simplicity with infinite complexity. Total specification of the necessary, sufficient, and contributing causes of maltreatment in even one case may be impossible; for large numbers of cases, it becomes unrealistic. What is needed is a way to narrow our view to a workable model that can both explain the pattern of occur-

rences and nonoccurrences of maltreatment and describe the process by which maltreatment is transmitted from one person to another (Aber and Zigler, 1981; Cicchetti and Rizley, 1981). Such a model should also be sufficiently focused that it has implications for intervention.

There is a need to focus on the "critical causes" of maltreatment – that is, those causes which, if changed, would lead to improvements in the other detrimental conditions and, thus, to improved family functioning. Because simply undoing the situation that caused maltreatment might not be the most effective or feasible way to correct it, such causes might imply one thing for the prevention of maltreatment and another for the amelioration of existing maltreatment.

The thesis of this chapter is that anxious (or insecure) attachment is a critical concept in regard to both the origin of family maltreatment and the rehabilitation of families. There are many advantages of such a hypothesis. First, it permits an integration of much of the existing knowledge about maltreatment around a single, although not simple, concept while concurrently permitting the differentiation of abuse from neglect. Second, because attachment theory is a developmental theory, it is responsive to differences in the nature and effects of anxious attachment at different points in the lifespan. As others have pointed out, it is impossible to develop appropriate diagnostic and treatment procedures without an awareness of developmentally salient issues (Cicchetti and Rizley, 1981; Sroufe and Rutter, 1984). Third, this lifespan approach is very compatible with a family perspective on maltreatment and, in fact, is incompatible with an approach focused entirely on individuals. Fourth, attachment theory also permits the integration of "external" (i.e., environmental) conditions and events with interpersonal conditions as interlocking influences upon the development of attachment. The advantage of combining these perspectives in the context of a focus on attachment is that risk status can be considered to vary across both families and time depending upon individuals' past experiences, current contextual factors, and developmental processes as well as random (or unexpectable) events without collapsing the model into an overly simplistic everything-is-interconnected approach. Finally, although issues regarding maltreatment are not generally open to testing by experimental means, attachment theory does facilitate the posing of specific hypotheses that can be tested with maltreating samples. Moreover, the extent to which attachment-related concepts account for the data may be compared to that of other theoretical approaches. Thus, attachment theory is compatible with ecological theory and also provides a specific focus and predicted hierarchy of influences.

This chapter will first consider some of the basic concepts of attachment theory and, then, apply those ideas specifically to maltreatment, considering the extent of empirical support for those propositions.

Attachment theory

Attachment theory is a relatively new, open-ended theory with eclectic underpinnings. Intended as a revision of psychoanalytic theory, particularly Freudian instinct theory and metapsychology, it has been infused by present-day biological principles with an emphasis on ethology and evolutionary theory, as well as by control-systems theory and cognitive psychology. Although it began with an attempt to understand the disturbed functioning of individuals who had experienced traumatic losses or early separations, it is a theory of normal development that offers explanations for some types of atypical development (Bowlby, 1969, 1973, 1980). Since Bowlby's preliminary formulation (Bowlby, 1958), it has stimulated research into socioemotional development and the growth of interpersonal relationships and has been responsive to the findings of such research with continuous clarifications, refinements, and extensions of applications. For example, it suggests a causal relationship between anomalies of attachment in the parent and abuse of the child (Ainsworth, 1980).

Ethological theory proposes that there are species-characteristic patterns of behavior that have evolved because they function to promote species survival – or to be more specific, gene survival. The propensity to develop these behaviors is transmitted genetically and evoked by specific and expectable internal and environmental conditions. Attachment theory applies this principle to the almost universal occurrence of infant attachment to the parent and of parental caregiving to the infant, as well as to attachment components in close relationships between adult partners (Ainsworth, 1985, Bowlby, 1969, 1979).

Attachment as a developmental construct

Bowlby (1969) proposed that the survival of humans and, especially, human infants is best ensured when proximity to an attachment figure is maintained. Such proximity is initially accomplished through complementary maternal and infant patterns of behavior. Infant signals such as crying tend universally to attract mothers into closer proximity. Such infant behaviors tend to be elicited by alarming situations, such as those involving loud noises, looming objects, strange persons or objects, and being left alone, as well as by internal discomfort or pain. Once close bodily contact is attained, aversive signals such as crying tend to be terminated and other behaviors, such as smiling, clinging, and vocalizing, function to maintain contact with and/or proximity to the mother.

Thus the "predictable" outcome of an infant's attachment behavior is the attainment of proximity to a trusted person (Bowlby, 1969). Subjectively,

this outcome usually brings a feeling of security. Attachment behavior may be activated also by undue time or distance away from an attachment figure, even though there may be no perception of external threat and no other experience of internal discomfort. Such behavior, however, is not peculiar to the young infant. Although the tolerable time periods and distances increase with age and experience, most older children and adults feel lonely and anxious when separated from their loved ones either inexplicably or for too long, and they too seek the support of an attachment figure during periods of stress (Bowlby, 1979).

An infant's primary attachment(s) develop through three phases in the course of the first year, clear-cut attachment usually being achieved about the middle of the first year with the emergence of behaviors such as locomotion that enable the baby to take initiative in keeping proximity and seeking contact. Most attachment research has been devoted to this third active phase, but it gradually gives way to a fourth and much more sophisticated phase, beginning sometime after a child's third birthday, with the development of what Bowlby (1969) termed a "goal-corrected partnership" between child and mother. This advance is made possible both by the increased effectiveness of communication between the partners through the child's burgeoning language skills and by his or her increased ability to see the world through the perspective of another. As the child becomes more able to understand that the mother has motivations, feelings, and plans of her own, and as he or she becomes better able to communicate motivations, feelings, and plans to her, they, as partners, become able to negotiate differences in plans and often reach mutual agreement about them (Marvin, 1977; Marvin and Greenberg, 1982). Meanwhile the child's competence has increased, and he or she has become able to sustain confidence in the attachment figures across increasingly long periods of absence from them. The upshot of all of this is that a child's sense of security no longer depends so much on the actual presence of the attachment figure as upon the mutual trust and understanding that has been built up in the partnership. However, should the parent herself (or himself) be handicapped either in perspective-taking or in being able to communicate motivation, feelings, and plans to the child, the child's latent capacities for perspective taking and for clearer communication may well remain undeveloped or, if developed, be likely to fail in producing mutual understanding and trust. Nevertheless, normally, a partnership will be established based on mutual understanding and trust that each partner will be vigilant in regard to the other's perception of danger and will seek proximity whenever time, distance, or other relevant conditions cause a reduction in felt security.

By adolescence, attachments can be maintained without actual physical proximity for increasingly long periods of time. During absences, distal modes of communication, such as letters and phone calls, can temporarily

replace proximity and contact. Furthermore, adolescents become active in a search for new attachments outside the family, and more consciously accept some of the responsibility for being an attachment figure to new partners.

Even in adulthood, stable, affectionate relationships are wanted and needed by most people. A parent, of course, is expected not only to manage a reciprocal attachment with his or her partner, but concurrently to be a caring and nurturant attachment figure in the nonsymmetric relationship with his or her child. According to Bowlby, attachment – first to the parents and later to a partner or spouse – is basic to the security of all.

Attachment as a behavioral system

The attachment system is but one of the important species-characteristic behavioral systems that forward survival. The individual's overt behavior in any one set of circumstances depends upon the relative strength of activation of his behavioral systems, with the most intensely activated having the most effect. Whereas some systems may often act in synchrony – as, for example, when fear leads both to the avoidance of the object feared and to seeking contact with an attachment figure – other systems are usually antithetical, so that when one is intensely activated the other is at least temporarily submerged.

In infancy the two behavioral systems that chiefly compete with the attachment system are the exploratory and affiliative systems. As long as the infant's attachment system is the more highly activated and his behavior is primarily functioning to ensure proximity to an attachment figure, he or she is not free to explore the environment. If an infant feels secure in his relationship with his mother, however, he can use her as a secure base from which he can become acquainted with his world and the other people in it (Ainsworth, 1967). This antithetical arrangement itself has survival value, for it is critical to an infant's cognitive, language, and social development that he have experience with his physical and social environment. Because he gains his experience while sustaining reasonable proximity to a caregiving figure, the experience is not gained under risky conditions.

Although older children and adults normally require much less proximity to their attachment figures than do infants, much the same principle pertains to them. Although they, too, enjoy being with those to whom they are attached, much of the time they feel free to respond to other demands on their time and attention and to follow up other interests and activities. However, as Bretherton (1980) suggested, the attachment system functions primarily as a security-maintenance system. Throughout life, attachment behavior is most intensely activated under stressful conditions that evoke alarm or anxiety. Yet the development of knowledge about the world, com-

petence, and self-reliance are fostered by feeling secure about the availability of attachment figures when needed. Thus, the nature of the conditions that elicit attachment behavior is modified by each person's own experience, particularly the nature or quality of his or her past and present relationships with attachment figures.

Attachment as a qualitative construct

The principal quantitative dimension of an attachment is the degree to which it is characterized by feelings of security or insecurity. However, qualitative distinctions are equally important. These indicate the various ways in which a person organizes his or her behavior, thoughts, and feelings toward an attachment figure. In infancy, three major patterns, together with eight subpatterns, have been distinguished and are especially highlighted in a laboratory situation called the "Strange Situation" (Ainsworth, Blehar, Waters, and Wall, 1978). The major patterns are indicative of (1) secure attachment, with four subpatterns, (2) anxious/avoidant attachment, with two subpatterns, and (3) anxious/ambivalent or anxious/resistant attachment, also with two subpatterns. The discussion below will focus on the relation between maternal behavior and infant pattern of attachment, the antecedents of maternal insensitivity or unresponsiveness, and adjustments to the classificatory system made to account for the behavior of disturbed children, including maltreated children.

Maternal behavior and infant pattern of attachment. Infant patterns of attachment are believed to be closely related to the behavior of the attachment figure in question, although the chief evidence of this so far pertains to mothers as attachment figures. Such evidence stems from the work of Ainsworth et al. (1978), although subsequently other studies have yielded confirmatory evidence (e.g., Belsky, Rovine, and Taylor, 1984; Egeland and Farber, 1984; Grossmann, Grossmann, Spangler, Suess, and Unzer, 1985).

An infant whose mother is sensitive in her responsiveness to infant signals usually displays positive affect in interaction with her and cries relatively little even in little everyday separations from her. When his attachment behavior has been intensely activated (for example, by separation from her under unaccustomed circumstances), he tends to be easily reassured and comforted by her close presence, and is soon ready again to pursue his activities. Such an infant is judged to be securely attached to his mother.

However, an infant whose mother tends to be inaccessible, unresponsive, or inappropriately responsive to his behavioral cues is likely to emerge as insecure or anxious in his attachment to her. Because his bids for proximity and contact tend often to be frustrated, attachment behavior persists and

tends to intensify and to become mingled with anger. Consequently, when his mother does respond, he behaves ambivalently and is hard to soothe. Since he cannot rely on her to be accessible, he is vigilant for any indications of decreased proximity and displays more distress at little everyday separations or threats thereof. Such behavior is characteristic of the anxious/ambivalent pattern of attachment.

Infants showing an anxious/avoidant pattern of attachment have experienced interaction with mothers who are also inaccessible, unresponsive, or inappropriately responsive to their behavioral cues. These infants behave at home much as the anxious/ambivalent babies do. When the stress is relatively high, however, as in the Strange Situation, they behave quite differently. They show little stress upon separation and upon reunion they display avoidance of the mother rather than seeking proximity to her. Others display a mingling of avoidance and proximity seeking upon reunion. This avoidance has been identified as a defensive maneuver, similar to the detachment shown by young children after long, depriving separations from their mothers.

The mothers of these anxious/avoidant babies differ from the mothers of anxious/ambivalent babies in Ainsworth's sample in that the latter are merely inconsistent in their responsiveness and accessibility, whereas the former were more rejecting and angry, whether overtly or covertly. Because these mothers manifested an aversion to close bodily contact, it appeared that this rejection was most likely to be expressed by rebuffing or withholding close bodily contact when the baby most needed it – for example, when his attachment behavior was activated at high intensity. This implies that the baby experiences a severe approach/avoidance conflict whenever he most wants to be close to his mother, for he not only feels angry because he expects her to be unresponsive, but he also fears he may be painfully rebuffed. The avoidant defense seems to enable him to disconnect his attachment behavior from the situational cues that usually activate it. Consequently, he interprets neither his mother's departure nor her return as cues for wanting close contact with her. He avoids both the contact-seeking and the anger that seem likely to evoke rebuff. Recently, Grossmann et al. (1985) reported that a disproportionate number of their sample of North German infants showed an anxious/avoidant pattern, which they attributed to cultural pressure to encourage independence as early as the middle of the first year (rather than to maternal attitudes of rejection). This suggests that in infancy it is the withholding of close bodily contact – with or without rejecting attitudes – that accounts for the anxious/avoidant pattern.

The antecedents of maternal insensitivity or unresponsiveness. There are a number of situations that can result in maternal insensitivity. If a mother herself is securely attached to no one, it is expected that it will be difficult

for her to respond to her child in such a way that he can become securely attached to her (Bowlby, 1973). Indeed, if she has had a history of anxious attachment herself, there is increased likelihood that her own attachment behavior will be in conflict with her infant's. Because even normal infant signals may seem overdemanding to her, the angry, escalated attachment behavior of a child whose attachment to her has already become anxious may be highly noxious. She may delay or avoid responding or become angry at his demands. Thus, a pattern of anxious attachment may be communicated and passed on to a child from its parent. Evidence that a mother's unresolved distress resulting from childhood experiences with her own parent can affect the quality of her relationship with her infant has been demonstrated in a study comparing the results of an Adult Attachment Interview given to the mothers (George, Kaplan, and Main, 1985) with the Strange Situation classifications of the children in infancy as well as their attachment as assessed at 6 years of age (Main, Kaplan, and Cassidy, 1985). Mothers in that study who were accepting of their relationships with their own parents tended to have securely attached infants and children. This does not mean that the secure infants and children necessarily had mothers whose childhood relationships were similarly secure. Rather, it suggests that those mothers who acknowledged and accepted the reality of their own difficult childhood situations, often even forgiving their mothers, were best able to mitigate the expected negative effects of their previous insecure relationships and to provide their children with a sensitive and responsive attachment figure. In some cases their means for doing so may have included the development of a secure relationship with a surrogate attachment figure and successful counseling or psychotherapy.

Other situations that are especially likely to result in extremes of unresponsiveness or inappropriate responsiveness on the part of an adult in interaction with his or her child include unresolved traumatic separations from or permanent loss of attachment figures. In two samples, parents who had suffered loss of a significant attachment figure in childhood were particularly likely to have anxiously attached infants whose behavior did not fit the Ainsworth classificatory system (Ainsworth and Eichberg, in press; Main, Kaplan, and Cassidy, 1985). Periods of depression or other severe emotional or mental disturbance for the parent, recent death of a significant figure, and childhood experiences of abuse, including sexual abuse, may interfere with normal reactions to close contact. Such situations can result in either inconsistencies in the parental patterns of caregiving or in persistent distortions; the effects of these two conditions are expected to be somewhat different.

Adjustments to the classificatory system. Although all 56 of the infants in the original samples used to develop the classificatory system could be classified in one of the three major patterns, it was believed from the beginning

that the behavior of some infants would not fit this classificatory scheme. Indeed, a number of investigators have identified infants whose behavior does not fit comfortably into any of three patterns described by Ainsworth (Crittenden, 1985 a, 1985b; Main and Weston, 1981; Radke-Yarrow, Cummings, Kuczynski, and Chapman, 1985; Spieker and Booth, in press). Two approaches to expanding the classificatory system have been taken. One grew out of attempts to better describe the behavior of a number of apparently normal children whose behavior in the Strange Situation could not be satisfactorily classified using the Ainsworth criteria (Main and Weston, 1981). The other approach was the result of studies of samples of maltreated or low birthweight infants and infants of severely depressed mothers.

The children identified by Main and Weston as unclassified were later classified as "disorganized/disoriented" (Main and Solomon, in press). It was not assumed that this constituted a fourth pattern. Indeed it seemed that each of these infants showed disorganization of one of the three major patterns previously identified. Such disorganizations did tend to imply even more extreme insecurity than the basic patterns of which they were variations.

In otherwise normal families, a disorganized pattern of infant attachment appears to result from inconsistency of maternal behavior rather than persistent distortion. This inconsistency is not the day-to-day mixture of sensitivity and unresponsiveness that is associated with mothers of infants with an anxious/ambivalent pattern. Rather, it appeared to occur when the mother has first been consistent for a sufficiently extended period of time that the infant has formed expectations about her behavior. This consistency is then interrupted by the sudden interjection of quite different behavior. Such violations of expectations are especially frightening to the child if the unexpected maternal behavior is itself threatening or if the mother herself appears frightened (Main and Hesse, in press).

In contrast, when the mother's behavior is thought to be consistently and severely distorted, the child has both a basis for developing expectations and a need to adapt to bizarre and unsatisfying conditions. This situation has led to the second approach to expanding the classificatory system. The behavior in the Strange Situation of many children of such mothers does not fit the classificatory system devised by Ainsworth. Although the behavioral markers she described are present, they are organized differently than in the normal samples used for the development of the classificatory system. Children of these consistently insensitive mothers may show in one observation period all of the major types of behavior described by Ainsworth: the high proximity seeking usually indicative of secure or anxious/ambivalent attachment, the high avoidance indicative of avoidant attachment, and the high resistance indicative of ambivalent attachment (Crittenden, 1985 a, 1985b; Radke-Yarrow et al., 1985.) In addition, many of the children

showed the stereotypic behaviors described by Ainsworth for one of the secure subpatterns. Both the Crittenden and Radke-Yarrow research groups classified the children showing this pattern as avoidant/ambivalent (A/C). The Crittenden observations are particularly relevant here because they pertain to maltreated children. In two separate samples, maltreated children who had experienced abuse or abuse-and-neglect were frequently classified as A/C_1 or A/C_2 – avoidant and openly resistant or avoidant and overwhelmingly passive – respectively. Both groups of children were very distressed, an observation supported by the presence, in many cases, of clinically relevant indicators of stress (i.e., stereotypic behaviors such as huddling and rocking on the floor, wetting). Furthermore, these patterns were not only apparent in infants, but also in preschool-aged maltreated children, for whom the Strange Situation would ordinarily be expected to provide little stress.

Although the disorganized category of infant Strange Situation behavior described by Main is currently thought of as a disorganized form of one of the standard patterns, Crittenden views the avoidant/ambivalent classification as representing a separate pattern – that is, another organization of the behaviors identified by Ainsworth as relevant to the assessment of security of attachment. The behavior of maltreated children in the Crittenden samples seems better described as organized around resolving the conflict between the child's needs for proximity to the mother and his expectations of his mother's reactions to his behavior. That is, the maltreated child needs proximity and contact with his mother following separation as much as other children do. In fact, his experiences of previous maltreatment heighten his distress during the brief separation of the Strange Situation, making the need for contact more imperative. However, the maltreated child also has learned to expect that his bids for contact will be ignored, rebuffed, or possibly punished. The ability of such children to maintain avoidance following the stress of separation together with their ability to limit their resistance to noncontextual aggression directed away from the mother and their use of distal and circumspect means of achieving proximity would suggest a highly controlled, or organized, pattern of behavior.

Although the relation of the disorganized category and the avoidant/ambivalent pattern to each other and to the original Ainsworth patterns in infancy is as yet unclear, there is some evidence that the disorganization observed in Main's sample of infants had been resolved by the age of 6 years into an organized pattern. Similarly both Radke-Yarrow's and Crittenden's samples included preschool-aged children who showed the (organized) A/C pattern. The suggestion is that young children organize their behavior most easily if the mother's behavior is predictable regardless of how sensitive or appropriate it is, but that older children who have had to cope with major inconsistencies eventually integrate that information into their set of expec-

tations and develop an organized pattern of responding. The nature of that integration awaits further research.

Anxious attachments may occur at any age. Some of the indications of anxious attachment in older children and adults resemble the indications of anxious attachment in infancy: undue preoccupation with the whereabouts of the attachment figure and undue difficulty in separating from him or her, lack of trust in the attachment figure, chronic anger and resentment toward him or her, inability to seek or use support from the attachment figure when such support is needed, or absence of feeling toward him or her. Other indications that are less likely to be observed in infancy are: compulsive compliance to the wishes of the attachment figure, compulsive caregiving, or an excessive sense of self-reliance and emphasis on independence from any need for an attachment figure. The conditions leading to such anxiety include traumatic or depriving separation from an attachment figure or permanent loss thereof, unresponsiveness of an attachment figure, or inappropriate responsiveness. These conditions can have impact at any time throughout the life span. However, they are more influential when they occur earlier in life, if only because previous experiences influence the way later experiences are perceived and interpreted.

Attachment as a representational construct

Over time, the developing infant's repeated experiences with his mother lead him to form expectations regarding the nature of future interactions. This set of expectations is the basis for the infant's development of internal representational models of his mother and of himself (Bowlby, 1969). If his mother has been consistently responsive and sensitive to his signals, he forms a representational model of her as responsive and accessible and of himself as competent in eliciting her response and worthy of it. Such an infant is considered securely attached to his mother (Ainsworth et al., 1978). Some infants' experience, however, is of a mother who either does not respond to signals of need or who does not respond appropriately, whether she is rejecting (or unduly interfering) or inconsistent. The representational model formed by one of these infants of the mother figure reflects the particular nature of the behavior his experience with her has led him to expect. In any case he cannot trust her to give the kind of response he wants or needs. Moreover, he forms an image of himself as ineffective in obtaining her cooperation and as unworthy of it.

In similar fashion, an infant forms a representational model of his father and/or other caregiving figure(s) who constitute a prominent part of his social world. It is believed that at first the models of such figures, as well as the complementary models of self, are independent of each other. Although it is not clear how or when in the course of development it happens, these

independent models of attachment figures become more or less loosely integrated into a generalized model of attachment figures. As the child continues his relationship with his parents and establishes new relationships with others, he assimilates his new experiences into his models of attachment figure and of self and to some extent alters his model accordingly. Thus, at any given time, the model is an "open model" more or less open to new input and consequent adjustment based on additional experience, or (perhaps not until adolescence or adulthood) rethinking of previous experience. Nevertheless, it is in terms of the current model that the individual tends to perceive his social world, and to seek out some persons and situations and avoid others.

For the infant and young child whose experiences with attachment figures have been secure on the whole, the task of integrating experiences into a generalized set of working models is relatively simple. Occasional experiences of disappointment, frustration, or anxiety do not loom large enough to interfere with the generally positive nature of the models. However, for the infant and young child whose experiences have led to anxious attachment(s), the task of integration is more difficult. Bowlby (1973, 1980) suggests that multiple models of even one attachment figure are likely to be formed. Thus, a mother who is inconsistent, sometimes offering close comfort when the child needs it, yet often failing to do so, may lead a child to form two models of her, one of a responsive mother and another that is quite antithetical, and similarly two models of self, one of a person who is effective and love-worthy and another of a person who is incompetent and unworthy. These two sets of models may alternate with one being uppermost sometimes and sometimes the other.

However, the picture is likely to be complicated by another consideration as development proceeds, verbal communication improves, and the child becomes cognitively more competent. No longer are the models based solely on the sequence of episodes of experience, but integration and generalization may be aided by conceptual processes, so that the conceptual formulations come to replace the actual episodes of experience that gave rise to it. Furthermore, this conceptual formulation may be much influenced by ready-made generalizations provided by the parent. Thus, a child who is frequently told that he is bad, and is being deprived or punished entirely for his own good by a mother who has only his best interests at heart, is likely to have a model of his mother as a wonderful person and of himself as generally bad and unworthy. It is this set of models that are likely to be most accessible to consciousness, whereas his other model of his mother as harsh, rejecting, and unresponsive to his needs and his model of himself as a love-seeking child justifiably resentful of unfair treatment tend to be disconnected from further conscious processing, even though based on repeated episodes of actual experience.

As implied above, defensive processes are particularly likely to interfere

with the task of constructing models that are accurately based on experience and, perhaps more important, open to new input and consequent adjustment. Thus, the child who as an infant was anxious and avoidant in his attachment to his mother, and who defends himself from demanding closeness when he most needs it, tends to close himself off from new experiences, whether with his mother or with others, that might invalidate his expectation of rebuff and weaken his feeling of distrust of closeness.

Child maltreatment considered in the light of attachment theory

Even this necessarily brief synopsis of attachment theory provides several related postulates from which hypotheses can be drawn that may explain the behavior of maltreated children and maltreating parents. First, attachment relationships are important for individual functioning at all ages, although the specific nature of attachments changes as a consequence of development. Second, the primary function of attachments is to promote the protection and survival of the young, which is precisely what is at risk in cases of maltreatment. Third, whereas humans are genetically predisposed to exhibit certain patterns of behavior, an individual's actual behavior in a specific situation is determined by an interplay of environmental/situational factors and previous experience with similar situations. The previous experience is encoded as internal representational models of the other(s) and of the self, including the emotional flavor associated with experience of the relationship. Fourth, actual patterns of attachment behavior affect the direction of children's developmental courses (rather than arresting development at a problematic stage). Fifth, the effect of the internal representational models that underlie anxious attachments is to change behavior in a way that makes current attachments more stressful and future attachments less likely to be secure. Finally, attachment problems are not best defined in terms of one person's psychopathology. Rather, they are defined in terms of how successful a relationship is in providing sufficient security such that individuals are freed to attend to other aspects of their lives.

Using these concepts, it is possible to predict and understand many seemingly unrelated or even paradoxical aspects of abuse and neglect. In the following discussion, a number of hypotheses drawn from attachment theory will be presented together with the research relevant to them. The intent is not to "prove" the validity of the theoretical perspective offered, but rather to establish an empirical basis for considering it seriously. The hypotheses cover the following aspects of individual and dyadic functioning: (1) anxious attachment, (2) internal conflict, (3) child strategies for coping with parents, (4) child strategies for coping with the environment, (5) niche-picking, and (6) adaptation.

In each case the tie between the theory and the predicted outcomes is the

internal representational model of relationships. To the extent that the behavior of individuals in maltreating families provides a basis for inferring the nature of the inner models, those models can serve as the basis for predicting the nature of other relationships. Indeed, information on the nature of mother–infant interaction in maltreating and adequate families has been used to infer the nature of the underlying representational models and to predict both the nature of the child's attachment to his or her mother and the mother's relationships with network members and professionals (Crittenden, 1985b, 1988a, b). These models will be used in the present discussion as the basis for a broader set of hypotheses.

Based on that work, abusing mothers are expected to have working models tied to issues of conflict, control, and rejection. Their expectations of others will tend to center around the idea that others will attempt to dominate them to meet the needs of the other and reject them when they press to have their own needs met. Their model of themselves will be tied to the idea that others have, and will not willingly give up, needed psychological or physical resources. Consequently, coercion and victimization will be central to the mothers' perceptions of themselves. The accompanying affect will be one of anger.

Neglecting mothers are expected to have models centering around the concept of helplessness. They will not perceive others as having, or being able to give them, what they need. Neither will they see themselves as effective at eliciting the help and support of others. The affect accompanying their relationships will be one of emptiness and depression.

Adequate mothers, by contrast, will have models centered around ideas of competence and reciprocity. They will perceive others as helpful and responsive. They will perceive themselves as capable of obtaining help and support when it is needed and also of providing support to others. The accompanying affect will be one of satisfaction (Crittenden, 1985b).

Discussed below are several hypotheses, based on attachment theory and drawn from the above working models, regarding the behavior of maltreated children and maltreating parents.

Anxious attachment

Individuals in maltreating families will be expected to form anxious attachments with family members. For maltreated children, this would mean anxious attachment to the parent(s). For maltreating adults, this would include anxious attachments to the adults' parents, to their partners, and to their children. Underlying these anxious attachments would be distorted internal representational models of the self and other(s). The quality of previous relationships is expected to influence, but not wholly determine, the nature of later relationships.

Abuse. The clearest evidence that relationships in abusing families are anxious comes from investigations using the Strange Situation procedure (Ainsworth et al., 1978) to assess the quality of the child's relationship to the parent. Abused children, ranging in age from 1 to 4 years, have been found to be anxiously attached to their mothers (Crittenden, 1985a, 1985b; Egeland and Sroufe, 1981; Gaensbauer and Harmon, 1982; Schneider-Rosen, Braunwald, Carlson, and Cicchetti, 1985) and to show the anxious/avoidant pattern in particular. Nonlaboratory derived evidence of anxious attachment between abusing mothers and their children comes from a study of mothers' and children's response to protective daycare (Crittenden, 1983).

It is also possible to infer quality of attachment from observations of parent–child interaction. As previously noted, maternal insensitivity (i.e., interference and/or unresponsiveness) in interaction with the child has been associated with child anxiety in the Strange Situation (Ainsworth et al., 1978; Belsky, Rovine, and Taylor, 1984; Crittenden, 1985a; Sroufe, 1985). There is substantial evidence that abusing mothers are more harsh, interfering, controlling, and negative when interacting with their children (Burgess and Conger, 1978; Crittenden, 1981, 1985; Crittenden and Bonvillian, 1984; Dietrich, Starr, and Weisfeld, 1983; Mash, Johnson, and Kovitz, 1983; Robinson and Solomon, 1979; Wasserman, Green, and Rhianon, 1983). Such evidence is based on observations of children across the full range of childhood and supports the inference that maltreated children of all ages will tend to be anxiously attached to their parents.

Evidence regarding the nature of adult attachments to parents, partners, and children is derived primarily from family history data regarding the duration and nature of such relationships. Based on the inferred nature of abusing mothers' models of relationships, it would be expected that mother–partner relationships would be non-egalitarian (i.e., composed of a dominant and a submissive partner) and that there would be conflict over these roles. The evidence is generally consistent with this hypothesis in terms of distressed marriages, broken marriages, and, especially, wife abuse (Baldwin and Oliver, 1975; Herrenkohl and Herrenkohl, 1981; Johnson and Morse, 1968; National Institute of Mental Health, 1977; Perry, Wells, and Doran, 1982; Starr, 1982; Wolfe, 1985). Moreover, following a separation, many abusing mothers choose another abusive partner or remain single, whereas nonabusing mothers are more likely to remain with the children's father or a relative (Burgess, Anderson, Schellenbach, and Conger, 1981; Friedman, 1976; Hunter and Kilstrom, 1979; Kotelchuck, 1982). This suggests an inability on the part of the abusing parents to incorporate new information into existing models, thus increasing the likelihood of the repetition of previous problems.

Following the popularization of the concept of maternal bonding to the

neonate, there have been numerous suggestions that maltreating mothers may not bond properly to their children (Helfer, 1976; Hurd, 1975; Lynch and Roberts, 1977). Although there is no formal assessment of the presence or absence of bonding, it seems reasonable to assume that a mother who keeps and nurtures her infant sufficiently to maintain life has formed a bond. However, it is quite possible that the nature of that bond is different for maltreating mothers than for adequate mothers. One study that has examined this issue has reported that mothers who later abused or neglected their children differed in their attitudes toward the pregnancy, in their behavior with the infant immediately following delivery, and in their behavior in the postpartum period (Gray, Cutler, Dean, and Kempe, 1977). However, another study with less subjective measures found no evidence of bonding failure in maltreating mothers (Egeland and Vaughn, 1981). Studies that have evaluated the effectiveness of interventions to improve bonding have reported mixed results such that it is unclear whether or not extended contact in the hospital and/or home visitation are helpful (Gray et al., 1977; Siegal, Bauman, Schaefer, Saunders, and Ingram, 1980).

Evidence of the probable anxious attachment of an abusing parent to her own parents is consistent with the expectation of an anxious relationship between mother and child. Abusing parents have reported being abused by their own parents (Gil, 1970; Silver, Barton, and Dublin, 1967) or being severely punished in childhood (Kotelchuck, 1982). In addition, it has been argued that rejection as a child by one's parents can lead to rejection of one's own child and that this may be a less severe example of the process leading to the cross-generational transmission of abuse (Main and Goldwyn, 1984). Others have found that maltreated children show patterns of interaction with their younger siblings similar to those of their maltreating parents (Crittenden, 1984) and that abusing mothers experienced more losses and separations from their own parents in childhood (DeLozier, 1982).

Neglect. Investigations that have considered neglected children as a subgroup have reported that, as assessed in the Strange Situation, most neglected children were anxiously attached to their mothers (Crittenden, 1985a, 1985b; Egeland and Sroufe, 1981; Gaensbauer and Harmon, 1982). Moreover, like abused children, they tended to display an anxious/avoidant pattern. However, the pattern of off-modal classifications differed from that in the abuse group – neglected children who were not avoidant tended to be ambivalent. When in interaction with their mothers, neglected children tended to be passive rather than either difficult or compulsively compliant (Crittenden, 1981, 1985a).

Similarly, there is evidence that neglecting adults find it difficult to leave home and establish attachment relationships with nonfamilial partners (Crittenden, 1986). Often then the neglecting mother's own mother serves as her partner in raising the children, thus enabling the mother to avoid the

primary situation in which individuals take on reciprocal, care-giving attachment relationships.

Internal conflict

Second, it is hypothesized that anxious attachments will be associated with conflicting impulses within the individual that, in extreme cases such as maltreatment, might lead to behavior that would otherwise be considered paradoxical.

Abuse. The extreme of this is, of course, the situation of the abused infant. He is genetically locked into forming an attachment to his primary caregiver and yet his experience teaches him that this attachment figure may be a source of pain and injury. There is evidence that anxiously attached children are both avoidant of and angry with the parent and also seek excessive closeness. Similarly, maltreated children would be expected to defend and protect the very parent who endangers them. Indeed, many investigations of child abuse are hampered by the child's unwillingness to implicate the perpetrating parent even when the child's protection from parental reprisal has been adequately ensured. Abused children, especially girls, have been found to care for their parents as though the parent–child roles were reversed (Flanzraich and Dunsavage, 1977; Morris and Gould, 1963; Steele and Pollock, 1974); such behavior is not dissimilar to Bowlby's concept of compulsive caregiving as both a way of maintaining closeness to an attachment figure and a means of denying pervasive anger with the person being cared for (Bowlby, 1973).

Maltreating mothers would be expected to show similar incompatible feelings toward their children although the child is particularly sought as the one person whom the mother possesses and who will love her back. In fact, the child's anger at the mother's intrusiveness may be interpreted by the mother as rejection and trigger her own rejection of him. The child's use of the avoidant response to the mother and often promiscuous seeking of affiliation with strangers may have similar effects; the mother did not want to give nurturance to her child but neither did she want a demonstration of her child's ability to get along without her or to obtain support from someone else. Finally, in spite of a desire to establish more satisfying and secure relationships, maltreated adolescents and maltreating adults would be expected to choose as partners individuals who will tend to contribute to the maintenance of distressed relationships. Many would unwittingly carry into developing relationships a wariness or suspicion of other people and excessive demands for attention from the few who were known well. When current relationships became unsatisfying, there could easily be a precipitous rush into a new and, hopefully, more rewarding attachment. However, the ambivalent ties to parents and/or previous partners would remain stressful

and the individual's pattern of demandingness, distrust, and hostility would probably remain unchanged. Further, there is a reasonable likelihood that such an individual would perceive both the spouse and any children as potential sources of nurturance rather than as recipients of nurturance.

Neglect. In the case of neglect, the paradox is that individuals who desperately need the comfort and support of others rarely seek it or seem comforted by it when they receive it. Under the stress of a brief separation from the mother, neglected children respond to the need for their mothers with helplessness or random roaming around the room (Crittenden, 1985a; Gaensbauer and Harmon, 1982). Neglecting adults respond to the opportunity for relationships with withdrawal and/or a denial of feelings of loneliness and anger (Crittenden, 1988a; Polansky, Gaudin, Ammons, and Davis, 1985).

Coping with parents

Third, different types of maltreatment will be associated with different organizations of child behavior relevant to the children's interaction with the parent. Moreover, such organizations can be expected to change as a function of ontogeny and to reflect the competing desires of maltreated children. These outcomes reflect changes in the direction of development rather than an arresting of developmental processes at an infantile stage.

Abuse. When in interaction with their mothers, abused infants have been shown to be more difficult than other infants; however, the evidence suggests that this pattern of behavior is tied to the immediate interpersonal situation and not to aspects of innate infant temperament (Crittenden, 1981, 1985a). Moreover, their mothers' response to such behavior is often to avoid and/or punish the infant, thus increasing his distress. Such a mother can only feel very frustrated in her attempts to satisfy her baby. If she cannot learn to perceive and respond appropriately to her child's behavioral cues and if her child cannot learn to please her, one would expect the conflict to become increasingly severe, further endangering the infant.

In fact, there is evidence that, toward the end of the first year of life, many abused infants have learned to accommodate their mothers, first, by inhibiting signs of their anger and, later, by learning to tolerate their mothers' interference without complaint and even to comply with her desires (Crittenden, 1988c; Crittenden and DiLalla, 1988). By so doing they change the nature of the interaction from mutual anger to superficial cooperation and compliance. There is considerable evidence that many older abused children are also passive, fearful, vigilant, and compliant (Green, Gaines, and Sandgrund, 1974; Ounsted, Oppenheimer, and Lindsay, 1975).

However, not all abused children make the transition from resistant to compliant behavior. Particularly if there is no way for the child to predict what will please or anger the parent (as in abuse-and-neglect, see below), it becomes almost impossible for him or her to inhibit some behaviors and exhibit others selectively to please the mother. Thus, by the second year of life, two distinct response patterns for coping with the distress of living with an abusing parent are likely to have developed: a negative, resistant one and a compulsively compliant one.

Neglect. Parents who neglect their children would be expected to foster different patterns of child response. Like abused children, neglected children want proximity to their attachment figure when they are anxious or under stress. However, unlike abused children, they have learned that their mothers do not respond to their signals. They learn that they are ineffective at communicating their needs and obtaining maternal cooperation in meeting them. Given this experience, most children would be expected to intensify their demands. If that produced results, they would probably maintain a pattern of intense, clingy, and demanding behavior. On the other hand, if their mothers rarely responded to the intensified attachment behavior, they would be expected either to become depressed and withdrawn or to ignore their mothers entirely in their pursuit of other satisfactions. In addition, both the anxious, demanding children and the active, disorganized children could, by their efforts to draw forth a response from their environment, become a source of stress to their mothers. If their generally unresponsive mothers become frustrated and angered by their intensified demands, the children could well experience the interpersonal conditions associated with abuse-and-neglect (see below).

Coping with the environment

Fourth, it is proposed that these styles of interpersonal behavior will be related to the effectiveness of the children's exploration of their environment. Attachment theorists postulate that the attachment and exploration systems of behavior function best when balanced with each other. Thus, when there are signals of danger, the attachment system is activated, resulting in the proximity of mother and child. When child and mother feel secure, the child should feel free to explore the environment safely. Because maltreated children are neither protected adequately by proximity to the mother nor secure in the belief that she will be available, their ability to explore safely and effectively would be expected to be impaired.

Abuse. Abused children who were avoidant of their mothers could be expected to explore freely and successfully only when there were (1) no indi-

cators of danger in the environment and (2) no indicators of maternal stress or anger. Under such conditions they could expect to be safe. When there were either environmental or maternal signals of danger, they would face approach/avoidance conflict. The studies using the Strange Situation indicate that under such conditions some abused children are able to maintain an avoidant defense strategy, whereas others are both sufficiently anxious to need close proximity to the mother and also sufficiently angry to be unable to conceal their feelings fully, displaying both avoidance and ambivalence (Crittenden, 1985a, 1985b). The avoidant children would thus be expected to benefit somewhat from exploratory behavior, whereas the more distressed abused children might be preoccupied with managing their safety and unable to explore widely. Studies by Crittenden (1985a), Dietrich et al. (1983), and Koski and Ingram (1977) support these expectations in terms of developmental quotient (DQ); abused children, as a group, have lower DQs than adequately reared children. When the DQ of the abused children is considered as a function of their tendency to use the compulsive/compliant pattern with the mother, it becomes clear that there are important within-group differences. Compliant abused children tend to have higher than normal DQs, whereas abused children who are passive/withdrawn or difficult tend to have very low DQs (Crittenden and DiLalla, 1988).

Neglect. Neglected and withdrawn children would be expected to find it difficult to separate sufficiently from their mothers to enable them to explore their environment and to establish relationships with other people; they would appear helpless and unable to exploit the learning potential of their environments. The more adventurous neglected children would have the advantage of increased experience, but at risk to their safety and without the advantage of adult support.

Niche picking

Fifth, behavior patterns of family members in attachment relationships would be expected to affect other aspects of their social ecology, such as social networks, employment, and, for the children, school experiences. The processes by which such patterns of behavior would generalize to include nonattachment relationships include the perception and interpretation of experience through internal models of reality and the tendency to repeat ingrained patterns of behavior in new situations.

Abuse. Although some abused children are compliant with adults, there is evidence that with peers many are aggressive, both in and out of school or other supervised settings (Galston, 1971; George and Main, 1979; Herrenkohl and Herrenkohl, 1981; Riedy, 1977). Their ready aggression could be motivated either by displaced anger or by increased vigilance in the context

of expecting aggression *from* others. Such vigilance resulting from internal models of conflict and dominance could easily lead the abused child to misinterpret the behavior of others and to respond with aggression himself. Of course, the response of others to his aggression will only confirm his model.

The delinquent behavior of abused adolescent males and promiscuous behavior of females attest to another change in coping strategy (Silver et al., 1967). It is probable that these more mature, although equally inappropriate, patterns of behavior are associated with violence at home and reflect, for the boys, the sense of competence and control that comes from taking what one wants and, for the girls, the attempt to find security and acceptance by giving what others want.

The social networks of maltreating and adequate mothers have been found to parallel the nature of the mothers' relationships with their infants (Crittenden, 1985b). Abusing mothers appear to have the social skills to establish new friendships; however, those relationships are neither stable nor reciprocal (Crittenden, 1985b). Instead, abusing mothers perceive their help-providing friends as undependable and they in turn are perceived by their friends as being manipulative. Most abusing mothers' relationships are not only short-lived; they also end in violent quarrels and enduring bitterness (Young, 1964).

Similarly, although abusing parents find it relatively easy to obtain jobs, they are rarely able to keep them any length of time. The most common reasons for quitting their jobs are disputes with the employer or co-workers. McKinley (1964) found a negative relation between fathers' job satisfaction and harsh punishment of the children. Although this finding has been interpreted as indicating that loss of status leads to violence, it is equally possible that those men who are unable to manage personal relationships so as either to obtain satisfying jobs or to find personal satisfaction in the jobs they have are also less able to establish cooperative relationships with their children.

Neglect. Children who have been neglected tend either to be withdrawn from their schoolmates or to disorganized, active, and aggressive.

Their mothers' social relationships reflect distortions similar to those of their intrafamilial relationships. They have very few friendships outside of family; those friends they do have tend to be seen infrequently and known only briefly (Crittenden, 1985b; Gaudin and Polansky, 1986; Polansky, 1985).

Adaptation

Sixth, the children's patterns of behavior would be predicted to be adaptive to the immediate (proximate) sense of promoting their immediate survival while being maladaptive in the long-term (ultimate) sense of personal mental health and, possibly, gene survival. The maladaptation would be based

in part upon the notion that defensive models imply perceptual exclusion of information and distortion of the meaning of some important perceived information.

Abuse. The adaptiveness of two patterns should be considered: compulsive compliance and overt resistance. The compulsively compliant child in interaction with his or her parent inhibits responses that the parent dislikes and substitutes others that the parent prefers. This strategy has the advantage of reducing the risk of parental violence. It is also likely to teach the child to be very sensitive to the interpersonal behavior of others; this skill may prove adaptive in many life situations. In addition, the compliant strategy may foster overachievement and/or nurturance of the parent if the parent desires and rewards such behavior. However, these outcomes are the result of the child's learning to behave in ways that do not reflect his feelings. The anger he felt in the original situations that led to inhibition may become associated with compliance, leading to a diminution of satisfaction in achievement and the association of caregiving with anger and coercion. Thus, a compulsive compliant strategy of coping with abuse may come to consist of (1) excessive social vigilance (with the attendant risk of systematic misinterpretation of others' social behavior), (2) superficial compliance in situations in which others seem threatening or powerful (with the risk of never testing the misinterpretations made regarding the possible hostility of others), and (3) inhibited anger (with the risk of possibly excluding some emotions from perception). Such a behavior pattern is often labeled manipulative and may describe the defensive response of both some abused children and many abusing parents. It is consistent with the development of representational models of others as powerful and hostile, the self as lovable only when compliant, and an emotional overtone of anxiety and repressed anger.

Abused children who remain overtly angry and resistant face different risks. They are more likely to experience continued parental anger and abuse, but less likely to deny their own feelings. Thus, their model of others may be negative, whereas their model of themselves could include justification of their own angry behavior. Therefore, overtly angry abused children may be less likely to exclude information defensively or to systematically misinterpret it. However, the costs of such a developmental pathway are both the risk of continued abuse and the possibility that anger will pervade much of the individual's behavior, thus leading to the accurate perception of rejection by others and, in the extreme, to delinquency. The balance is between retaining *open* (as opposed to defensive) models that can be consciously revised if the individual finds a more responsive substitute attachment figure and risking that the individual's anger will come to dominate all of his social interactions.

Data relevant to this rationale are scarce, but what little there are, are

supportive. Adults who have been abused but do not themselves abuse their children are reported to be more open about their anger over their mistreatment and conscious in their decision not to follow their parents' model (Hunter and Kilstrom, 1979). Moreover, these parents report having supportive social relationships. Other nonabusing but formerly abused parents report having had an important supportive relationship during childhood. Such relationships could have not only the immediate advantage of helping the children through difficult experiences, but also the long-term advantage of modifying their working models to include more positive images of the self and others and an associated feeling of satisfaction. Such changes increase the likelihood that the individual will be able to form other supportive relationships in the future.

There is some limited evidence that members of abusing families do perceive or interpret experience differently from other people. Although there is no evidence that abused children are constitutionally or temperamentally different from other children (Crittenden, 1985a; Egeland and Sroufe, 1981; Kotelchuck, 1982; Starr, 1982), there is considerable evidence that their mothers perceive them to be so (Herrenkohl and Herrenkohl, 1981). Although abusing mothers have been thought to have higher expectations of their children or to attribute intentions to them inappropriately, the evidence suggests otherwise (Kravitz and Driscoll, 1983; Rosenberg and Reppucci, 1983). However, when abusing mothers have been shown videotaped behavior of children, they appear to respond more negatively and feel more angry than other mothers (Frodi and Lamb, 1980). This suggests that the problem is not with general expectations or attributions or with insufficient information about child development; instead, the problem seems to be tied to perceptions and associated emotional responses.

Turning to the situation of abused children, there is some evidence that they may be both more perceptive of the social behavior of adults (Cummings, Zahn-Waxler, and Radke-Yarrow, 1981) and less perceptive of their own or other children's behavior (Camras, Grow, and Ribordy, 1983). Furthermore, it is possible that such sensitivity is tied to IQ, with abused children who do not show IQ deficits being the more adept at interpreting emotional expressions in others (Frodi and Smetana, 1984). If abused children do adapt to their situation both by becoming hypervigiliant (Martin and Beezely, 1977, 1980) and nurturant to their parents (Cummings et al., 1981) and by denying their own emotional response, this pattern of skills and deficits would be expected. Of critical interest would be the extent to which the children retain the ability to interpret the behavior of different adults accurately (rather than assuming that all adults are similar to their abusing parent) and to recognize accurately their own emotions. There is some evidence that they respond flexibly in infancy to differences in the behavior of others (Crittenden, 1985a), but that at least some abused toddlers and preschoolers lose this resiliency (George and Main, 1979).

Neglect. For neglected children, the two primary patterns to be considered are extreme passivity (depression) and undisciplined activity. Most neglected infants find their parents too unresponsive for them to develop a secure attachment. However, as they develop mobility, they themselves become able to modify the nature of their environment. In particular, they begin to explore, seeking stimulation from all aspects of their environment. Such exploration is both adaptive and dangerous. It provides the opportunity for learning about the world as well as contingencies in it; however, because no one is watching out for the welfare of the young neglected child, there is danger of accidental harm. In addition, the child's search for stimulation is likely to be disorganized, reflecting his lack of experience with focused interaction. Current thinking about hyperactive children suggests that, rather than being overstimulated, they are understimulated to the extent that they cannot focus attention (Quay, 1985). Such a rationale would certainly fit with the unstructured behavior of some neglected children.

Other neglecting parents are able to offer little to their child beyond the physical resources to maintain life. They neither respond to their child's other needs nor encourage their child's access to a stimulating environment. Their children, therefore, neither learn strategies for engaging their parent nor for independently exploring the environment. Their passivity is a form of depression, one which results from a lack of awareness of the potential for personal effectiveness. Such children cannot be described as coping with their plight as much as being victimized by it.

Severity and abuse-with-neglect. The evidence presented suggests that the developmental impact of maltreatment differs according to type of maltreatment. However, the above presentation is distorted in two ways. First, it assumes either that all maltreatment is of similar severity or that severity is not an important factor. Second, it assumes that the conditions of abuse and neglect are mutually exclusive. Of course, neither assumption reflects the complexity of reality. The rationale was presented with these distortions for the purposes of clarity and to highlight the differential nature of the two developmental courses. On the contrary, it is necessary to grapple at least briefly with more complex situations. Data on two groups of children are relevant here: those who have been only marginally maltreated and those who have been both abused and neglected.

Children who have been marginally maltreated generally show a pattern of deficits and adaptation which is, as expected, less extreme than in maltreated children. They show mild developmental delay, general cooperativeness as infants in interaction with their parents, and mildly anxious attachment (Crittenden, 1981, 1985a, 1988a, b). Similarly, their mothers show only moderate disturbance in childrearing practices. The primary difficulty faced by these children appears not to be the maltreatment itself but rather its unpredictability. Whereas their mothers are in some ways and at

some times sensitively responsive, at others they are harsh and/or unresponsive. It is difficult for the children both to determine what causes the changes in their mothers' behavior and also to develop internal models of their mothers and themselves that are consistent and useful in predicting future maternal behavior. Thus, generalized anxiety and sometimes undisciplined activity may lead these children to social and academic problems.

Abused-and-neglected children, in contrast, experience general unresponsiveness combined with bursts of harshness. Often both their exploration and their intensified demands for attention lead to parental punitiveness. The predictions of coercion and unresponsiveness that the abused and the neglected child (respectively) can make regarding their parents' behavior lead to consistent models of their parents and themselves. Although the situations offered them are distorted and unpleasant, children who experience only one type of maltreatment can often learn to cope with the predictable nature of the distortion. This is not true for the abused-and-neglected child. He experiences both types of distortions and, further, finds that his own activity endangers him. It would be expected that the coping strategies used by such children would include flagrant acting out with extreme disregard for others, extreme inhibition and withdrawal, severe psychosomatic illness, pervasive role reversal as a means of deflecting the anger of the threatening parent(s), or some combination of these (Crittenden, 1988a, b, c).

Conclusions

This chapter represents an attempt to apply the principles of attachment theory to the study of maltreatment. In the process, a number of points have been made. First, maltreatment has pervasive psychological effects; the rationale provided here applies equally well to cases with or without *physical* maltreatment. Second, the outcomes of maltreatment are developmental in nature, that is, they affect different aspects of personal functioning at different points in time. They also affect the direction of future development rather than arresting it at a problematic and immature stage. Third, although the outcomes differ at different ages, there is developmental coherence across periods (Cicchetti and Rizley, 1981, p. 49). Fourth, the developmental course selected is an outcome of individual differences as well as differences in experience. Finally, the experience of abuse is quite different from the experience of neglect with regard both to parental behavior and to the nature of child-coping strategies.

The argument offered here is not intended to focus on dyadic, attachment-related influences on maltreatment to the exclusion of organismic or societal influences. Rather, it is intended to provide a means of (1) identifying a critical variable that can explain the impact of many associated conditions and suggest why the impact of maltreatment affects so many areas of individual or family functioning and (2) identifying those individuals and fam-

ilies who are most vulnerable to other sources of influence and to suggest the nature of the influence. The advantage of considering anxious attachment as a critical variable is that it implies a process through which its impact can be understood, as opposed to merely identifying the correlates of risk. It is an attempt to be parsimonious without being trivial.

The predominant current theoretical approach is a transactional ecological model focusing on the environment associated with maltreatment and vulnerabilities in the child as well as on parental characteristics. As indicated above, congenital child variables do not, in well controlled studies, differentiate maltreating and nonmaltreating families. On the other hand children do differ in their ability to elicit maternal responsiveness, especially after they have experienced unsatisfying maternal behavior. Such situations are interpreted, from the perspective of attachment theory, as reflecting the nature of the relationship rather than as being a parent or a child characteristic. Thus, attachment theory is not unidirectional in its approach to causation; the focus is one how individuals' experiences with attachment figures affect what is perceived as threatening as well as what patterns of coping are shown in response.

With respect to societal influence, there is considerable evidence that the correlates of low socioeconomic status are also the correlates of maltreatment. Moreover, changes in some societal conditions have been associated with changes in rates of maltreatment – for example, increases in unemployment have been associated with increases in abuse (Justice and Duncan, 1977; Steinmetz and Straus, 1974). The nature of the association is not clear. Because not all families with an unemployed father abuse their children, it still remains to be shown why some families, and not others, are vulnerable under stress to maltreatment of their children. It is proposed here that distorted attachment relationships in the family leave family members vulnerable to the effects of crisis situations such as unemployment. The point is not that social conditions are irrelevant to the incidence of maltreatment. On the contrary, given that the quality of relationships is on a continuum, the nature of the social context may determine the point along the secure–anxious continuum at which risk for maltreatment becomes imminent. However, knowing the effect of deleterious social conditions only allows one to predict increased incidence of maltreatment. Knowing the nature of family attachment relationships and the individuals' associated representational models should enable one to specify more precisely which families and/or individuals will be the most vulnerable to external stressors.

Often the evidence needed to support this and the other hypotheses offered here is either missing or of poor quality as a result of poorly measured variables, clinical observations, etc. This is especially true in older studies and in studies of parents. In addition, very little of the evidence was initially offered in the context of testing attachment theory. This is unfortunate but does not, in and of itself, diminish the potential of attachment

theory to pose integrative and testable hypotheses regarding the nature, causation, and effects of maltreatment. It is now necessary that investigators design studies (as did Kotelchuck, 1982, and Starr, 1982, to test other theoretical approaches) that test, in a single study, a range of attachment-derived hypotheses similar to those presented here. Although such an approach would not "prove" attachment theory, it would result in either finding that the theory was no more effective in explaining maltreatment than other theories or that the results were heuristically consistent and explanatory.

References

Aber, J. L., and Zigler, E. (1981). Developmental considerations in the definition of child maltreatment, *New Directions for Child Development: Developmental Perspectives on Maltreatment, 11,* 1–30.

Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love.* Baltimore: Johns Hopkins University Press.

Ainsworth, M. D. S. (1980). Attachment and child abuse. In G. Gerber, C. J. Ross, and E. Zigler (Eds.), *Child abuse reconsidered: An agenda for action.* New York: Oxford University Press.

Ainsworth, M. D. S. (1985). Attachments across the life-span. *Bulletin of The New York Academy of Medicine, 61,* 792-812.

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

Ainsworth, M. D. S., and Eichberg, C. F. (in press). Effects on infant-mother attachment of mother's unresolved loss of an attachment figure or other traumatic experience. In C. K. Parker and J. Stevenson Hinde (Eds.), *Attachment across the life cycle.*

Baldwin, J. A., and Oliver, J. E. (1975). Epidemiology and family characteristics of severely-abused children. *British Journal of Preventive Medicine, 29,* 205–221.

Belsky, J. (1980). Child maltreatment: An ecological integration. *American Psychologist, 35,* 320–335.

Belsky, J., Rovine, M., and Taylor, D. G. (1984). The Pennsylvania Infant and Family Development Project, III: The origins of individual differences in infant-mother attachment: Maternal and infant contributions. *Child Development, 55,* 718–728.

Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psychoanalysis, 39,* 359–73.

Bowlby, J. (1969). *Attachment and loss, Vol. I: Attachment.* New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss, Vol. II: Separation.* New York: Basic Books.

Bowlby, J. (1979). *The making and breaking of affectional bonds.* London: Tavistock Publications.

Bowlby, J. (1980). *Attachment and loss, Vol. III: Loss.* New York: Basic Books.

Bowlby, J. (1982). Violence in the family as a disorder of the attachment and caregiving systems. *American Journal of Psychoanalysis, 44,* 9–27, 29–31.

Bretherton, I. (1980). Young children in stressful situations: The supporting role of attachment figures and unfamiliar caregivers. In G. V. Coelo and P. Ahmed (Eds.), *Uprooting and development* (pp. 179–211). New York: Plenum.

Burgess, R. L., Anderson, E. S., Schellenbach, C. J., and Conger, R. D. (1981). A social interactional approach to the study of abusive families. In J. P. Vincent (Ed.), *Advances in family intervention, assessment and theory: An annual compilation of research (Vol. 2)* (pp. 1–46). Greenwich, CT: JAI Press.

Burgess, R. L., and Conger, R. D. (1978). Family interaction in abusive, neglectful, and normal families. *Child Development, 49,* 1163–1173.

Camras, L. A., Grow, J. G., and Ribordy, S. C. (1983). Recognition of emotional expression by abused children. *Journal of Clinical Child Psychology, 12,* 305–328.

Cicchetti, D., and Rizley, R. (1981). Developmental perspectives on the etiology, intergenerational transmission, and sequelae of child maltreatment. *New Directions for Child Development: Developmental Perspectives on Child Maltreatment, 11,* 31–56.

Crittenden, P. M. (1981). Abusing, neglecting, problematic, and adequate dyads: Differentiating by patterns of interaction. *Merrill-Palmer Quarterly, 27,* 1–18.

Crittenden, P. M. (1983). The effect of mandatory protective daycare on mutual attachment in maltreating mother–infant dyads. *Child Abuse and Neglect, 3,* 297–300.

Crittenden, P. M. (1984). Sibling interaction: Evidence of a generational effect in maltreating families. *Child Abuse and Neglect, 8,* 433–438.

Crittenden, P. M. (1985a). Maltreated infants: Vulnerability and resilience. *Journal of Child Psychology and Psychiatry, 26,* 85–96.

Crittenden, P. M. (1985b). Social networks, quality of child-rearing, and child development. *Child Development, 56,* 1299–1313.

Crittenden, P. M. (1986). Final Project Report. HHS Grant #90-CA-844: Differential assessment of maltreating families using interaction, attachment and family systems.

Crittenden, P. M. (1987). Non-organic failure-to-thrive: Deprivation or distortion? *Infant Mental Health Journal, 8,* 51–64.

Crittenden, P. M. (1988a). Family and dyadic patterns of functioning in maltreating families. In K. Browne, C. Davies, and P. Stratton (Eds.), *Early prediction and prevention of child abuse* (pp. 161-189). New York: Wiley.

Crittenden, P. M. (1988b). Distorted patterns of relationship in maltreating families: The role of internal representational models. *Journal of Reproductive and Infant Psychology, 6,* 183-199.

Crittenden, P. M. (1988c). Relationships at risk. In J. Belsky and T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 136-174). Hillsdale, NJ: Erlbaum.

Crittenden, P. M., and Bonvillian, J. (1984). The effect of maternal risk status on maternal sensitivity to infant cues. *American Journal of Orthopsychiatry, 54,* 250–262.

Crittenden, P. M., and DiLalla, D. L. (1988). Compulsive compliance: The development of an inhibitory coping strategy in infancy. *Journal of Abnormal Child Psychology, 16,* 585-599.

Cummings, E. M., Zahn-Waxler, C., and Radke-Yarrow, M. (1981). Young children's responses to expressions of anger and affection by others in the family. *Child Development, 52,* 1274–1282.

Deitrich, K. N., Starr, R., and Weisfeld, G. E. (1983). Infant maltreatment: Caretaker–infant interaction and developmental consequences at different levels of parenting failure. *Pediatrics, 72,* 532–540.

DeLozier, P. P. (1982). Attachment theory and child abuse. In C. M. Parkes and J. Stevenson-Hinde (Eds.), *The place of attachment in human behavior* (pp. 95–117). New York: Basic Books.

Egeland, B., and Farker, E. A. (1984). Infant–mother attachment: Factors related to its development and changes over time. *Child Development, 55,* 753–771.

Egeland, E., and Sroufe, A. (1981). Developmental sequelae of maltreatment in infancy, *New Directions for Child Development: Developmental Perspectives on Child Maltreatment, 11,* 77–92.

Egeland, B., and Vaughn, B. (1981). Failure of "bond formation" as a cause of abuse, neglect, and maltreatment. *American Journal of Orthopsychiatry, 51,* 78–84.

Eichberg, C. (1986). Security of attachment in infancy: Contributions of mother's representation of her own experience and child care attitudes. Unpublished doctoral dissertation, University of Virginia, Charlottesville.

Flanzraich, M., and Dunsavage, I. (1977). Role reversal in abused/neglected families: Implications for child welfare workers. *Children Today,* 13–15.

Friedman, R. (1976). Child abuse: A review of psychosocial research. In Hefner and Company (Eds.), *Four perspectives on the status of child abuse and neglect research.* Washington, DC: National Center on Child Abuse and Neglect.

Frodi, A. M., and Lamb, M. E. (1980). Chld abusers' responses to infant smiles and cries. *Child Development, 51,* 238–241.

Frodi, A., and Smetana, J. (1984). Abused, neglected, and nonmaltreated preschoolers' ability to discriminate emotions in others: The effects of IQ. *Child Abuse and Neglect, 8,* 459–465.

Gaensbauer, T. J., and Harmon, R. J. (1982). Attachment behavior in abused/neglected and premature infants: Implications for the concept of attachment. In R. N. Emde and R. J. Harmon (Eds.), *The development of attachment and affiliative systems* (pp. 263–280). New York: Plenum.

Galston, R. (1971). Violence begins at home. *Journal American Academy of Child Psychiatry, 10,* 336–3350.

Garbarino, J. (1977). The human ecology of child maltreatment: A conceptual model for research. *Journal of Marriage and the Family, 39,* 721–727.

Gaudin, J. M., and Polansky, N. A. (1986). Social distancing of neglectful families, *Children and Youth Services Review, 8,* 1–12.

George, C., Kaplan, N., and Main, M. (1985). Adult Attachment Interview. Unpublished doctoral dissertation, University of California, Berkeley.

George, C., and Main, M. (1979). Social interactions of young abused children. *Child Development, 50,* 306–318.

Gil, D. G. (1970). *Violence against children: Physical child abuse in the United States.* Cambridge, MA: Harvard University Press.

Gray, J. D., Cutler, C. A., Dean, J. G., and Kempe, C. H. (1977). Prediction and prevention of child neglect. *Child Abuse and Neglect, 1,* 45–58.

Green, A. H. Gaines, R. W., and Sandgrund, A. (1974). Child abuse: Pathological syndrome of family interaction. *American Journal of Psychiatry, 31,* 882–886.

Grossmann, K. E., Grossmann, K., Spangler, G., Suess, G., and Unzer, L. (1985). Maternal sensitivity and newborns' orientation responses as related to quality of attachment in Northern Germany. In I. Bretherton and E. Waters (Eds.), Growing points in attachment theory. *Monographs of the Society for Research in Child Development, 50* (1–2, Serial No. 209), pp. 233–256.

Helfer, R. E. (1973). The etiology of child abuse. *Pediatrics, 51,* 777–779.

Helfer, R. E. (1976). Early identification and prevention of unusual child-rearing practices. *Pediatric Annals, 5,* 91–105.

Herrenkohl, R. C., and Herrenkohl, E. C. (1981). Some antecedents and developmental consequences of child maltreatment, *New Directions for Child Development: Developmental Perspectives on Child Maltreatment, 11,* 57–76.

Hunter, R. S., and Kilstrom, N. (1979). Breaking the cycle in abusive families. *American Journal of Psychiatry, 136,* 1320–1322.

Hurd, J. M. (1975). Assessing maternal attachment: First step toward the prevention of child abuse. *JOGN Nursing, 4,* 25–30.

Johnson, B., and Morse, H. (1968). *The battered child: A study of children with inflicted injuries.* Denver, CO: Denver Department of Welfare.

Justice, B., and Duncan, D. F. (1977). Child abuse as a work-related problem. *Journal of Behavior Technology, Methods, and Therapy, 23,* 53–55.

Kempe, C. H., Silverman, F. N., and Steele, B. F. (1962). The battered-child syndrome. *Journal of the American Medical Association, 181,* 17–24.

Koski, M. A., and Ingram, E. M. (1977). Child abuse and neglect: Effect on Bayley scores. *Journal of Abnormal Child Psychology, 5,* 79–91.

Kotelchuck, M. (1982). Child abuse and neglect: Prediction and misclassification. In R. Starr (Ed.), *Child abuse prediction: Policy implications* (pp. 67–104). Cambridge, MA: Ballinger.

Kravitz, R. I., and Driscoll, J. M. (1983). Expectations for childhood development among abusing and non-abusing parents, *American Journal of Orthopsychiatry, 53,* 336–344.

Lynch, M. A., and Roberts, J. (1977). Predicting child abuse: Signs of bonding failure in the maternity hospital. *British Medical Journal, 1,* 624–626.

Maden, M. and Wrench, D. (1977). Significant findings in child abuse research. *Victimology, 2,* 196–224.

Main, M., and Goldwyn, R. (1984). Predicting rejection of her infant from mother's representation of her own experience: Implications for the abused–abusing intergenerational cycle. *Child Abuse and Neglect, 8,* 203–217.

Main, M., and Hesse, E. (in press). Lack of resolution of mourning in adulthood and its relation to disorganization in infancy: Speculations regarding causal mechanisms. In M. Greenberg, D. Cicchetti, and M. Cummings (Eds.), *Attachment in the preschool years.* Chicago: University of Chicago Press.

Main, M., Kaplan, N., and Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton and E. Waters (Eds.), Growing points in attachment theory and research. *Monographs of the Society for Child Development, 50* (1–2, Serial No. 209), pp. 66–106.

Main, M., and Solomon, J. (in press). Procedures for identifying infants as disorganized-disoriented during the Ainsworth Strange Situation. In M. Greenberg, D. Cicchetti, and M. Cummings (Eds.), *Attachment in the preschool years.* Chicago: University of Chicago Press.

Main, M., and Weston, D. R. (1981). The quality of the toddler's relationship to mother and father: Related to conflict behavior and the readiness to establish new relationships. *Child Development, 52,* 932–940.

Martin, H., and Beezley, P. (1977). Behavioral observations of abused children. *Developmental Medicine and Child Neurology.* 19, 373–387.

Martin, H., and Beezley, P. (1980). Behavioral observations of abused children. In J. V. Cook and R. T. Bowles (Eds.), *Child abuse: Commission and omission.* Toronto: Butterworth.

Marvin, R. S. (1977). An ethological–cognitive model for the attenuation of mother–child attachment behavior. In T. M. Alloway, L. Krames, and P. Pliner (Eds.), *Advances in the study of communication and affect. Vol. 3. The development of social attachments* (pp. 25–60). New York: Plenum.

Marvin, R., and Greenberg, M. (1982). Preschoolers' changing conceptions of their mothers: A social cognitive study of mother–child attachment. In D. Forbes and M. T. Greenberg (Eds.), *New directions for child development: Vol. 14. Developing plans for behavior* (pp. 47–60). San Francisco: Jossey-Bass.

Mash, E. J., Johnston, C., and Kovitz, K. (1983). A comparison of the mother–child interactions of physically abused and non-abused children during play and task situations. *Journal of Clinical Child Psychology, 12,* 337–346.

McKinley, D. G. (1964). *Social class and family life.* New York: Free Press.

Morris, M. G., and Gould, R. W. (1963). Role reversal: A necessary concept in dealing with the "battered-child syndrome." *American Journal of Orthopsychiatry, 33,* 298–299.

National Center on Child Abuse and Neglect (1978). 1977 Analysis of child abuse and neglect research (017–091–00223–1). Washington, DC: U.S. Government Printing Office.

National Institute of Mental Health (1977). *Child abuse and neglect programs: Practice and theory.* Rockville, MD: National Institute of Mental Health, DHEW.

Newberger, E. H., Newberger, C. M., and Hampton, R. L. (1983). Child abuse: The current theory base and future research needs. *Journal of the American Academy of Child Psychiatry, 22,* 262–268.

Ounsted, C., Oppenheimer, R., and Lindsay, J. (1975). The psychopathology and psychotherapy of the families: Aspects of bonding failure. In A. Franklin (Ed.), *Concerning child abuse.* Edinburgh: Churchill Livingston.

Parke, R. D., and Collmer, C. W. (1975). Child abuse: An interdisciplinary analysis. In E. M. Hetherington (Ed.), *Review of child development research,* Vol. 5. Chicago: University of Chicago Press.

Perry, M. A., Wells, E. A., and Doran, L. D. (1982). Parent characteristics in abusing and non-abusing families. *Journal of Clinical Child Psychology, 12,* 329–336.

Polansky, N. A. (1985). Determinants of loneliness among low income mothers. *Journal of Social Service Research, 8,* 1–15.

Polansky, N. A., Chalmers, M., Buttenweiser, E., and Williams, D. (1979). The isolation of the neglectful family. *American Journal of Orthopsychiatry, 49,* 149–152.

Polansky, N. A., Chalmers, M., Buttenweiser, E., and Williams, D. (1981). *Damaged parents: An anatomy of child neglect.* Chicago: University of Chicago Press.

Polansky, N. A., Gaudin, J. M., Ammons, P. W., Davis, K. B. (1985). The psychological ecology of the neglectful mother. *Journal of Child Abuse and Neglect, 9,* 265–75.

Polansky, N. A., Hally, C., and Polansky, N. F. (1976). *Profile of neglect: A survey of the state of knowledge of child neglect.* Washington, DC: U.S. Department of HEW.

Quay, H. (1985). Attention deficit disorder and the behavioral inhibition system: The relevance of the neuropsychological theory of Jeffery A. Gray for prevention. Conference on Hyperactivity as a Scientific Challenge, University of Groningen, Groningen, The Netherlands, June.

Radke-Yarrow, M., Cummings, M., Kuczynski, L., and Chapman, M. (1985). Patterns of attachment in two- and three-year olds in normal families and families with parental depression. *Child Development, 56,* 884–893.

Reidy, T. (1977). The aggressive characteristics of abused and neglected children. *Journal of Clinical Psychology, 33,* 1140–1145.

Robinson, E., and Solomon, F. (1979). Some further findings on the treatment of the mother–child dyad in child abuse. *Child Abuse and Neglect, 3,* 247–251.

Rosenberg, M., and Reppucci, N. D. (1983). Abusive mothers: Perceptions of their own and their children's behavior. *Journal of Consulting and Clinical Psychology, 51,* 674–682.

Schneider-Rosen, K., Braunwald, K. G., and Carlson, V., and Cicchetti, D. (1985). Current perspectives in attachment theory: Illustration from the study of maltreated infants. *Monographs of the Society for Research in Child Development, 50* (1–2, Serial no. 209), pp. 194–210.

Siegal, E., Bauman, K. E., Schaefer, E. S., Saunders, M. M., and Ingram, D. D. (1980). Hospital and home support during infancy: Impact on maternal attachment, child abuse and neglect, and health care utilization. *Pediatrics, 66,* 183–190.

Silver, L. B., Barton, W., and Dublin, C. C. (1967). Mandatory reporting of physical abuse of children in the District of Columbia: Community procedures and new legislation. *Medical Annals of the District of Columbia, 36,* 127–130.

Spieker, S. J., and Booth, C. L. (in press). Maternal antecedents of attachment quality: What makes social risk risky? In J. Belsky and T. Nezworsky (Eds.), *Clinical implications of attachment.* Hillsdale, NJ: Erlbaum.

Sroufe, L. A. (1985). Attachment classification from the perspective of infant–caregiver relationships and infant temperament. *Child Development, 56,* 1–14.

Sroufe, L. A., and Rutter, M. (1984). The domain of developmental psychopathology. *Child Development, 55,* 17–29.

Starr, R. (1982). A research-based approach to prediction of child abuse. In R. E. Starr, Jr. (Ed.), *Child abuse prediction: Policy implications.* Cambridge, MA: Ballinger.

Steele, B. F., and Pollock, C. B. (1974). Psychiatric study of abusive parents. In R. E. Helfer and C. H. Kempe (Eds.), *The battered child,* Chicago: University of Chicago Press.

Steinmetz, S. K., and Straus, M. A. (Eds.) (1974). *Violence in the family.* New York: Dodd, Mead.

Wasserman, G. A., Green, A., and Rhianon, A. (1983). Going beyond abuse: Maladaptive patterns of interaction in abusing mother–infant pairs. *Journal of the American Academy of Child Psychiatry, 22,* 245–252.

Wolfe, D. A. (1985). Child-abusive parents: An empirical review and analysis. *Psychological Bulletin, 97,* 462–482.

Wolock, I., and Horowitz, B. (1984). Child maltreatment as a social problem: The neglect of neglect. *American Journal of Orthopsychiatry, 54,* 530–543.

Young, L. (1964). *Wednesday's children: A study of child neglect and abuse.* New York: McGraw-Hill.