

In press, Baradon, T (Ed.), *Relational Trauma in Infancy: Psychoanalytic, Attachment and Neuropsychological Contributions to Parent-Infant Psychotherapy*. London: Routledge. Available from December 2009.

The Adult Attachment Interview and Relational Trauma: Implications for parent-infant psychotherapy

Miriam Steele, Howard Steele and Anne Murphy

The burgeoning field of infant mental health is by its very nature multidisciplinary with influences from adult and child psychiatry, psychoanalytically based theory and treatment, and empirical studies in contemporary developmental research. The dialectic that exists in the exchange of ideas and practice between these disparate but related fields is usefully exemplified by looking at how attachment theory and research is currently being applied to ongoing intervention work with distressed families participating in a parent-infant psychotherapy program (Steele, Murphy & Steele, in press). This chapter will focus on the knowledge gained from the use of a set series of questions concerning what happened during an adult's childhood, and how those childhood experiences are represented in the mind of the adult, namely the Adult Attachment Interview (George, Kaplan & Main, 1996). This tool is of special interest because of the detailed rating and classification system most recently summarized in Main, Hesse & Goldwyn (2008) that permits, among other clinically relevant phenomena, identification of adults for whom past loss and trauma represents an ongoing bereavement problem. Thus, for those working with families suffering from current 'relational trauma' there is great value to be gained from having reliable information

about the meaning of past trauma in the mind of the parent. This will permit mapping of a current clinical case in the mental and emotional landscape established by published research with the AAI, and more importantly, this will be a valuable potential guide to understanding and responding to central issues in the ongoing clinical work. Thus reviewing past work with the AAI, and framing its relevance to parent-infant work involving relational trauma comprises the first part of this chapter. The second section of this chapter will then describe an attachment based intervention program specifically designed for families suffering from relational trauma where the use of the Adult Attachment Interview has been an important tool in helping to facilitate the clinical process and in demonstrating the efficacy of the intervention.

There is an expanding field of clinically relevant research that utilizes the AAI (Steele & Steele, 2008a). The interest in the AAI began with its unique capacity to provide the empirical flesh to the long held psychoanalytic belief that the most robust predictor of current parent-child relationships is the adult's own experience of having been parented. A landmark finding for the field of parent-infant work was produced by Mary Main and Erik Hesse (1990) who first showed that parents whose Adult Attachment Interviews were classified as Unresolved with regard to their own experiences of loss and/or trauma were more likely to have children classified as Disorganized in the Strange Situation. This finding has been replicated multiple times with its robustness confirmed by meta-analytic summaries (van IJzendoorn, 1995). For clinicians working in parent-infant psychotherapy, against the backdrop of Selma Fraiberg's (1980) words and work on the infamous 'ghosts in the nursery,'

with the AAI a means became available to measure the ghosts (Fonagy, Steele, & Steele, 1993).

The Adult Attachment Interview

The Adult Attachment Interview is structured entirely around the topic of attachment, principally the individual's relationship to their mother and father (and/or to alternative caregivers) during childhood. The interview protocol was recently described as having been "designed and structured to bring into relief individual differences in deeply internalized strategies for regulating emotion and attention response to the discussion of attachment" (Main, Hesse, & Goldwyn, 2008, p. 37). Interviewees are asked both to describe their relationship with their parents during childhood, and to provide specific memories to support global evaluations. The interviewer asks directly about childhood experiences of rejection, being upset, ill, and hurt, as well as about loss, abuse, and separations. In addition, subjects are asked to offer explanations for their parents' behavior, and to describe the current relationship with their parents as well as the influence they consider their childhood experiences to have had upon their adult personality. These questions specifically are ones that offer the interviewee an opportunity to demonstrate their capacity for 'reflective functioning' which may be briefly defined as a being able to put oneself in one's parents' shoes, and understand the thoughts feelings and intentions of the other (Fonagy, Steele, Moran, Steele, Higgitt, 1991; Steele & Steele, 2008b).

Adult patterns of attachment, identifiable in spoken (recorded and transcribed) responses to the Adult Attachment Interview, refer to different strategies adults rely on when faced with the task of making sense of their childhood relations with adult

caregivers. The signal features of the 'secure-autonomous' strategy are coherence and a strong valuing of attachment. The dismissing and preoccupied patterns each represent different forms of insecurity arising out of negative attachment experiences that *do not* appear integrated evenly into the adult's sense of self. The dismissing strategy is typically seen in an incoherent narrative characterized by global idealized statements about a good or normal childhood that cannot be supported by relevant memories. The preoccupied strategy is typically seen in an incoherent narrative characterized by global statements about a difficult childhood that are accompanied by an overabundance of memories and affects from childhood and adulthood, which lead the speaker to express current feelings of anger, or a sense of resignation to difficulties that cannot be overcome. Finally, the unresolved pattern, which may be present in an otherwise dismissing, preoccupied, or autonomous interview, is evident when an adult shows signs of ongoing grief and disorientation concerning some past loss or trauma. Narratives that are assigned a classification of unresolved with respect to loss and/or trauma include an excessive attention to detail when discussing loss, delayed bereavement reactions, lapses in the monitoring of speech that go uncorrected, and lapses in the monitoring of reason, as when dead loved ones are spoken about in the present tense as if they were still alive.

It is a remarkably hopeful and positive sign when a speaker refers to past trauma without slipping in the above mentioned quagmire of absorption and confusion. In the nonclinical population, in cases where childhood experiences have involved trauma, it is not uncommon for the speaker to convey a sense of having moved beyond the fear they felt so often as a child. Additionally, such speakers are capable of progressing toward understanding, though not necessarily forgiving, caregiving figure(s) who once

perpetrated abuse against them. For the field of clinicians working to interrupt the deleterious effects of 'relational trauma' in the parent for the sake of improving the quality of parenting of their young infants it is useful to be minded of a recent paper from Busch, Cowan and Cowan (2008) who refer the AAI as " an observational measure of post-bereavement functioning." This definition conveys the essence of the AAI in respect of trauma, that is, what is critical is not that the individual was exposed to relational trauma, but whether there is ongoing evidence of bereavement and lack of resolution of trauma. Importantly, the AAI provides direct clues as to the specific content of an individual's bereavement difficulties, providing openings for clinical work aimed at healing the deep wounds of past relational trauma. Achieving this goal is vital so that fear in the life of the present infant may be contained and minimized, as opposed to it becoming exacerbated into an atypical pattern of attachment disorganization.

Links with Disorganized Attachment Patterns

Organized child-parent relationships typically adhere to one of three patterns: (1) the optimal 'secure' or evenly regulated pattern, the majority (55-65%) of low-risk samples, is widely documented to serve as a protective factor for the child's current and future mental health; (2) the insecure-avoidant or excessively 'down-regulating' pattern, typically 20-25% of low-risk samples; and (3) the insecure-resistant or excessively 'up-regulating' pattern, typically 10-15% of low-risk samples. These patterns were first identified by Ainsworth, Blehar, Waters

& Wall (1978) and their links to emotion regulation have since been elaborated (e.g. Main, 1990; Thompson, 2008; Bretherton & Munholland, 2008).

A fourth group, already identifiable at one year of age in response to two brief separations from the attachment figure (Ainsworth et al., 1978), show the effects of relational trauma by way of freezing in the presence of the mother for 20 seconds or more, hiding from the mother, hitting the mother, alternately displaying avoidance (moving away) with resistance (crying uncontrollably) – and all the time the mother appears at a loss of what to do to settle her child (Main & Solomon, 1986; 1990). Anomalous behavior such as this is termed ‘disorganized/disoriented’ and has many correlates in maternal behavior (Schuengel, van IJzendoorn, Bakermans-Kranenburg, & Bloom (1999). Infants with disorganization are significantly likely to have mothers noted for the display of frightening or frightened behavior with their infants or marked signs of withdrawal and more generally profoundly insensitive behavior, well beyond a hint of rejection or interference (Lyons-Ruth & Jacobvitz, 2008).

In high-risk samples, like those where relational trauma was a feature of the parent’s history, 50-80% of samples are observed to show attachment disorganization (Lyons-Ruth & Jacobovitz, 2008). The long-term correlates of disorganized attachment prominently include childhood externalizing behaviors such as elevated levels of aggression and disruptive behavior (Hazen, Jacobovitz, Allen, Higgins, & Jin, in press; Lyons-Ruth, Easterbrooks, & Cibelli, 1997; Shaw, D., Keenan, K., Vondra, J, Delliquadri, E., & Giovannelli, J., 1997)). Shaw, Owens, Vondra

and Keenan (1996) examined disorganized attachment at 12 months, maternal personality and child rearing disagreements during the second year as predictor of disruptive behavior at age five. They found that these early risk factors predicted aggressive behavior at age three years and disruptive behavior at age five. A meta-analysis confirmed these findings showing that disorganized attachment in infancy predicts aggression in school-aged children, with an effect size of .29 across 12 studies (van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999).

A related outcome of infant disorganization, highlighted most clearly in the large longitudinal Minnesota study of high risk families, are a range of clinical outcomes linked to dissociation and cognitive confusion. For example, it was found that infant disorganization predicted psychopathology as assessed with the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) at age 17 years (Carlson, 1998). Specific dissociative symptoms in adolescence have also been linked to earlier assessments of infant disorganization (Ogawa, Sroufe, Weinfield, Carlson, and Egeland, 1997) with similarities drawn between the fear infused stances evidenced in the Strange Situation and the corollary indices of dissociative qualities in young adulthood. Recently, an independent longitudinal study that included observations of attachment disorganization with mother at 12-months has shown that such early relational trauma is linked to PTSD symptoms in later childhood, specifically in the 9th year of life (Macdonald, Beeghly, Grant-Knight, Augustyn et al, 2008). In this latter work with 78 8.5 year-olds, of whom 16 (21%) had been disorganized as infants, those with disorganization in their past were significantly more likely than non-disorganized children to show both higher

avoidance cluster PTSD symptoms and higher re-experiencing cluster PTSD symptoms.

Given these long-term clinical correlates of infant-mother attachment disorganization, it is all the more impressive that an assessment of the mother (potentially conducted before the birth of the child) can forecast the likelihood of disorganization. A meta-analysis of nine studies (N=548) revealed an effect size of $d=0.65$ ($r=.31$) for the relation between child disorganization and parental unresolved status. That these two disparate measures are linked with one another places them even more squarely in the center stage of what is of interest to clinicians working with parents where there is evidence of relational trauma. That traumatic experiences are relational in context is critical. This has been demonstrated by a recent well-designed and innovative study (Sagi-Schwartz, et al, 2003) where the potential transmission of attachment patterns was studied in individuals known to have suffered enormous trauma (from the Second World War), namely a group of 48 Holocaust survivors, their daughters and grandchildren. When the research team looked at the extent of transmission of unresolved trauma across generations, they found that it was much less than what is typically found when the trauma emanates from *within* relationships. The researchers posit that this was the case for two reasons: (1) firstly some of these individuals would have experienced pre-war secure attachment relationships with their attachment figures providing them with a resilient capacity; and (2) even for those who did not have these optimal experiences, most probably, the most frightening experiences were associated with forces outside of their family.

Thus, relational trauma is inherently within the family and carries the power

to stay with an individual long into the future, impacting the next generation. Empirical evidence of this fact has followed from the observations of Main and Hesse (1990) who showed that unresolved trauma (stemming from abuse or loss within the family) leads to frightened or frightening behavior overwhelming to the infant which can result in the infant displaying disorganized and/or disoriented behavior. For the infant, this puzzling and paradoxical situation of being faced with the at-times loving parent who is alternately frightened and frightening is likely to lead to several incompatible models of self and other in the immature child's mind. These incompatible models linked to overwhelming feelings of fear and confusion herald the hallmark behaviors of disorganized attachment such as freezing or approach and simultaneous avoidance. Further, these multiple models leave the infant at risk for failing to cope with future affect-laden events that require the availability of integrated effective strategies. Yet post-infancy experiences may actually hold the potential to introduce organization where there was previously disorganization. At the same time, early disorganization makes later dissociative experiences more likely. For example, Ogawa et al (1997) compared scores on the Dissociate Experiences Scale of young adults previously classified as disorganized during infancy who had not faced trauma (N=10); young adults classified as disorganized in infancy who were faced with later trauma (N=35); and other young adults not previously classified as disorganized (N=83). A significant elevation in dissociation scores was found only among those who were both disorganized and had experienced later trauma. It is also notable that 78% of those classified as disorganized during infancy had experienced later trauma. This high rate suggests

that the caregiving environment associated with infant disorganization places an infant at risk for further exposure to trauma or loss.

The Adult Attachment Interview as Assessment Tool

The use of the Adult Attachment Interview in evidence-based studies within the context of parent-infant psychotherapy has a demonstrated efficacy across many domains which include the setting up of the therapeutic frame, uncovering traumatic experiences and important losses, permitting the reliable observation of reflective functioning and assessing therapeutic outcome (Steele & Steele, 2008c).

The AAI can also help predict which clients may be most amenable to the therapeutic process based on their attachment states of mind. For example Christoph Heinicke and Monica Levine (2008) found that mothers' pre-birth Adult Attachment Interviews "anticipated" their involvement in relation-based home visiting program as well as features of the developing mother-child relationship and the child's emotional development. Specifically they found that the mothers' whose AAIs were classified as Secure-Autonomous had the best outcomes both in terms of involvement in the clinical process but also with regard to the best child outcomes. This was the case even when the mother's AAI was judged unresolved but secure/coherent as contrasted with those that were unresolved but incoherent/insecure. This speaks to the protective value of an organized secure state of mind, even in the presence of ongoing bereavement issues. Complimentary findings arose from an independent conducted by Douglas Teti and colleagues (2008) who used the AAI as a potential predictor of engagement in the therapeutic process with mothers of premature infants. They found stronger maternal commitment from women whose AAIs were classified Autonomous-Secure as compared

to these whose interviews were non-autonomous/dismissing. These recent studies add to earlier work which also found that autonomous states of mind in mothers were associated with greater receptivity to parent-infant intervention (Kormacher et al., 1997).

Against this backdrop of research findings using the Adult Attachment Interview, we will present a clinical example highlighting its use in a specifically designed, attachment based intervention for families known to ‘preventive services’ where there is a documented concern about whether children can remain with their birth mothers. Thus, the intervention is aimed both at improving the quality of the mother-child relationship, against the background of much past and current trauma, but also with the fundamental task of family preservation. In this context, the AAI may be a particularly useful tool for identifying not only ‘ghosts’ in the nursery but also perhaps barely remembered ‘angels’ who may offer some much needed protection (Jones, 2008, Lieberman, 2007; Steele & Steele, 2008a).

The Center for Babies, Toddlers and Families of The Early Childhood Center at the Children’s Evaluation and Rehabilitation Center of Albert Einstein College of Medicine

Context of Intervention

The Center as whole has a range of functions including multi-disciplinary assessments, individual treatment, pediatric mental health (Briggs, Racine, & Chinitz, 2007), family court, foster care and preschool consultation and the parent-child psychotherapy program. Overall over 400 families are treated at the Center annually. The Parent/child psychotherapy group model was developed and has evolved over the past five years to meet the needs of a very isolated group of parents who are referred because of their own history of multiple adverse childhood experiences. Importantly, these

parents are seeking help in becoming a “different kind of parent” from that which they experienced as children growing up. Many express histories of abuse and neglect during their childhoods in the 1980s, in the Bronx, NY, a time when substance abuse peaked. Accordingly, many of these young parents report experiences of parental substance abuse which caused disruption in their young lives placing them in unprotected situations where they were abused and neglected, often leading to multiple foster placements. Many report dropping out of school to care for younger siblings. All the families fill out the Adverse Childhood Experiences questionnaire¹ or ACE. This measure is included a way of helping to describe the background from which these parents come. This measure was first used in a large epidemiological study of a managed care health group in California showing the long term deleterious physical and mental health effects of child maltreatment (Dube, et al., 2003; Felitti, et al, 1998).

While preventing disorganization and promoting security is an immediate goal of the therapeutic intervention, it is the prevention of longer-term social, behavioral and mental health problems for both the child and the parent, that this intervention is aimed at ameliorating. The intervention was specifically designed for the high-risk parents and children who live in the Bronx, New York. The intervention and research program associated with it, are both infused with attachment-based theory and assessment measures, as will be described in detail below.

The parent group serves multiple purposes. The group format has been designed for a high risk population referred to as families “on the outside” (Osofsky, 1998)

¹ Questionnaire was modified through personal communication with Shanta Dube, one of the study’s authors.

where the effects of poverty are exacerbated by homelessness, greater exposure to community and domestic violence, drug use, single-parent families and less access to medical care. The group format is especially helpful for these families with such impoverished social support as the group provides the possibility to forge new relationships with peers both during and outside of the intervention context (Niccols, 2008). Importantly, group formats have also been demonstrated to be one half as expensive as home-visiting interventions (Niccols, 2008). Observing behavior by co-participants in the group also facilitates therapeutic goals, as it is often a catalyst to change to identify strengths and difficulties in others. A secondary but clearly related benefit of a group format is the advent for the children of offering a safe and well-regulated environment for them to build their skills at socialization.

Case Illustration: The repetition compulsion and the wish to change

The following case illustrates well the utility of using the Adult Attachment Interview in a clinical context. The material revealed in the parent's response to the AAI protocol enhanced the therapist's understanding of the particular attachment issues, and vulnerabilities of the parent, most salient in the ongoing work. Further the parent's AAI alerted the therapist to potential allies of positive change in the inner world of the parent evident from her account of past support, however brief or fleeting, received.

The case presented here is one of many arising from the ongoing collaborative work between the Center for Babies, Toddlers and Families at the Albert Einstein College of Medicine, and the Center for Attachment Research at the New School for Social Research. In the context of supporting the ongoing clinical

work, led by Anne Murphy, we have been assessing a sample of the at-risk families using a range of state-of-the-art attachment measures. Central amongst this list is the Adult Attachment Interview. Dejenae aged 22 years was referred to the Center when her son, Jamal was almost 3-months old. The referral was precipitated by concern for the infant due to the mother's significant mental health history, current isolation and lack of social support. Dejenae herself was born to a teenage, 14-year-old mother at the height of crack-cocaine epidemic that haunted New York City in the 1990s. Dejenae was raised by different relatives and her father has been incarcerated for the last 7 years. She had been sexually abused since early childhood. She was diagnosed as suffering from Borderline Personality disorder /Bipolar Disorder and Post Traumatic Stress Disorder, but since the pregnancy with Jamal has been off medication and desisted from a previous pattern of multiple suicide attempts and cutting behaviors.

Dejenae's narrative responses to the Adult Attachment Interview corroborate her difficult past, yet the advantage of studying her narrative has been helpful, if not altogether illuminating, in terms of giving us important clues as to the landscape of her inner world, her strategies for regulating arousal and distress, and her hopes for herself and her child. For example when asked to give 5 adjectives to describe her early relationship with mother she provides the following:

"Weird, fast confusing, independent, lonely". When asked to elaborate on how the relationship was "confusing" she responds *"Confusing, I don't ever think that she really accepted me as her daughter, I am just like the younger sister that she pushed*

out. I remember my grandmother doing most of the stuff at one point and then it just like and everything went blink. And then there was a different grandmother, then there was a grandfather, then there was an aunt, then there was an uncle, then different schools. I went to so many different schools...."

When asked, "When you were upset as a child what would you do?" Dejanae responds in a clearly dismissing way, derogating of attachment "*Nothing, it wasn't my place to be upset. A child has no real feelings.*" Interestingly, she shows a reliance on identification with the aggressor (A. Freud, 1936), here the aggressor being the parent who took no notice of the child's feelings, and the child has become a parent who endorses this view of children. This harshness of viewpoint and overall derogation of attachment can also be seen in response to the question that often sparks a reflective stance in some but not in this respondent: "Why do you think your parents behaved as they did when you were a child? "*Because they were young and dumb and hot in their pants, they had nuthin' else better to do.*"

Despite the overall quality of the narrative as being characteristic of the insecure-dismissing type, there are small glimmers of understanding and sparks of reflective thinking. For example, when asked about her experience of sexual abuse she reports "*... he (mother's boyfriend) started at 2 1/2 with touching at first and it started going into other things. When I got older I realized that I felt I had no voice because when I told, nobody believed me and I got beaten, ... it could be once or twice a day.*" The words 'when I got older I realized that I felt I had no voice...' speak to D's capacity for adopting a developmental perspective. They leave one to wonder what

other realizations await for her so that she become more integrated, and more available to her son?

When asked about her relationship with her father, “When you think of the relationship with your father in which there is guilt, do any specific memories come to mind? Dejnae says the following: “*...in a way I feel a little bit guilty about it because the little girl that he knew so long ago is dead and lost a long, long time ago and he is never ever going to get that part of me back. Cause I even lost touch with that person.*” This is a compelling sign of how the speaker is in the process of developing a coherent narrative concerning the abuse and loss she suffered as a child as distinct from the adult she is now striving to be. For the therapist, this is a most hopeful sign. Coherence and reflection of this sort, beginning to be articulated by Dejanae, is the antidote to unresolved mourning and unthinking repetition of a painful past.

The AAI often reveals that there were attachment figures other than parents who had an important role in a person’s development. The positive influence of an aunt was evident in Dejanae’s history. When she was asked “How has death of your aunt effected how you approach your own son?”, she replied as follows:

“I mean she taught me to be a little bit more loving but I guess my own fears pushes what she taught me aside a little bit. I try to strive for at least near perfection. Because that is just something that has been instilled in me but my fear is that I’ll screw my son up and it freaks me out like bathing him and touching him. I am very precise about it and you know, time limits about it, the hugging, cause I be afraid that you know I’ll be doing something to him unconsciously and I don’t want to like freak him out.” Here

Dejanae describes openly her appropriate hopes for her son, and her struggles with past demons that interfere with her ability to respond appropriately to her son. We can perhaps hear something of how the therapeutic work is impacting on her, when Dejanae shows an awareness of the powerful pull of unconscious forces upon her behavior. At the time of the interview being conducted, Dejanae had been working as a member of the weekly individual and group therapy process for nearly one year.

The Administration of Child Services (ACS) were alerted to this case at the time of Jamal's birth and they were referred to the group by the infant mental health specialist in Jamal's pediatrician's office. Indeed very early on Dejanae projected intense negative attributions to her young son such as the beliefs that he was "*greedy*" and "*aggressive*". When asked to elaborate she made the complaint that "*he is a pervert, just like his father*" as his one- month-old hand brushed against her breast as he was feeding. The therapist contained much of Dejanae's anxieties both in individual and group sessions. Critical to the treatment was the therapist's ability to keep Dejanae in mind and to convey to her that despite her often expressed anger and rage with the therapist, the therapist would remain her ally and made herself available for ongoing consultation. Given the paucity of "good enough parenting" in her own childhood experience Dejanae felt challenged by her own internal struggle and a wish to be a different kind of parent for her young son. This was expressed both in her AAI responses as cited above and her crude assertions that she "*doesn't care how he (Jamal) feels,*" that she would easily "*pop him*" (strike him in the mouth) if he touches something he shouldn't, and that children his age (18 months) need to

respect their parents. Further progress on the part of this parent will be considered, in part, through re-administrations of the AAI 12-18 months from the original interview (above) in order to detect (hopefully) an increase in coherence and an appreciation of the age-appropriate needs of her son, together with an anticipated diminishment of fear and anger.

Interestingly, at the time this AAI was collected, Jamal was one-year old and we looked at his response to mother in the Strange Situation (Ainsworth et al., 1978). Jamal made repeated approaches to his mother, mainly to show her the toys with a bid to get some help from her in figuring them out. As is often the case for mothers unfamiliar with the situation and coping with enormous emotional burdens, Dejanae behaved as if Jamal's task was to play on his own and so she rebuffed him a number of times. Jamal' pattern of attachment could not be called secure, but this was not for lack of trying on his part! Impressive was the observation of an organized avoidant response, and no signs of disorganization as we would certainly have expected had the pair not benefited from a year of therapeutic work.

In the case of Dejanae, her AAI was collected many months after her involvement with the Center for Babies, Toddlers and Families, and so the signs of coherence and reflection that were noted may well have been the outcome of therapy rather than an indication that she would respond well to the intervention. Clearly, though, the experience of being interviewed with the AAI provided fresh insights as to Dejanae's state of mind concerning attachment, and motivational

support for her to consolidate the gains she was making through therapy.

Conclusion

Early intervention work holds out the promise of preventing or repairing the wounds that accompany relational trauma. Understanding the consequences of relational trauma in the adult mind, and pursuing the prevention of relational trauma in an infant's life, may be greatly supported by familiarity with, and use of, the Adult Attachment Interview. In fact, the AAI can be relied upon as one very useful measure of the efficacy of our interventions. Why? Because, as so poignantly phrased by Mary Main and colleagues, "coherence can change, whereas life-history cannot" (Main, Hesse & Goldwyn, 2008, pg 48).

References

- Ainsworth, M.D., Blehar, M.C., Waters, E., & Wall, S. (1978) *Patterns of attachment: assessed in the strange situation and at home*, Hillsdale, NJ: Lawrence Erlbaum.
- Bretherton, I., & Munholland, K. Internal Working Models in Attachment Relationships: Elaborating a Central Construct in Attachment Theory. In J. Cassidy & P.R. Shaver (eds.) *Handbook of Attachment: Theory, Research and Clinical Applications* (102-130). NY: Guilford Press.
- Briggs, R. D., Racine, A., & Chinitz, S. (2007). Preventive pediatric mental health care: A collocation model. *Infant Mental Health Journal*, 28 (5), 481-495.
- Busch, A., Cowan, P., & Cowan, C. (2008) Unresolved loss in the Adult Attachment Interview: Implications for marital and parenting relationships *Development and Psychopathology* 20, 717–735.
- Carlson, E. (1998). A prospective longitudinal study of attachment disorganization/disorientation. *Child Development*, 69, 1107-1128.
- Dube, S., Felitti, V., Dong, M., Giles, W., & Anda, R. (2003). The impact of adverse childhood experiences on health problems: Evidence from four birth cohorts dating back to 1900. *Preventive medicine* 37, 268-277.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14, 245-258.

- Fonagy, P., Steele, H., Moran, G., Steele, M., & Higgitt, A. (1991). The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment. *Infant Mental Health Journal, 13*, 200-217.
- Fonagy, P., Steele, M., Moran, G.S., Steele, H., Higgitt, A. (1993). Measuring the ghost in the nursery: An empirical study of the relation between parents' mental representations of childhood experiences and their infants' security of attachment. *Journal of the American Psychoanalytic Association 41*, 957-989
- Fraiberg, S., Ed. (1980). *Clinical Studies in Infant Mental Health*. New York: Basic Books.
- Freud, A. (1936) *The Ego and the Mechanisms of Defence*, New York: Int. Univ. Press.
- George, C., Kaplan, N., & Main, M. (1996). *Adult Attachment Interview* (3rd ed.). Unpublished manuscript, University of California at Berkeley.
- Hazen, N., Jacobovitz, D., Allen, S, Higgins, K., & Jin, M. (in press) Pathways from disorganized attachment to later social-emotional problems: The role of gender and parent-child interaction patterns. In J. Solomon & C. George (Eds.) *Attachment Disorganization* (2nd ed.). New York: Guildford Press.
- Heinicke, C.M., & Levine, M.S. (2008). The AAI anticipates the outcome of a relation-based early intervention. In H. Steele, & M. Steele (Eds.), *Clinical Applications of the Adult Attachment Interview*, pp. 99-125. New York: Guilford Press.

- Jones, A. (2008) The AAI as a Clinical Tool. In H. Steele, & M. Steele (Eds.), *Clinical Applications of the Adult Attachment Interview*, pp. 175-194. New York: Guilford Press.
- Korfmacher, J., Adam, E., Ogawa, J., & Egeland, B. (1997). Adult attachment: Implications for the therapeutic process in a home visiting intervention. *Applied Developmental Science*, 1, 43-52.
- Leiberman, A., Padron, E., Van Horn, P., & Harris, W.W. (2005) Angels in the Nursery: The intergenerational transmission of benevolent parental influences. *Infant Mental Health Journal*, 26, 504-520.
- Lyons-Ruth, K., & Easterbrooks, M.A., & Cibelli, C.D. (1997). Infant attachment strategies, infant mental lag, and maternal depressive symptoms: Predictors of internalizing and externalizing problems at age 7. *Developmental Psychology*, 33, 681-692.
- Lyons-Ruth, K., & Jacobvitz, D. (2008). Attachment disorganization: Genetic factors, parenting contexts, and developmental transformation from infancy to adulthood. In J. Cassidy & P.R. Shaver (eds.) *Handbook of Attachment: Theory, Research and Clinical Applications* (666-697). NY: Guilford Press.
- Main, M., Kaplan, N. & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation. (Growing points in attachment: Theory and research. *Monographs of the Society for Research in Child Development*, 50 (1-2, Serial No. 209), 66-104.)

Main, M., & Solomon, J. (1986) Discovery of an insecure-disoriented attachment pattern. In T. B. Brazelton & W. Yogman (Eds.) *Affective development in infancy* (pp. 95-124). Norwood, NJ: Ablex.

Main, M., & Solomon, J. (1990) Procedures for Identifying infants as disorganized/disoriented during the Ainsworth Strange Situation. In M. Greenberg, D. Cicchetti, & E.M. Cummings, (Eds.) *Attachment in the preschool years; Theory, research, and intervention* (pp. 121-160). Chicago: University of Chicago Press.

Main, M., & Hesse, E. (1990) Parent's unresolved traumatic experiences are related to infant disorganized attachment status: Is frightening and/or frightened parental behavior the linking mechanism? In M. Greenberg, D., Cicchetti, & E.M. Cummings (Eds.), *Attachment in the preschool years* (pp. 121-160). Chicago: University of Chicago Press.

Main, M., Hesse, E., & Goldwyn, R. (2008). Studying differences in language use in recounting attachment history. In H. Steele, & M. Steele (Eds.), *Clinical Applications of the Adult Attachment Interview*, pp. 31-68. New York: Guilford Press.

Macdonald, H.Z., Beeghly, M., Grant-Knight, W., Augustyn, M., Woods, R.W., Cabral, H., Rose-Jacobs, R., Saxe, G.N. & Frank, D.A. (2008). Longitudinal association between infants disorganized attachment and childhood posttraumatic stress symptoms. *Development and Psychopathology*, 20, 493-508.

- Niccols, A. (2008) 'Right from the Start': randomized trial comparing an attachment group intervention to supportive home visiting, *Journal of Child Psychology and Psychiatry*, 49, 754–764.
- Ogawa, J., Sroufe, L.A., Weinfield, N., Carlson, E., & Egeland, B. (1997) Development and the fragmented self: Longitudinal study of dissociative symptomatology in a nonclinical sample. *Development and Psychopathology*, 9, 855-879.
- Osofsky, J.D. (1998). Children as Invisible Victims of Domestic and Community Violence. In G.W. Holden, R. Geffner, & E.N. Jouriles (Eds). *Children Exposed to Marital Violence: Theory, Research, and Intervention*. (Pp. 95-120). Washington, D.C.: American Psychological Association Books.
- Sagi-Schwartz, A., van IJzendoorn, M., Grossmann, K., Joels, T., Grossmann, K., Scarf, M., et, al. (2003) Attachment and traumatic stress in female Holocaust child survivors and their daughters. *American Journal of Psychiatry*, 160, 1086-1092.
- Schuengel, C., van IJzendoorn, M., Bakermans-Kranenburg, M., & Bloom, M. (1999). Frightening, frightened and/or dissociated behavior, unresolved loss, and infant disorganization. *Journal of Consulting and Clinical Psychology*, 67, 54-63.
- Shaw, D., Keenan, K., Vondra, J, Delliquadri, E., & Giovannelli, J. (1997) Antecedents of preschool children's internalizing problems: A longitudinal study of lo-income families. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 1760-1767.(1997)

Shaw, D. Owens, E., Vondra, J., & Keenan, K. (1996) Early risk factors and pathways in the development of early disruptive behavior problems. *Development and Psychopathology*, 8, 679-699.

Steele, H. & Steele, M. (2008a). Eds., *Clinical applications of the Adult Attachment Interview*. NY: Guilford Press.

Steele, H., & Steele, M. (2008b). On the origins of reflective functioning. In F. Busch (Ed.), *Mentalization: Theoretical considerations, research findings, and clinical implications*. NY: The Analytic Press.

Steele, H. & Steele, M. (2008c) Ten Clinical Uses of the Adult Attachment Interview. In Steele, H. & Steele, M. (Eds.), *Clinical applications of the Adult Attachment Interview*, pp. 3-30. NY: Guilford Press.

Steele, M., Murphy, A., & Steele, H. (in press) Identifying Therapeutic Action in an Attachment based Intervention with High Risk Families. *Journal of Clinical Social Work*.

Teti, D., Killeen, L., Candelaria, M., Miller, W., Hess, C., & O'Connell, M. (2008). Adult attachment, parental commitment to early intervention, and developmental outcomes in an African American sample. In H. Steele, & M. Steele, (Eds.), *Clinical applications of the Adult Attachment Interview*, pp 126-153. NY: Guilford Press.

- Thompson, R. (2008) Early Attachment and Later Development: Familiar Questions, New Answers. In J. Cassidy & P.R. Shaver (Eds.) *Handbook of Attachment: Theory, Research and Clinical Applications* (348-366). NY: Guilford Press.
- van IJzendoorn, M.H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin*, 117, 387-403.
- Van IJzendoorn, M., Schuengel, C., Bakermans-Kranenburg, M. (1999) Disorganized attachment in early children: A meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, 11, 225-249.
- van IJzendoorn, M.H., & Bakermans-Kranenburg, M.J. (2008). The distribution of adult attachment representations in clinical groups: Meta-analytic search for patterns of attachment. In H. Steele & M. Steele (Eds.), *Clinical Applications of the Adult Attachment Interview*, pp. 69-96. NY: Guilford Press.