

Linda Baird

CHILDHOOD TRAUMA IN THE ETIOLOGY OF BORDERLINE PERSONALITY DISORDER: THEORETICAL CONSIDERATIONS AND THERAPEUTIC INTERVENTIONS

Linda Baird, M.A., LPC, CHT

Editor's Note: It is a pleasure to have Linda Baird's helpful perspective on working with those who display the signs and symptoms of Borderline Personality Disorder in this edition of the *Hakomi Forum*. Normal Hakomi Therapy trainings concentrate on teaching the principles, methods, and techniques of the work with only passing reference to various clinical conditions. As the editorial policy of the *Forum* indicates, those who have had experience applying Hakomi Therapy to various client groups and disorders are encouraged to share their work in these pages.

Linda Baird, MA, LPC, CHT is in private practice in Denver and Boulder, CO. Linda received a B.S. in Business Administration, with additional education toward a B.A. in Biochemistry from the University of Colorado. She worked as a research scientist for 16 years, with particular interest in neuroscience, prior to beginning her path as a Hakomi therapist in 1995. Linda received her M.A. from Regis University in Denver. This paper is taken, in part, from her primary research paper, which included an in-depth case study at Regis, and her presentation at the 2005 Hakomi conference, as well as from her work with clients over the last ten years. Contact information: firewoman619@msn.com; 303 507-6310. Website: www.bodymindintegrativetherapy.com.

ABSTRACT: Borderline Personality Disorder (BPD) has notoriously been one of the most challenging conditions to treat in therapy. This paper addresses the etiology of BPD in childhood trauma, specifically in the lack of secure attachment. The effects of trauma on the development of limbic structures involved in attachment and affect regulation is discussed, as well as how traumatic events are encoded in implicit memory. The dysregulated affect states of BPD, which present as the diagnostic criteria, are considered in terms of state-dependent memory that is triggered by present day relational events. Shame is discussed as a foundation of attachment failures and BPD. Key elements of individual therapy with borderline clients are discussed, including mindfulness, development of resources, establishment of a safe container within the therapeutic relationship, addressing shame dynamics, and the resolution of past trauma. Therapeutic interventions are presented, both in theory and practice.

Introduction

When I was introduced to the concept of "trauma" during my first psychotherapy training in 1996, while living in Boston, I had little interest. I thought it did not apply to me. I was more interested in character theory and childhood development. Then I attended my first workshop with Pat Ogden, founder of Hakomi Bodywork, with later became Hakomi Somatics Institute and recently, Sensorimotor Psychotherapy Institute. The workshop, called "Trauma and the Body", was a week-long experiential workshop at the Omega Institute outside of New York City. As I learned about how the nervous system is affected by perceived life-threatening events, and as I was guided through

experiencing this in my own body, my interest and passion for working with trauma was awakened.

This paper is an excerpt from a primary research paper written for the completion of my Master's degree. It combines my passion for neuroscience with the study of personality development, addressing the etiology of Borderline Personality Disorder in early childhood trauma. In particular, repeated misattunement in childhood, when the neural circuitry is developing, can result in personality traits, or, in more extreme situations personality disorders such as BPD and Antisocial Personality Disorder.

Role of Childhood Trauma

According to van der Kolk (1988), there seems to exist a spectrum of trauma-related disorders, such as BPD and multiple personality disorder, precipitated by early traumatic events that become integrated into the totality of a person's personality organization. There is a high correlation between the degree of BPD psychopathology and the severity of childhood trauma (Famularo, 1991; van der Kolk, 1996; Schore 1994). Clinical descriptions of borderline personality disorder and post-traumatic stress disorder are very similar, especially when there is a history of repeated trauma over time. Overlaps include disturbances in affect regulation including heightened aggression, hypervigilance and increased startle response, depression and dysphoric mood, poor impulse control including risk-taking behavior, self-mutilation and substance abuse, dissociative episodes and paranoid ideation, and intrusive memories.

Van der Kolk (1987) states "the most significant descriptive discrepancy between BPD and chronic PTSD is the absence in the criteria for BPD of a recognizable stressor in the patient's history" (p. 115). Van der Kolk (1987) and Famularo et al. (1991) indicated that until recently, the links between childhood traumatic events and the development of BPD in adulthood have not been consistently recognized among professionals trained to work with BPD. The connection between early childhood trauma and adult relational difficulties has been completely out of awareness for many people diagnosed with BPD, as well (Perry et al., 1990). The tendency to re-enact abusive childhood scenarios of physical, sexual, and psychological/emotional abuse will continue until the "sense of injustice and fear of retribution is clarified and validated" (Perry et al., 1990, p. 40).

Herman et al. (1988, as cited in Goodwin, 1990) found that in a sample of clients carefully diagnosed with BPD, 81% gave a history of major childhood trauma including significant physical abuse (71%), sexual abuse (68%), and witnessing serious domestic violence (62%). There was also a significant link between childhood sexual abuse and development of BPD that cannot be overlooked. Although borderline clients in this study did not meet criteria for PTSD as measured on the Impact of Experience Scale, the authors postulate that BPD might be conceptualized as a complicated posttraumatic syndrome and that validation and integration of the childhood trauma might be a precondition for successful treatment. An earlier study by the same authors (Herman et al., 1987, as cited in van der Kolk, 1996), concluded "Our explanation is that BPD is a function of having been chronically terrified during one's early development . . . the superimposition of childhood terror upon adult situations is most likely to be the key [in the development of BPD]".

Adolf Stern (1938, as cited in Perry, et al., 1990) wrote the first paper differentiating borderline from neurotic disorders. The first feature he described was a sort of narcissism, meaning an early developmental disturbance of self-preserving functions, leading to psychotic-like transferences. Features included lack of maternal affection, parental quarrels, including outbursts directed at the child, early divorce, separation or desertion, cruelty, brutality, and neglect by the parents over many years duration.

For many borderline clients, the connection between early trauma and current problems in close relationships often remains out of awareness. These clients may repetitively re-enact scenarios in which they feel threatened, attacked, or abused, and then become enraged. The characteristic self-destructive and stormy interpersonal behaviors that follow are an attempt to cope with unbearable feelings of rage, shame, guilt, and terror associated with the symbolic re-experiencing of the trauma.

Lack of secure attachment plays, for a number of reasons including neglect and abuse, a central role in the object relations of those who develop borderline pathology. An essential feature in BPD is the lack of development of object constancy that is generally accomplished during the second and third years of life in the separation and individuation stages (Herman et al., 1987, as cited in van der Kolk, 1996). Alder (as cited in Perry, 1990) described borderline pathology as a "developmental failure in the formation of self-soothing capacities based on evocative memory. These capacities derive from the child's ability to recall comforting memories of significant caregivers, even when they are not present" (p. 42). Because of this inability to internalize nurturing caregivers and in turn develop the ability to self-soothe, borderline clients are prone to intense feelings of loneliness and panic. The ability to self-soothe may begin to develop in some abused children; it may be destroyed, however, when the child has no choice but to turn to the abuser for comfort (Perry, 1990).

Again, Herman (1997) describes the adult relationships of those who have survived severe childhood abuse in terms that exemplify borderline diagnostic criteria. These relationships are characterized by intense periods of searching for intimacy combined with idealization of the other person, which often put them at risk for re-enactment of childhood abuse, alternating with periods of angry withdrawal and denigration. This "splitting" behavior is classic characteristic of BPD:

The survivor's intimate relationships are driven by the hunger for protection and care and are haunted by the fear of abandonment or exploitation. . . . In quest for a rescue, she may seek out powerful authority figures who seem to offer the promise of a special care taking relationship. By idealizing the person to whom she become attached, she attempts to keep at bay the constant fear of being either dominated or betrayed. . . . Inevitably, however, the chosen person fails to live up

Linda Baird

to her fantastic expectations. When disappointed, she may furiously denigrate the same person whom she so recently adored. Ordinary interpersonal conflicts may provoke intense anxiety, depression, or rage. In the mind of the survivor, even minor slights evoke past experiences of callous neglect, and minor hurts evoke past experiences of deliberate cruelty. These distortions are not easily corrected by experience, since the survivor tends to lack the verbal and social skills for resolving conflict. Thus the survivor develops a pattern of intense, unstable relationships, repeatedly enacting dramas of rescue, injustice, and betrayal (p. 111).

Adults traumatized as children often retreated into isolation after years of frantically searching for rescuers (Herman et al., 1987, as cited in van der Kolk, 1996). Symptoms of abuse manifest in power differentials in relationships based on dominance and submission. There is a tendency to either be in the position of power, where they “inspire fear and loathing” (p. 197), or to be in the subordinate position where they feel helpless and behave submissively. In the latter case, the classic borderline tendency toward “splitting” may appear as idealization alternating with devaluation of the abusive partner. In either case, what is lost is the ability to experience competence in a mutually respectful relationship.

Attachment

Numerous studies have concluded that sudden and uncontrollable loss of attachment bonds is an essential element in the development of PTSD, and could be a key to understanding why some people develop PTSD and some do not when exposed to similar traumatic events (van der Kolk, 1988). Borderline Personality Disorder is now being diagnosed in childhood, with an emphasis on mismatched parenting, leading to neurobiological impairment (Schore, 1994). Research by Bowlby (1969), in particular, has demonstrated the profound psychobiological effects of disruptions in the mother-infant attachment bond and the subsequent behavioral effects that often become the personality traits of BPD (as cited in Masterson, 1988). The roots of traumatic re-enactment have also been shown to be related to disruption in attachment bonds with primary caregivers (Scaer, 2001). The protest and despair responses displayed in response to parental separation, as observed by Bowlby, parallel the hyperarousal and numbing states found in PTSD (van der Kolk, 1988).

The attachment system in an infant is an in-born system that promotes the chances of survival (Siegel, 1999). Recent research has shown that the mother or primary caregiver is the regulator of the infant’s neural development and affect states (Schore, 2000). Because the brain of the infant is undifferentiated aside from the brainstem and the amygdala, the psychological and emotional health of the mother, as well as her ability to be present with her child, are fundamental to attachment bonding (Schore, 1994, 2000). Infants tend to seek increased attachment in the face of

danger, even when the attachment object no longer provides nourishment and safety (van der Kolk, 1988).

Briefly, Ainsworth, and later Main and Solomon, developed a measure of distinct attachment patterns called the Strange Situation. There are four classifications of attachment, determined at one year of age, that have been correlated with specific behavior patterns at one year of age and also with adult behavior. The four attachment categories are: secure, avoidant, resistant or ambivalent, and disorganized/disoriented. Of specific interest in the study of trauma, and the development of BPD in adults, is the disorganized/disoriented attachment pattern. This pattern is characterized by disorganized and/or disoriented behaviors in the presence of the parent, suggesting a collapse of behavioral strategies, including apprehension and confusion, freezing, contradictory patterns of alternately clinging and turning away, and other stereotypical behaviors found in neurologically impaired infants (Schore, 2000; Siegel, 1999).

According to Schore (1994), these behavioral characteristics will manifest when the mother is not able to serve as the regulator of the infant’s affect states. Children who display this type of attachment pattern have parents who are physically, sexually, or emotionally abusive, or respond to the child in a frightening, frightened, or disoriented manner (Siegel, 1999). The child cannot use the parent as a source of soothing and nourishment because the parent is the source of fear. As the child matures, he or she may be able to cognitively organize behavior in non-stressful situations but be unable to communicate, interpret or regulate emotional signals (van der Kolk, 1996).

As mentioned, a critical role of the primary caregiver is to provide modulation of the infant’s neural development. The behavioral patterns of disorganized/disoriented attachment reflect the potentially severe structural impairment of “rostal” limbic system development in the brain that is involved with attachment behavior (Schore, 2000). The rostral limbic system refers to the hierarchical connections between the amygdala, anterior cingulate and orbitofrontal cortices. There is evidence that the rostral limbic system is also connected to the brain stem monoaminergic and hypothalamic neuroendocrine nuclei (Schore, 1994).

The infant’s interactions with an emotionally misattuned and unresponsive caretaker are stored in the developing corticolimbic circuits as imagistic, visceral, and nonverbal procedural memories (see below). The orbitofrontal cortex integrates body states and makes meaning, enabling words to be put to feeling states. Healthy development of the rostral limbic system and the right orbitofrontal cortex through interactions with an attuned mother helps the child learn to read another person and know what a face is saying. In essence, this means the child learns to pick up on external cues and read situations (Schore, 2000). A child with a disoriented/disorganized will not be able to do this.

Linda Baird

Damasio (1994) discusses the hierarchical structure of the rostral limbic system in terms of primary and secondary emotions. Primary emotions are controlled by the amygdala and anterior cingulate. Primary emotions are preorganized, innate and reptilian. The messages put out by the amygdala are nondiscriminatory; they are broad and designed for survival. A stimulus is received by the amygdala, and signals are sent to the body to respond accordingly with “fight or flight” arousal in the sympathetic nervous system and endocrine system, or alternatively “freeze” in the parasympathetic nervous system (Damasio, 1994). Since the more complex neural networks are undeveloped in infant, the responses to sensory stimuli are primarily innate and amygdala-driven.

Secondary emotions, on the other hand, take another pathway in the developing brain. While some of the stimulus still goes straight to the amygdala, another part takes the longer neuronal pathway to the neocortex where it is brought into consciousness in the form of images or memories. As the images and memories emerge, the orbitofrontal cortex responds to the stimulus with an acquired rather than innate response. From the orbitofrontal cortex the response is signaled to the amygdala and cingulate, which in turn activate bodily responses in the visceral, muscular, nervous and endocrine systems (Damasio, 1994). For instance, if one sees a rope at dusk on the sidewalk, the amygdala may immediately respond with a non-discriminatory fight or flight response: muscles tense and prepare to flee, there may be fear, the endocrine system kicks in and dumps adrenalin into the system. However, the neocortex and orbitofrontal system take over once the rope is recognized as a rope. The secondary emotional response may be relief or anger for mistaking the rope for a snake, depending on the acquired response. Damasio states that secondary emotions require primary emotions to express themselves. He has observed that people with damage to the orbitofrontal cortex cannot generate emotions relative to images brought up by memories of specific situations, while those with damage to the amygdala and cingulate cortex “have more pervasive impairment of both primary and secondary emotions and thus are more recognizably blunted in their affect” (Damasio, 1994, p. 139). Schore argues that acquired and *appropriate* secondary emotional responses from the orbitofrontal cortex are regulated by the primary caretaker in early development (Schore, 2000).

According to Van der Kolk (1996), “early attunement combines with temperamental pre-dispositions to ‘set’ the capacity to regulate future arousal; limitations in this capacity are likely to play a major role in long-term vulnerability to psychopathological problems after exposure to potentially traumatizing experiences” (p. 186). Parents who are abusive or unable to appropriately respond their child promote unregulated states, such as hyperarousal. 80% of children who have been physically and/or sexually abused have disoriented/disorganized attachment patterns

that are likely to increase vulnerability to later pathology, including borderline personality disorder and PTSD (van der Kolk, 1996).

Empathy is an autonomic nervous system function related to the ability to read the internal state of another person. The ability to empathize begins to arise in the second year of life in a well-attached child (Schore, 2000). According to Schore, an understanding of empathy is not so much a match of verbal cognitions as nonverbal psychobiological attunements (Schore, 2000) mediated by the healthy neural development of the orbitofrontal cortex. The impaired development of this part of the brain leads to difficulties in the social relationships of children who display disorganized/disoriented attachment patterns. These children may become passive and withdrawn, or they may tend to abuse and bully other children, with an inability to regulate aggressive behavior (van der Kolk, 1996; Siegel, 1999). Lack of ability to empathize--a direct result of insecure attachment to primary caregivers--plays a major role in childhood and adolescent violence in the United States (Lewis et. al, 1989, as cited in Perry, 1995b).

Explicit and Implicit Memory

There are two separate, yet inter-related, memory systems within the brain.

Nondeclarative, or implicit, memory is responsible for storing acquired skills, conditioned responses, and emotional associations (Scaer, 2001). It is unconsciously acquired and does not require the necessary involvement of conscious declarative memory centers such as the hippocampus and prefrontal cortex for coding and retrieval (Siegel, 1999). Brain structures responsible for implicit memory are intact at birth (Siegel, 1999), including the amygdala and limbic system structures responsible for emotional memory. Procedural memory is a part of nondeclarative memory that serves in the learning of motor skills such as athletic abilities, musical and artistic talents (Scaer, 2001).

A second type of nondeclarative memory is involved in the process of unconscious conditioned behavior akin to Pavlov’s dog experiments where a bell was paired with feeding. The result of this experiment was that the dogs were conditioned to salivate at the sound of the bell. This is an example of an unconscious, conditioned autonomic nervous system response linked to nondeclarative memory (Scaer, 2001). This type of conditioning is not permanent *unless* it is paired with high arousal or emotion, as is the case with trauma responses.

There is a self-sustaining feedback circuit related to this type of conditioning in traumatic responses known as “kindling.” It was found, in rats, that single electrical stimuli applied to specific brain areas were insufficient to

Linda Baird

trigger a convulsion. If these stimuli were applied with a certain frequency, however, they would summate and trigger a seizure. In newborn rats, if the kindled seizures were induced with repetition, the rats would have spontaneous, self-perpetuating seizures without any stimulation. Rats also developed a permanent change in the excitability of neural networks within the kindled part of the brain (Scaer, 2001).

The brain region most susceptible to kindling is the amygdala. In relation to humans, this means that threat-related information generated by both internal memory and external experiential cues routinely activates the amygdala. The amygdala, in turn, interprets the resulting emotion-based, implicit memories as threatening, resulting in the triggering of arousal once again. Results of this kindling of the amygdala would be the specific symptoms seen in PTSD, such as cue-related memories, flashbacks, memory and situation-induced arousal, mood changes, anxiety, nightmares, stimulus sensitivity, phobias, and increased startle responses (Scaer, 2001). Modulation of the organized response to threat is diminished due to impaired development of the right orbitofrontal cortex, leading to impaired regulation of arousal/memory mechanisms in individuals with significant prior unresolved traumatic stress experiences (Scaer, 2001, Schore, 2000).

Our second memory system is declarative or explicit memory, concerned with memory for facts, events, and information. It is conscious and intentional. It is the part that we use in acquiring information and a formal education. It contains sub-systems for episodic memory related to personal experience or another's experience. Narrative memory is such a subsystem, referring to the way we store and recall experiences in story form. The hippocampus and prefrontal regions of the brain are the most responsible for mediating explicit memory (Siegel, 1999). Explicit memory can be affected or distorted by the emotional content of the associated experience, causing the emotional content to be stored differently. Posttraumatic amnesia is characterized by the loss of a segment of declarative memory.

The hippocampus does not fully mature in children until the third or fourth year in life. This finding contributes to the phenomenon of normal "childhood amnesia" (Siegel, 1999), and also the tendency for adults who suffered traumatic experiences as young children to be prone to re-experience trauma on a sensorimotor level. Traumatic experiences in early childhood, during the period of "childhood amnesia," are encoded *only* in implicit memory. These implicit recollections will likely influence emotional, behavioral, perceptual, and somatic reactions without conscious awareness of their origins. This is particularly true for children who display the disorganized/disoriented attachment pattern (Siegel, 1999).

Developmental psychologists have identified three levels of information processing that bear resemblance to the

development of the central nervous system. The earliest level of development is the sensorimotor or enactive level, followed by the development of perceptual representations (iconic), and finally symbolic and linguistic organizations of experience (left-brain functions). Under stress, experiences are not assimilated at the highest level of organization and are arranged on the sensorimotor and iconic levels of representation, including fight/flight/freeze reactions, intrusive memories, and visceral sensations. This is analogous to state dependent learning where information is acquired in an aroused state and is not available under normal conditions. It returns, however, when the altered state of consciousness is reintroduced via a triggering event. For children, especially, this means that traumatic events cannot be translated into symbols and language (van der Kolk, 1988, 1991).

State-dependent Memory

According to Siegel (1999), "a state of mind can be proposed to be a pattern of activation of recruited systems within the brain responsible for perceptual bias, emotional tone and regulation, memory processes, and behavioral response patterns" (p. 210). "State dependence" or "state dependent memory" are terms that refer to states of being encoded into the memory tracts, limbic system, and physiology of an individual during a particular experience that may be re-experienced if the individual finds himself in a similar state in the future (Siegel, 1999). Explicit and, most importantly in response to traumatic events, implicit memories not readily available to cognitive channels may become activated during future events reminiscent of the original trauma, contributing to re-enactment of the original trauma. Hiroto and Seligman (1975, as cited in Peterson et al., 1993) suggest that learned helplessness may involve a "trait-like" system of expectancies that responding is futile.

In adults, trauma results in "states" while in children, trauma results in "traits" (Perry, 1995a). Internalization of the fear response, a "state" memory-can be built into the mature brain, while in the developing brain of an infant or child, fear states organize neural networks, resulting in "traits." In the developing brain, undifferentiated neural networks are dependent upon the external environment, namely the primary caregiver(s), to provide the framework for healthy development.

"Although experience may alter the behavior of an adult, experience literally provides the organizing framework for an infant and child . . . unlike broken bones, irreversible mal-development of brain areas mediating empathy resulting from emotional neglect in infancy and childhood is not readily observable" (Perry, 1995a, p. 276). The more frequently the neural pattern associated with a specific state occurs, the more indelible the internal representation.

Linda Baird

In the initial stages of threat, there is a large sympathetic nervous system response, resulting in increased heart rate, blood pressure, and respiration, with increasing hypervigilance, all triggered by increased release of norepinephrine. When the child is exposed to repeatedly traumatic events, the response can become sensitized: neural pathways become kindled and a “state” becomes a “trait.” With hyperarousal comes increased anxiety and decreased cognitive processing due to the inability of the information to reach the highest orbitocortical level, which is known to be central for not only affect regulation but for the processing of cognitive-emotional interactions and affect related-meanings (Barbas and Teasdale, as cited by Schore, 1994).

At the other end of the continuum, if the child is not able to get help when threatened (often from the abusive adult), he may move into a “freeze” response. The “freeze” response is misnomer in that the nervous system is still highly activated, akin to driving with one foot on the gas and one foot on the brake. If terrorized, the freeze response may move into complete dissociation (Porges, 2001). Dissociative response exists on a continuum, as well, ranging from daydreaming and fantasy to more severe symptoms such as depersonalization, derealization and fugue states. In children, dissociative reactions will be more common if there is an inability to escape the threat. As with hyperarousal, if the child dissociates when exposed to traumatic experiences, the child will “internalize a sensitized neurobiology related to dissociation, predisposing to the development of dissociative disorders” (Perry, 1995a, p. 283). Eventually the child moves from dissociation to surrender (Perry, 1995a). Again, a state becomes a “trait” and patterned response.

Returning to the discussion of attachment, the disorganized/disoriented pattern emerges in response to primary caregiver(s) who respond to their infants in a frightening, frightened or disoriented manner. The child is unable to form a cohesive, stable, and adaptive state of mind. The disorganization and disorientation becomes a repeated pattern that may eventually become a personality trait such as dissociation or disorganization as seen in BPD (Siegel, 1999).

Therapeutic considerations

This section will discuss therapeutic approaches presented in current literature, as well as experience with private practice clients. I would like to acknowledge my training with Pat Ogden, Kekuni Minton and Christina Dickinson, of the Sensorimotor Psychotherapy Institute (Hakomi Integrated Somatics in 1998), from which I draw some of the therapeutic interventions mentioned in this section.

Clients diagnosed with BPD are generally considered difficult to treat because of the intensity of their engagement

with caregivers, the at times overwhelming nature of their demands for care, and the intense emotions and conflicts they provoke in others (Linehan, 1993, Herman, 1997, van der Kolk, 1996). In the past it has been considered a public health nightmare, with numerous therapists refusing to treat borderline clients. This attitude appears to be changing, however, with the evolution of new therapies.

Classical treatments for both PTSD and BPD have involved cognitive-behavioral therapy, exposure therapies, pharmacological interventions, psychodynamic approaches, exposure therapies, anger management, relaxation techniques, and group therapies (Foa et al., 2000; van der Kolk, 1996).

Understanding the role of childhood trauma in the development of BPD and other severe disorders informs every aspect of treatment (Herman, 1997). Perry et al. (1990) concluded that failure to address childhood trauma history in psychotherapy with borderline clients perpetuates the tendency for traumatic re-enactment in the therapeutic relationship.

In my summation, there are four key elements involved in therapy with a client who presents with borderline symptoms. I want to emphasize that when working with clients, I am looking at the *symptoms* and not the potential diagnosis. This includes borderline as well as bipolar and anxiety disorders. This is important, as having to make a diagnosis (for insurance purposes, for example) can get in the way of seeing the client as they are. When I see affect dysregulation, I automatically think “trauma history” and approach therapy from this perspective. The key elements are mindfulness, development of resources, establishment of a safe container within the therapeutic relationship, and addressing shame dynamics. These are ongoing and intertwined tasks. Additionally, the remaining principles of the Hakomi method (non-violence, body-mind holism, and organicity), as well as the skills of tracking and emotional contact, are woven throughout.

The resolution of past traumatic events, such as physical and sexual abuse, is also a fundamental aspect of therapy with borderline clients. The specifics of trauma resolution are beyond the scope of this paper. A list of resources is provided after the conclusion.

Mindfulness

No discussion of BPD and mindfulness practice would be complete without mention of Dialectical Behavioral Therapy (DBT), developed by behavioral psychologist and Zen Buddhist practitioner Marsha Linehan. DBT is currently one of the most effective methods of working with BPD. Although DBT is continuing to gain momentum, there are also those who consider its limitations (Butler, 2001). While I am also trained in DBT skills group work, I

Linda Baird

prefer individual therapy with more focus on mindfulness, therapeutic relationship and shame dynamics. Because the etiology of BPD is potentially in the pre-verbal attachment relationship, therapy must address relationship on a non-verbal, pre-cognitive level.

A primary focus in Hakomi therapy, as well as every phase of DBT, is the development of mindfulness, or the “witness consciousness” in order to be able to observe reactions to life experiences instead of “living” the reactions. Mindfulness, particularly bringing awareness back to the body, is a fundamental and ongoing task of therapy. Siegel has written extensively about attunement, internal and external, and the practice of mindfulness in *The Mindful Brain* (2007). He draws a parallel between secure attachment and mindful awareness practices, citing research that shows the prefrontal areas are more well-developed in individuals with regular mindfulness meditation practices---the same areas that develop in the formation of a secure attachment bond. Siegel distinguishes between intrapersonal and interpersonal mindful awareness, with the latter referring to mindful awareness of oneself. According to Siegel, “Sharing mental states is the underlying experience within secure attachment between child and parent that promotes resilience. Mindfulness can be seen as a way of developing a secure attachment with yourself” (p. 180). Siegel contends “attention to intention creates attunement . . . when we pause to reflect, attending to our attention, we are creating the foundation for internal attunement” (p. 178).

The dysregulated affect states in trauma and BPD can be considered dissociative states; when triggered by an external or internal stimulus, the connection to cognition is easily lost, especially if the orbitofrontal cortex is not well-developed as previously discussed, and the client dissociates into an elevated emotional state such as rage. Thus, when we help clients become mindfully aware of their internal world of thoughts, emotions, movements, perceptions, and internal sensations (the “core organizers” as defined by Ogden, 1998), exploring how these core organizers are disconnected and tethering them back together via body/somatic awareness, we facilitate internal attunement and intrapersonal relationship. For example, I might say to a client who is having a strong emotional reaction, “Notice what you are thinking right now as you are feeling that anger. Where do you feel that anger in your body? Describe that sensation. Does it have a movement?” In working this way, we may also be facilitating the further brain development in areas crucial for emotional regulation.

Some clients may not have the ability to be mindful, however, due to the degree of affect dysregulation. We can still facilitate the development of mindful states by simply directing the client to take a few deep breaths and notice what happens, or by encouraging them to feel their feet on the floor. Sometimes riding the rapids or hitting a pillow is what needs to happen in the present moment. It may be that

the client just needs to tell their story and we need to stay in contact. Simply saying, “I am right here with you” can create a window of awareness and the beginnings of a felt sense of not being so alone that can later be deepened with mindfulness.

Development of resources

“Resources” refer to “personal skills, abilities, objects, relationships, and services that facilitate self-regulation and provide a sense of competence and resilience” (Ogden et al., 2006 p. 207). Resources include external sources such as spiritual or church groups, support groups such as 12-step or DBT groups, family members, friends, and anyone else with whom the client can openly and safely discuss her experiences. Internal resources, often not as easily identified, include practices such as the development of mindfulness, or the witness consciousness that enables the client to observe her impulses and potential reactions, awareness of inner strength, spiritual connection; connection with the breath, awareness of body sensations, intelligence; and knowledge that she has been able to survive. The skills the client learned in order to survive were resources at the time, though they may no longer be productive. Development of the awareness of new resources helps re-establish the client’s feeling of control. Without the development of resources, which are brought into the therapy session, the client remains vulnerable to dissociation and re-enactments as traumatic material is brought to the surface (HIS training, 1998).

When working with clients who present with BPD, it is important for both client and therapist to establish external resources. Therapists need good peer support and consultation to both validate and address countertransference issues. Ideally, the client has a therapeutic team that both offers a variety of avenues of support for him/her, as well as providing support for therapists so they are not working in isolation.

It is necessary to establish resources early in therapy, ideally during initial sessions while taking a developmental and trauma history. The therapist asks the client about their support system, internal and external, and what has helped them survive, and also track their non-verbal cues and body responses as they are telling their story. Grounding resources in the body can help the client stabilize without having to directly address traumatic states or events (Ogden, 2006). For example, if the client has a pet that provides comfort, they would be directed to either imagine being with the pet and ask what they notice happens in their body, suggesting a menu such as breath and muscle tone, and/or suggest they explore what happens at home with they are with their pet. If clients feel unsafe to be in their physical bodies, they may be encouraged to see if there is even one small place in their body where they feel safe to bring attention, such as a big toe, and slowly expand on this.

Linda Baird

Developing a sense of ground, and grounding, through the feet is an important resource, as feeling this sense of ground, often combined with breath awareness, can help de-escalate a hyperaroused state.

Unless the client is totally unable to maintain some internal focus, breath awareness can be a primary resource and point of focus. Siegel considers breath awareness an important example of intrapersonal attunement. Most people, in general, do not breathe deeply into their belly. Clients who become hyperaroused are in a sympathetic dominant nervous system (SNS) state. Breathing deeply into the abdomen engages the parasympathetic nervous system (PNS), which in turn helps to deescalate hyperarousal. The development of the breath as a primary resource is accomplished either by simple mindful awareness and/or by teaching breathing techniques that facilitate balance of SNS and PNS (e.g. yogic breathing methods such as Ujjayi Pranayama or Nadi Shodhana).

Developing somatic awareness of a sense of a safe and protective container, as well as a differentiated sense of self, is another primary resource. Clients who present with BPD have often not had the experience of being separate while still being in relationship, or of safe container, due to the invasive nature of the relationship with the primary caregiver. To address this, I often use boundary work as adapted from personal experience with Integrated Body Psychotherapy (IBP) using rope as an externalized boundary. Tracking core organizers, I will ask the client to just notice what happens when they “physicalize” their boundary? What happens in the breath and muscle tone? Is there any emotion? Some clients experience fear the first time they set a boundary, because it creates a sense of separation. Once the client has explored and established their boundary, which is an on-going process in itself, I will bring the exploration into relationship by making my own boundary, inviting the client to notice what happens. Another helpful exercise is to use distance to explore boundaries and somatic awareness. For example, either therapist or client can move closer or further away (with or without the physical boundary). While the client may “think” that a certain distance is fine, her body may be telling a different story. Encouraging the client to explore the language of the body and allowing the choice to say “no” and push away is both important and empowering.

I also work with developing a sense of internal boundary, as adopted from my hatha yoga practice, encouraging the felt-sense of core muscle engagement before reaching out to engage with others. With the collapse into depression, clients often lose the connection with a sense of inner strength. I will invite the client to come to standing, bend the knees slightly and raise the toes. This engages muscles that connect into the pelvis. The legs then straighten without locking the knees. Next, the client is instructed to reach out with the arms, either directly in front or to the sides, without muscular engagement in order to feel what

“disengaged” feels like. The muscles are then engaged by bringing the shoulder blades onto the back, engaging muscles and pulling in to the core. This creates an internal felt sense of strength and connection to self. The next step is to keep this engagement while extending out (opposing actions), which can facilitate an awareness of self in relationship. Clients are also encouraged to engage in other core strengthening exercise, such as Pilates.

For a detailed discussion of developing somatic resources, please refer to Ogden, Minton and Pain, 2006.

Therapeutic relationship as a safe container

Borderline and narcissistic personality disorders are considered disorders of self-development. A key to effective treatment is the development of a sense of self through the therapeutic relationship.

According to Herman (1997), “The core experiences of psychological trauma are disempowerment and disconnection from others. Recovery, therefore, is based upon the empowerment of the survivor and the creation of new connections. Recovery can take place only within the context of relationships; it cannot occur in isolation” (p. 134). Clients who present as borderline tend to be profoundly distrustful (Perry et al., 1990); therefore, establishment of a safe therapeutic container is fundamental. Although this may be a slow process, it can begin through systematically validating the client’s perceptions and acknowledging the appropriateness of emotional reactions to horrific abuses suffered in childhood. Advice given from borderline clients indicate that the validation of their emotional responses to their traumatic, abusive childhoods was most beneficial in treatment, decreasing their inner confusion (Perry, 1990). And “they cannot examine their own pattern of re-enactment or explore the original traumas until their sense of injustice and fear of retribution is clarified and validated” (p. 40). The previously cited study by van der Kolk et al. (1988) concluded that the striking degree of improvement seen in clients diagnosed with BPD who reported a history of severe physical and/or sexual abuse, over the three to six years prior to study interviews, was due to the clients feeling secure with their therapists.

Herman (1997) views the empowerment of the client and the establishment of a sense of control as the first steps in recovery from severe trauma. Gaining control over one’s current life, rather than repeating trauma in action, mood, or somatic states is the goal of treatment (van der Kolk, 1989). The therapeutic relationship is unique in relation to power and control, and is vulnerable to abuses of power, real or imagined (Barstow, 2002; Herman, 1997). The client comes to the therapist in need of help and support. Transference reactions similar to childhood experience will inevitably be evoked (Herman, 1997). The adaptations used by borderline clients to survive in the abusive childhood

Linda Baird

environment will show up in the therapeutic relationship, as well as other relationships that present any degree of intimacy. Thus, the fear of abandonment, relying heavily on others to provide soothing and other functions not developed in themselves, spitting, projective identification, and rage can be understood as attempts to cope using the mechanisms available at the time when the trauma occurred (Perry, 1990).

Transference with borderline clients will have a certain flavor, and may involve intense period of approach and avoidance, alternating between rageful, regressive, and clinging behaviors combined with missing sessions. The therapist may become the idealized parent figure. When the therapist proves himself to be imperfectly human, he may become devalued and the target for unresolved rage (Herman, 1997, Perry, 1990). Borderline clients tend to be exceptionally perceptive, and have an uncanny ability to read and respond to the therapist's vulnerability (Kernberg, as cited in Herman, 1997). Motive and reactions can be misperceived. A neutral therapeutic stance may be confused with abuse and neglect (Perry, 1990). Considering the nature of the potential transference, it is of utmost importance that the therapists use their power responsibly, in service of fostering the client's recovery, track for their own countertransference in relation to these behaviors, and get to appropriate supervision (Barstow, 2002).

Additionally, since much of the trauma experienced by clients diagnosed with BPD may have occurred preverbally, "Changes in nonverbal relational knowledge are at the core of therapeutic change" (Schore, p. 146, citing Stern et al 1998). Therefore, much of the work of relationship involves tracking and contact with non-verbal cues.

Stephen Porges' "polyvagal theory" (2001) details a hierarchical approach to autonomic nervous system arousal and how it pertains to relationship. The autonomic nervous system contains a third branch, the *ventral* parasympathetic branch of the vagus nerve which Porges refers to as the "social engagement system," in addition to the sympathetic branch (SNS) that is dominant in hyperarousal, and the *dorsal* parasympathetic branch of the vagus nerve (what is typically considered the parasympathetic nervous system, or PNS) that is dominant in hypoarousal. The social engagement system is the optimal zone, allowing for vacillations in heart rate and muscle tone, for example, without mobilization of the SNS. Under non-threatening conditions, the social engagement system helps us engage with our environment and relationships. However, if this system is not well-developed through secure attachment relationships, SNS arousal may be dominant, creating a state of constant vigilance and hyperarousal. If both the social engagement system and SNS fail to provide protection and safety, the dorsal branch of the vagus nerve (PNS) takes over, creating a state of hypoarousal, immobilization, and in extreme cases, total shutdown of bodily systems.

According to Ogden (2006),

The social engagement system is initially built upon a series of face-to-face, body-to-body interactions with an attachment figure who regulates the child's autonomic and emotional arousal; it is further developed through attuned interactions with a primary caregiver who responds with motor and sensory contact to the infant's signals long before communication with words is possible (p. 42).

In disorganized/disoriented attachment, a precursor to the development of BPD in adults, the social engagement system is compromised (Ogden, 2006). One of our roles as therapists is to facilitate the engagement and development of the social nervous system through attuned relationship, taking special care in tracking and repairing breaks in the therapeutic relationship and helping the client to regulate arousal levels. Addressing shame dynamics through the social engagement system is of primary importance when working with BPD.

Shame: pulling it all together

Unless otherwise cited, the majority of literature and literature review in this following section on the role of shame in treating attachment failures and BPD, is cited from Allan Schore (1994, 2000, 2003 a and b). Although other authors have written about and researched shame dynamics, Schore offers, by far, the most comprehensive discussion I have found.

The diagnostic criteria for BPD (relationship instability including fear of abandonment, splitting, affect dysregulation [rage in particular], and dissociation) can be understood as defensive reactions to shame. Addressing shame dynamics involves all of the previously discussed aspects of therapy, most specifically the therapeutic relationship. Successful therapy involves helping the client tolerate the negative affect within the therapeutic relationship with the intention of building a full and healthy sense of self.

Shame is a limbic system-regulated affect, implicitly linked with the precipitating events (Kaufman, 1992). Schore (1994, 2000) emphasizes the essential role of working with shame dynamics in the treatment of clients with a history of attachment failure and BPD. An extremely inefficient capacity to regulate shame underlies the affective and characterological disturbance in BPD (Lansky, 1992, as cited in Schore, 1994).

Internalized shame arises out of misattunements that occur in attachment failures, paralyzing emotional development and regulation. **Shame is associated with the self's vicarious experience of another's negative evaluation, and occurs within the attachment relationship when the primary caregiver becomes misattuned with the child, either out of**

Linda Baird

oversight, negligence or abuse. A certain amount of mild shaming, or regulated shame, is necessary for the socialization process of young children, whereby the child learns empathy and a sense of morality in relationship with the primary caregiver. Shame states occur only when the child is experiencing interest, excitement or joy. The child, in a high energy, sympathetic state of elation, exposes itself to the caregiver. Expecting to be met in this state of elation, the child instead experiences a misattunement and deflation of narcissistic affect. When shaming occurs, the nervous system of the child quickly shifts from a hyperaroused, sympathetic state of elation to a parasympathetic state of hypoarousal that, when not repaired via upregulation by the primary caregiver, leads to internalized shame states. The “good enough” mother, tracking the emotional states of her child, is able to repair the misattuned shame state by emphasizing the impact of the child’s behavior and not threaten to take love away due to something fundamentally wrong with the child, leaving the child in a state of hypoarousal.

Unregulated or bypassed shame originates in the first few months of life and continues into the pre-verbal, practicing period (12-18 months) from misattunement, and is encoded in implicit memory. In the most severe attachment presentations, the mother (or primary caregiver) learns how to prolong the baby’s positive state and SNS arousal through not allowing the baby to avert her gaze, giving her a sense of control and closeness. Also, around 5 months, the baby starts to naturally be interested in the outside world. The increased gaze aversion from the child elicits confusion and negative affect in the mother. When the mother is misattuned to the needs of the child for gaze aversion, separation and PNS engagement, as well as upregulation from a PNS-dominant state, this is the beginning of abandonment depression, a classic symptom in the diagnosis of BPD, in the child, which in turn begins with the mother’s abandonment depression when her child doesn’t respond the way she wants or expects. Abandonment depression reflects the child’s entrance into a state of conservation-withdrawal; future perceived abandonment will trigger state-dependent recall of the original triggering event. **Generally speaking, excessive parental control, creating an environment where the child feels powerless and trapped, is the “seedbed for shame” (Kaufman, 1992, p. 63), which by definition puts the shame state into the realm of trauma.**

Unregulated shame has the capability to inhibit any specific affect, which in turn inhibits emotional development. When a particular affect comes into conscious awareness, the threat of exposure generates shame. Eventually, the affect is immediately erased from conscious awareness (Kaufman 1992). Therefore, developing the ability to tolerate emotional pain when repressed materials surface is crucial in the therapeutic process. Shame tolerance is at the core of healthy development of a sense of self.

Borderline clients tend to react with shame and humiliation to therapeutic suggestions or interventions: “Most of the defensive operations of borderline patients are reactions to their shameful self-consciousness among others. Borderline patients are exquisitely humiliation prone. They have a pronounced tendency to experience others as deliberately inflicting shame on them (Schore, 1994, quoting Lansky, 1992, p. 37).” The therapist’s inability to perfectly mirror the client and to do as expected may be experienced as non-confirmation that triggers shame and the associated dysregulated emotional states (Wolf, 1991, as cited in Schore, 1994). Transference may involve a lack of object constancy and fear of abandonment; especially between therapy sessions; borderline clients cannot regulate an enduring negative affective state triggered by the therapist. The therapist needs to be especially sensitive to non-verbal cues of perceived misattunement, such as gaze aversion, blushing, postural changes, and energetic changes (Schore, 1994). A well-attuned therapist can serve as an external regulator of shame, affectively resonating with the client and helping the client to tolerate increasing amounts of discomfort and misattunement that is repaired within the therapeutic relationship.

Countertransference in the therapist may inadvertently re-enact aspects of the original abusive relationship (Herman, 1997). This is an example of projective identification, in which the client provokes a reaction similar to the original abuse in another person, such as a therapist or partner. The countertransference feelings experienced by the therapist may also resemble that of an unwanted child, providing a means for the therapist to enter the subjective world of the borderline client (Searles, as cited in Perry et al., 1990). Addressing the present moment experience with the client can provide new insight and safety, which in turn can help the person begin to change the pattern of projective identification and re-enactment.

Splitting, another classic symptom of BPD, is fueled by the tendency for borderline clients to experience others as deliberately inflicting shame and humiliation on them. Affect dysregulation becomes intense when there is a perceived sleight and misattunement in relationship, which is a similar experience of earlier relationships. They may idealize the therapist until the therapist fails to meet expectations, at which time they either hide in shame or lash out in rage. They are “guided by internalized models of interactive misattunement [that] . . . encode experiences of humiliating narcissistic assault from a primary object” (Schore, 1994, p. 455). The once “good object” becomes the “bad object.” This is often projected onto the therapist as blame.

As mentioned, borderline clients lack the verbal and social skills to resolve conflict. Kaufman (1992) describes the upregulating repair process of a parent-child dyad when the child has either done something to warrant discipline or has felt emotionally missed, and has retreated in shame. When

Linda Baird

the attuned parent seeks out the child with the intention of repairing the break in relationship, the child may react with a backlash of anger that is “trapped” in the shame. If the parent can allow for this and affirm the child, attuned relationship can be reestablished. This same dynamic applies to borderline clients; when attempts at repair of mistakes and misattunements are made, the client may react with further anger or rage. Staying in emotional contact and tracking non-verbal cues is vital, as there will inevitably be misattunements. Carefully tracking countertransference is important, as the client will likely evoke anger or fear in the therapist. Repair of misattunements may take several sessions. The client may retreat in rage, only to return weeks to months later. The therapist must be mindful of their own boundaries, not allowing abuse from the client, yet staying in contact if therapy is to continue. In essence, the therapist is being the “good enough” mother who tells her child that what the child is doing is not OK, but that love will not be taken away, i.e. the child will not be abandoned.

Clients initially come to therapy with experiences of shame from daily life outside of the therapeutic relationship. Sharing their stories becomes the seedbed for shame dynamics within the therapeutic relationship. When telling the story, a shame *state* often naturally presents itself, providing an opportunity for healing as the therapist carefully tracks the client’s non-verbal responses.

As the client deepens into the shame state, he or she may begin to feel exposed and vulnerable, further withdrawing and wanting to hide, or lashing out, as was necessary in order to be protected from misattuned caregivers. At this point, the therapist may need to move back, turn away from the client, or both, tracking changes in the body and breath. Since the objective is to facilitate upregulation, the therapist must stay in emotional contact, which may mean having to create more physical distance. Reminding the client that, “I am still here, I am not leaving you even though I am moving back” is crucial, as silence will only exacerbate the injury. Since the shame state is the trauma response, working at the edges of activation is necessary. As the client’s nervous system comes to a new state of equilibrium, the charge is “upped” either by moving a bit closer or encouraging eye contact, for example. Eye contact can be a very powerful intervention, encouraging and allowing the client to initiate, and like a good-enough mother, following their lead. The therapist’s shame-modulating (and therefore affect regulating) function is instrumental. We are helping the client tolerate their own affect while staying in relationship. What was once narcissistic rage over a perceived slight can become normal anger that can be resolved through relationship.

In terms of the social engagement system, by working this way, we are engaging the client’s social nervous system through relationship. Remembering that we are potentially creating new neural connections within relationship, the

therapeutic process may take years and require much patience.

Conclusion

Individuals who have experienced severe childhood abuse are subject to diagnoses of dissociative and personality disorders, borderline personality disorder in particular. BPD tends to elicit immediate assumptions and judgments from professionals regarding therapeutic relationship and treatment. Often the etiology in childhood trauma is overlooked, as well as the significant overlap with symptoms of PTSD. A different diagnosis that includes both the symptomology and etiology would greatly benefit victims of the abuse for which they are not to be blamed.

Childhood adaptations to severe trauma imposed by primary caregivers, often including sexual abuse, include dissociation, dysregulation of affect, hypervigilance, depression, splitting, profound distrust and disruption in interpersonal relationships, re-enactment of abuse in subsequent relationships including domestic violence, avoidance of situations reminiscent of the trauma, self-injury, and feelings of helplessness and hopelessness. These adaptations are also the symptoms of PTSD.

Childhood trauma often begins with insecure attachment to primary caregivers. Neural development of the infant brain is dependent on the ability of the “good enough mother” to provide proper attunement and regulation of the autonomic nervous system, in particular. If the mother has a serious psychological disorder or is in any way unable to provide a nurturing, stable environment for the infant, the infant is at risk for maldevelopment of neural pathways vital for affect regulation and cognitive function. The etiology of both BPD and PTSD is also correlated with disoriented/disorganized attachment patterns seen in infants whose primary caregiver displays erratic and inconsistent behavior toward the infant, and is not attuned to the needs of the infant.

The issue is not whether PTSD and BPD are the same thing; the issue is the consideration of the early trauma in the etiology of symptoms. Along with cognitive, structural, and behavioral approaches, the trauma history needs to be addressed. Addressing trauma history means not only offering validation, support, and reframing, but working with physiological and somatic experience related to traumatic memory. Effective approaches to trauma resolution involve the integration of cognition, affect, five-sense perception, behavior, and somatic experience. These aspects of function become fragmented and dissociated during the traumatic event and in subsequent events reminiscent of the original event. Integration of these core organizers helps facilitate a wider range of function unavailable to the person before treatment. **Trauma is the result of extreme boundary violation;** effective therapy,

Linda Baird

therefore, must facilitate the ability to establish appropriate boundaries, developing the “felt sense” of what is appropriate in any give situation.

Given that the survivor of childhood trauma approaches relationships with the same survival skills she did in childhood, the therapeutic relationship must provide a different model and experience of relationship; one in which she is supported, accepted, and treated with dignity and respect—while also holding her accountable for unhealthy behaviors. The therapist provides the boundaries of a safe container, also providing structure, accountability, and the missing experience of acceptance and support necessary to counter the debilitating shame.

References

- Barstow, C. (2002). *Right use of power: The heart of ethics*. Boulder, CO: Many Realms.
- Butler, K. (2001). Revolution on the horizon. *Psychotherapy Networker*. May/June 2001.
- Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Avon Books.
- Famularo, R., Kinscherff, R., Fenton, T. (1991). Posttraumatic stress disorder among children clinically diagnosed with borderline personality disorder. *Journal of Nervous and Mental Disease* 179(7): 428-431.
- Goodwin, J, Cheeves, K, Connel, V. (1990). Borderline and other severe symptoms in adult survivors of incestuous abuse. *Psychiatric Annals* 20: 22-32. Hakomi Somatics Institute (HSI) Professional Training, February-August 1998, Boulder, CO.
- Herman, Judith L. (1997). *Trauma and recovery*. New York: Basic Books.
- Linehan, M. M. (1993). *Skills training manual for treating borderline personality disorder*. New York: Guilford.
- Masterson, J. F. (1988). *Search for the real self: Understanding the personality disorders of our age*. New York: Free Press.
- Ogden, P., Minton, K., and Pain, C. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. New York: Norton and Company;
- Perry, B.D., Pollard, R. A., Blakley, T. L., Baker, W. L., and Vigilante, D. (1995a). Childhood trauma, the neurobiology of adaptation, and “user-dependent” development of the brain: How “states” become “traits.” *Infant Mental Health Journal*, 16(4), 271-291.
- Perry, B.D. (1995b). Incubated in Terror: Neurodevelopmental Factors in the cycle of violence. In J. Osofsky (Ed.). *Children, youth and violence: Searching for solutions*. New York: Guilford Press.
- Perry, J.C., Herman, J. L., Van der Kolk, B.A., and Hoke, L.A.. (1990). Psychotherapy and psychological trauma in borderline personality disorder. *Psychiatric Annals* 26, 33-43.
- Peterson, C., Maier, S.F., and Seligman, M. E. P. (1993). *Learned helplessness: A theory for the age of personal control*. New York: Oxford Press.
- Porges, S.W. (2001). The polyvagal theory: Phylogenic substrates of a social nervous system. *International Journal of Psychophysiology*, 42(2), 123-146.
- Scaer, R. C. (2001). *The body bears the burden: Trauma, dissociation, and disease*. New York: Hawthorne Medical Press.
- Schore, A.N. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development*. Hillsdale, New Jersey: Lawrence Erlbaum and Associates.
- Schore, A. N. (2000, April 2). Personal notes from *Affect regulation and the origin of the self*. Talk presented at a meeting of the Hakomi Integrated Somatics Institute. Boulder, CO. (Available from the author.)
- Schore, A. N. (20003a). *Affect regulation and disorders of the self*. New York: Norton and Company.
- Schore, A. N. (20003b). *Affect regulation and repairs of the self*. New York: Norton and Company.
- Siegel, D. J. (1999). *The developing mind*. New York: Guilford Press.
- Siegel, D. J. (2007). *The mindful brain*. New York: Norton and Company.
- Van der Kolk, B.A. (1987). *Psychological trauma*. Washington, D.C.: American Psychiatric Press.
- Van der Kolk, B.A. (1988). Trauma spectrum: The interaction of biological and social events in the genesis of the trauma response. *Journal of Traumatic Stress* 1(3), 273-290.
- Van der Kolk, B.A. (1989). The compulsion to repeat the trauma: Re-enactment, revictimization, and masochism. *Psychiatric Clinics of North America* 12(2): 389-411.
- Van der Kolk, B.A. (2001). Personal notes from presentation on “Trauma Treatment” presented at a meeting of the Hakomi Somatics Institute, Boulder, CO. (Available from the author.)
- Van der Kolk, B.A., and van der Hart, O. (1991a). The intrusive past. *American Imago* 48(4), 425-454.
- Van der Kolk, B.A., Perry, J.C., and Herman, J. L. (1991b). Childhood origins of self-destructive behavior. *American Journal of Psychiatry* 148(12), 1665-1671.
- Van der Kolk, BA, Hostetler, A. Herron, N, and Fisler, R. (1994). Trauma and the development of Borderline Personality Disorder. *Psychiatric Clinics of North America* 17(4), 715-730.
- Van der Kolk, B.A., MacFarlane, A. C, and Weisaeth, L. (Eds.) (1996). *Traumatic stress: The effects of overwhelming experience on the body, mind, and society*. New York: Guilford Press.
- Two additional resources on trauma resolution not cited in this paper:*
- Levine, P. (1997). *Waking the tiger*. Berkeley, CA: North Atlantic Books.
- Scaer, R. (2005). *The trauma spectrum: Hidden wounds and human resiliency*. New York: Norton and Company.