

TRAUMA, DISSOCIATION, AND DISORGANIZED ATTACHMENT: THREE STRANDS OF A SINGLE BRAID

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During the past decade, research findings, theoretical reflections, and clinical experiences have woven together the themes of attachment disorganization, dissociative processes, and vulnerability to trauma-related emotional disorders. The resulting unitary perspective is captured in this article by an overview of inquiries on unresolved traumatic memories based on the Adult Attachment Interview (AAI) and of studies on the sequelae of early disorganized attachments. To illustrate the intriguing clinical implications of this unitary perspective, the author considers such topics as vulnerability to complex trauma-related disorders, delayed dissociative responses to past traumatic memories, and the definition of psychological trauma. Some psychotherapeutic implications of the interplay between trauma-related disorders and attachment disorganization are briefly addressed in the concluding section.

Overview of Research on Attachment in Infants and Adults

Early attachment is studied and assessed through a standardized laboratory procedure (i.e., “Strange Situation”; Ainsworth, 1982) where infants about 18 months old are observed during two brief episodes of separation from a caregiver, followed by two episodes of reunion. Three patterns of *organized* attachment behavior have been identified in infants: *secure* (the infant cries at separation and is quickly comforted at reunion), *insecure-avoidant* (the infant does not cry at separation and actively avoids the caregiver on reunion), and *insecure-ambivalent* (the infant cries at separation, but is not easily comforted on reunion). Some infants are not able to organize their attachment behavior according to any unitary or coherent pattern. They are classified as *disorganized* in their attachments.

Research studies on adult attachment are based on the Adult Attachment Interview (AAI; see Hesse, 1999). The AAI is a standardized interview, developed by Mary Main and her collaborators (Hesse, 1999), that explores adult individuals’ autobiographical memories of past attachment relationships. A complex scoring system of the interview transcript allows for a reliable classification of the individual’s state of mind concerning attachment relationships. Classification is based on the assessment of (a) deficits in metacognitive monitoring expressed as incoherence of memory, thought, and discourse and (b) different ways of organizing coherent states of mind concerning attachment.

The three main classes of *coherent* states of mind emerging from the AAI are called *autonomous* (related to secure attachment in children), *dismissing* (linked to insecure-avoidant attachment in children), and *preoccupied* (related to early insecure-ambivalent attachment). *Autonomous* interviews show coherent narratives, high levels of metacognitive monitoring (ongoing

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awareness that one's report of past memories should be made understandable to the interviewer), and freedom of thought in reporting memories of early attachment (i.e., both positive and emotionally negative memories are reported in a nondefensive manner). *Dismissing* interviews are characterized by idealization of the attachment figures, dismissing attitudes toward the importance of attachment needs, and a discrepancy between semantic (i.e., global descriptive) and episodic (i.e., specific) childhood memories. This discrepancy takes the form of maintaining an idealized view of one's parents despite recollections that suggest a childhood marked by unhappiness and an unsatisfactory relationship with one's parents. Finally, interviews showing continuing preoccupation with the meaning and value of one's early attachment experiences are rated as *preoccupied*.

High levels of *incoherence* (e.g., lapses and discrepancies between feeling and thinking while reporting memories of past attachment relationships) and very poor metacognitive monitoring of discourse lead to an AAI classification called "unresolved." Unresolved interviews are characterized by episodic memories of attachment-related traumas or losses that are not well integrated in the semantic structures of self-knowledge. A major discovery in attachment research is the strong relationship between caregivers' unresolved memories of traumas or losses, leading to "unresolved" AAI classification, and disorganization of early attachment in their children (Main & Hesse, 1990; Main & Solomon, 1990). About 80% of children whose parents are rated "unresolved" at the AAI develop disorganized attachment to their parents (see Hesse, Main, Abrams, & Rifkin, 2003; Lyons-Ruth & Jacobvitz, 1999, for reviews of the research findings supporting this statement).

This discovery is of great interest for clinicians, insofar as it points to the likelihood that patients who suffer from trauma-related disorders may establish a problematic relationship, mediated by attachment disorganization, with their children. The implications of these research findings for understanding the interpersonal dimension of trauma-related disorders are, however, even more interesting, and deserve the detailed analysis that will occupy the subsequent sections of this article.

Similarities Between Dissociation, Unresolved AAI Responses, and Disorganized Attachment

Both AAI transcripts that are classified "unresolved as to traumas" and infant disorganized attachment behavior bear close resemblance to clinical phenomena usually regarded as indicative of dissociation (Hesse & Main, 2000; Main & Morgan, 1996). *Dissociation* is usually defined as a deficit of the integrative functions of memory, consciousness, and identity and is often related to traumatic experiences and traumatic memories. During clinical interviews, dissociation is suggested either by such a degree of unwitting absorption in mental states that ordinary attention to the outside environment is seriously hampered or by a sudden lack of continuity in discourse, thought, or behavior of which the person is unaware (supposedly because of intrusion of dissociated mental contents in the flow of consciousness). Thus, for instance, a dissociative patient may suddenly interrupt his or her speech during a therapeutic session, stare into a void for minutes, and become unresponsive to the therapist's queries as to what is happening to the patient. Alternately, a patient suffering from post-traumatic stress disorder (PTSD) may suddenly utter fragmented and incoherent comments on intrusive mental images (usually related to traumatic memories) that surface in his or her consciousness and hamper the continuity of the preceding dialogue with the therapist. In the most extreme variety of dissociation (i.e., dissociative identity disorder; DID), an alternate ego state may appear during the clinical dialogue, reporting (sometimes with an unusual tone of voice; e.g., childlike) memories of childhood abuse of which the patient has previously been totally unaware or expressing attitudes and beliefs quite extraneous to the patient's personality.

Structurally similar phenomena may appear during an AAI *collected within a nonclinical sample* that is rated "unresolved." For instance, an adult individual may "fall silent in the middle of a sentence discussing loss or trauma, and then complete the sentence 20 seconds or more later, as if no time had passed" (Main & Morgan, 1996, p. 125). Others may "seem to suffer an intrusion of visual-sensory images which interfere with correct speech" as in a case where this sentence, related to a childhood experience involving the father, was uttered: "Yes, well what he did was

hit me, stick, stick, hurts . . . *brown stick*” (Main & Morgan, 1996, p. 126; italics added for emphasis). Still others may show the sudden, inappropriate intrusion into the interview of information regarding a traumatic experience suffered at the hand of the attachment figure (sometimes with a change into a childlike speech form).

Infants whose attachment behavior in the *Strange Situation* is rated “disorganized” also show behaviors that are, on the phenotypic level, similar to those indicative of dissociation in adult patients. For instance, in the middle of an approach behavior to the parent, they may suddenly become immobile, unresponsive to the parent’s call, with a blind look, and persist in this state for 30 s or more. They may also show contradiction in movement patterns, as if they are pursuing two incompatible goals simultaneously or in quick succession. An aggressive gesture, executed with an unusual facial expression, without warning and in the middle of a display of affectionate behavior toward the caregiver, is another possible indicator of dissociation in disorganized infants. A number of them have been observed, while they were pleasantly interacting with the parent in the *Strange Situation*, suddenly “assuming a dazed or trancelike expression, reaching slowly to strike at the parent’s face or eyes, and then resuming affectionate behavior” (Main & Morgan, 1996, p. 125). Many other instances of disorganized attachment behavior that may be indicative of dissociative processes have been described by Main and Morgan. Since disorganized attachment in children is strongly linked to unresolved AAI ratings in their parents, these observations hint at the possibility of an intergenerational transmission of dissociative mental states that is related to unresolved memories of past parental traumas.

Trauma and Dissociation in Research Findings Based on the AAI

The emergence, during administration of the AAI, of memories of traumatic losses of attachment figures, or of physical and sexual abuse suffered at the hands of attachment figures, is not a rare occurrence. In about 15% of nonclinical interviews (Lyons-Ruth & Jacobvitz, 1999; Steele & Steele, 2003), lapses, poor reflective capacity (i.e., poor metacognitive monitoring), and incoherence in the narratives suggest that these traumatic experiences have not been resolved (“un-

resolved” classification of the AAI). In these cases, to think that dissociative processes related to the traumatic memories interfere with the report of one’s attachment history is, at the very least, an educated guess (Hesse & Main, 2000; Liotti, 1992; Main & Morgan, 1996). An empirical finding supporting this conjecture has been provided by Hesse and van IJzendoorn (1999): People who describe unresolved traumatic memories during the AAI also rate high in a scale measuring the propensity toward absorption in daydreaming and self-hypnotic (i.e., dissociative) states of consciousness. Thus, there is a link between attachment-related traumas, tendency toward dissociative states, and dissociated mental operations during a task involving autobiographical memory.

Another intriguing finding of studies based on the AAI shows the surfacing, in nonclinical samples, of a different type of dissociative process, akin to the alternation of incompatible ego states of DID. Some interviews are assigned to a “cannot classify” category because they express deeply divided states of mind concerning attachment (Hesse, 1996). The simpler examples of “cannot classify” interviews portray a dismissing attitude toward attachment in the first half of the transcript and a very preoccupied state of mind concerning attachment in the second half (or vice versa), without any hint that the respondent is aware of the change in attitude during the interview. Therefore, these interviews cannot be classified as “dismissing,” nor can they be classified as “preoccupied.” It is interesting to note that most “cannot classify” interviews are also rated high for unresolved traumas and/or losses (Hesse, 1996; Steele & Steele, 2003). This is a further hint that “cannot classify” interviews may indicate the presence of a type of subclinical post-traumatic dissociative process, characterized both by poor metacognitive monitoring and by autobiographical memories that are split as to the meaning attributed to events.

In summary, research studies using the AAI have shown that subtle dissociative processes related to traumatic memories of past attachment relationships (and potentially able to interfere with the beginning organization of infant attachment behavior in the offspring) are not rare in adult nonclinical samples. In samples that are at high risk of emotional disorders, in violent families, and in clinical samples, the percentage of “unresolved” and “cannot classify” interviews

(and the corresponding frequency of disorganized attachment classifications in the infants) rises sharply, from the 15% found in nonclinical samples to over 70% (Lyons-Ruth & Jacobvitz, 1999; Solomon & George, 1999).

Steele and Steele (2003) reported some preliminary findings of a clinical study of severely dissociative patients involving the AAI that show a very high percentage of “cannot classify” interviews in this clinical population. When used with patients suffering from DID, the AAI regularly elicits multiple narratives, and sometimes multiple narrating voices, in the same individual. These multiple narratives reflect distinct ego states, or personality organizations, each with a different mental state concerning attachment. Not infrequently in this clinical sample, a switch in ego state signals the narration of a horrifying history of abuse suffered at the hand of an attachment figure that is not accessible to the preceding ego state.

Steele and Steele (2003), while reporting the preliminary findings of their study, called attention to an observation that can be confirmed by many clinicians dealing with the traumatic memories of adult survivors of child abuse: “while psychic pain certainly accompanies the recall of the abuse per se, this pales in comparison to the much greater pain that accompanies the recall of being betrayed by trusted caregivers and siblings” (Steele & Steele, 2003, pp. 116–117). That is, the memory of an attachment figure who fails to protect the child from the abuse perpetrated by another member of the family may be more painful than the memory of the abuse per se. The dissociative power of this subtle type of trauma, betrayal from a not otherwise maltreating attachment figure, is readily explained by attachment theory. Forced by the inborn propensity to preserve the attachment relationship and trust the caregiver, when a parent denies the very existence of the abuse perpetrated by another member of the family (or by a person outside the family), the abused child may collude with the parent’s denial and dissociate the traumatic memory (Bowlby, 1988; Freyd, 1997).

Disorganization of Early Attachment and Vulnerability to Dissociation

Infant disorganized attachment shows up as lack of orientation during attachment interactions and/or as incompatible responses to episodes of

separation–reunion with the caregiver, emitted either simultaneously or in quick succession (Main & Solomon, 1990). The essence of infant attachment disorganization is the simultaneity of approach and avoidance attitudes toward the caregiver that induces a serious lack of organization and orientation in the infant’s overall attachment behavior.

The strong statistical link between infant disorganized behavior and parents’ unresolved mental status as to trauma and losses—a finding that has been replicated in a great number of research studies, reviewed by Lyons-Ruth and Jacobvitz (1999) and Solomon and George (1999)—cannot be explained by genetic influences. Infants whose attachment behavior toward a given, “unresolved” parent is disorganized may develop coherent, organized patterns of attachment behavior toward another caregiver, provided that the latter’s state of mind concerning attachment is coherent (e.g., the same infant may be disorganized in the attachment behavior toward the “unresolved” mother, organized-avoidant in the attachment toward the “dismissing” father, and organized secure toward a third, “free” attachment figure). Disorganization of early attachment, therefore, seems to reflect an intersubjective reality rather than a property of the individual child’s mind.

A number of empirical studies (Lyons-Ruth & Jacobvitz, 1999) support the contention that individual (e.g., temperamental or neurological) variables exert minimal influence on attachment disorganization. However, a recent study challenged this conclusion, suggesting that genetic factors (an allele of the DRD4 gene), related to defective dopaminergic functions in the brain and reduced efficiency of attentional systems, may contribute to attachment disorganization (Lakatos et al., 2000). It should be noted that only a minority (less than 40%) of infants carrying the allele develop a disorganized attachment. This genetic factor is, therefore, insufficient to yield attachment disorganization by itself. The contrast between the studies quoted by Lyons-Ruth and Jacobvitz (1999) and the genetic research data provided by Lakatos et al. (2000) may be reconciled by the hypothesis that gene–environment interactions are at work in many, but not all, cases of infant attachment disorganization.

Liotti (1992) advanced the hypothesis that early disorganized attachment is the first step in many developmental pathways that (*provided*

they include traumatic experiences during childhood and adolescence) progressively lead to increased vulnerability to dissociative disorders and to dissociative reactions to later traumas. A similar hypothesis has been independently advanced by Lichtenberg, Lachmann, and Fosshage (1992). Evidence supporting this hypothesis has been provided by a longitudinal study of dissociative symptomatology in a nonclinical sample of 168 young adults (called the Minnesota longitudinal sample in the literature on attachment) whose attachment patterns had been assessed when they were infants in their 2nd year of life (Ogawa, Sroufe, Weinfield, Carlson, & Egeland, 1997). The group that had been disorganized in their attachments as infants (“disorganized” group) had a higher mean dissociation score than those with other types of early attachment patterns. Within this “disorganized” group, the higher dissociation scores, reaching clinical significance, characterized the subgroup that had faced traumas during childhood and adolescence. (The difference between the mean dissociation score of the disorganized subgroup that faced later trauma and those of the disorganized subgroup that did not face trauma was statistically significant.)

Other observations in the Minnesota longitudinal sample that also support Liotti’s (1992) hypothesis have been discussed by Carlson (1998). Infant disorganization was associated with higher ratings of dissociative behavior on the Teacher Report form of the Child Behavior Checklist both in elementary and high school and with self-report of more dissociative experiences on the Dissociative Experience Scale (DES) at Age 19 (Carlson, 1998). Three adolescents in the Minnesota longitudinal sample had developed clear-cut dissociative disorders at the time of Carlson’s inquiry; all of them had been disorganized in their infant attachment to a primary caregiver (Dozier, Stovall, & Albus, 1999). Other empirical findings—although they have been less systematically collected and are less methodologically satisfactory than the above-quoted longitudinal studies—also point toward a role of attachment disorganization in disorders implying dissociation. These findings have been reviewed elsewhere (Liotti, 1999, 2000).

A multicentric case-control study of 52 dissociative patients and 146 psychiatric nondissociative controls conducted by the Italian Group for the Study of Dissociation (Pasquini et al., 2002)

also lends support to Liotti’s hypothesis. Traumatic losses and severe traumatic events in the life of the dissociative patients’ mothers that took place in the interval of 2 years before to 2 years after the patients’ births proved to be a significant risk factor for the development of dissociative disorders. Since the traumas/losses in the life of the patients’ primary caregivers (likely still unresolved) exerted their effects in the period when the patients’ early attachments were shaped, a legitimate interpretation of Pasquini et al.’s finding is that early disorganized attachment is the mediator of this risk factor.

The presence of traumas/losses in the life of the patients’ mothers around the time of the birth of the patient is also a risk factor for borderline personality disorder (BPD; Liotti, Pasquini, & the Italian Group for the Study of Dissociation, 2000). Since it is commonly held that the developmental psychopathology of BPD often implies both traumas and dissociation, the latter finding is compatible with the hypothesis that early attachment disorganization increases, throughout development, the general propensity toward dissociation. Clinically different types of dissociative reactions to traumatic events (as observed in dissociative disorders and BPD) may be linked to a common risk factor related to early attachment disorganization.

Besides the dissociative and borderline disorders, some complex types of PTSD may also be related to early attachment disorganization. The empirical finding that PTSD in parents is linked to vulnerability to PTSD in children (Yehuda, Halligan, & Grossman, 2001) may be explained by considering disorganization of children’s attachment to “unresolved” parents as a mediating variable. The intergenerational transmission of trauma-related dissociation that many clinicians hypothesize as an explanation of disorders observed in children of Holocaust survivors may also be mediated by attachment disorganization (see, e.g., Fonagy, 1999). The unresolved traumatic memories of the horrors of Nazi concentration camps may interfere with the parental behavior of the survivors, inducing attachment disorganization in their offspring and in turn increasing the offspring’s vulnerability to trauma-related disorders, implying dissociation. There is some empirical support for this hypothesis (Solomon, Kotler, & Mikulincer, 1988). It should be emphasized, however, as is more widely discussed in a later section of this article,

that pathological developments are by no means the rule in children of Holocaust survivors.

Attachment Dynamics Linking Parents' Unresolved Mental State to Infants' Disorganization

The strong statistical link between parents' unresolved traumatic memories of past abuses or losses and infants' disorganized attachment can be understood by taking into account the inborn nature of attachment interpersonal dynamics. Attachment theory holds that humans, like other mammals, are born with a strong, evolved tendency to seek care, help, and comfort from members of the social group whenever they are facing an overwhelming danger and whenever they are suffering from physical or emotional distress (Bowlby, 1982). As Bowlby (1979) has cogently argued, the care-seeking or attachment system, although more often active during infancy and childhood, is operant throughout any human being's life and is powerfully activated during and after any experience of fear, physical pain, or psychological pain. Usually, the propensity to seek protection and comfort is met with positive responses from significant others. The inborn disposition to care for one's kin (George & Solomon, 1999), which matches the equally inborn tendency to ask for help, provides the basis for a relatively smooth functioning of caregiving-careseeking interactions. Ethological observations and affective neuroscience (Panksepp, 1998) provide abundant evidence of the evolutionary processes that build up, in homologous parts of any mammal species' brain, distinct emotional/motivational systems able to organize care-seeking (i.e., attachment) and caregiving behavior, respectively. On these theoretical premises, one may explain attachment disorganization as follows (see Main & Hesse, 1990, for the original formulation of this explanation).

When unresolved traumatic memories surface in the mind of parents while they are responding to the attachment requests of their children, the mental suffering linked to these memories activates the parents' attachment system together with their caregiving system. That the attachment system is normally activated not only in children but also in adults ("from the cradle to the grave"; Bowlby, 1979, p.129) by any type of suffering is, as has been noted above, a central tenet of attachment theory. In the absence of soothing responses

from significant others (perceived as "stronger and/or wiser" than the suffering self; Bowlby, 1979, p.129), the activation of the attachment system arouses in the parent strong emotions of fear and/or anger. Thus, while infants are crying, "unresolved" parents may interrupt their attempts to soothe them (attempts stemming from the parent's caregiving system) with unwitting, abrupt manifestations of alarm and/or of anger (stemming from the parent's attachment system). Caregivers' abrupt manifestation of both anger and fear are always frightening to infants. The innate defensive reaction of escaping from the signal of threat (e.g., by distracting attention or avoidance of gaze) ensues in the infant.

The increased relational distance, however, further activates the (equally inborn) infant's attachment system, because increased distance from the attachment figure innately strengthens the need for protective proximity, *whatever the behavior of the attachment figure may be*. The attachment figure, in interactions leading to attachment disorganization, is "at once the source and the solution" (Main & Hesse, 1990, p. 163) of the infant's alarm, and this leads to fright without solution. That is, the infant has no way out of this paradox. There is no single, coherent behavioral or attentional strategy able to interrupt the loop of increasing fear and contradictory intentions (approach and avoidance) in the infant's experience. Disorganization of attachment behavior and disorientation in attentional strategies during attachment interactions follow. Disorganization and disorientation of early attachment closely mimic the collapse of the integrative functions of consciousness that characterize any dissociative experience and may be the first instance of dissociative reactions during life.

At least two studies (reviewed by Lyons-Ruth & Jacobvitz, 1999) provide empirical support to Main and Hesse's (1990) hypothesis that frightened/frightening parental behavior is the link between an infant's disorganized attachment and a caregiver's unresolved state of mind concerning attachment. These studies, and others following Main and Hesse's original observations (Hesse & Main, 2000; Hesse et al., 2003), provide many disquieting examples of how a parent's state of mind, unresolved as to traumas, may interfere in the communication between parent and child. It is noteworthy that parents' unresolved states of mind can induce fright without solution and dissociative reactions in the infant *even when the*

parents' behavior does not obviously constitute maltreatment. For instance, while seemingly trying to soothe the infant's cry, an unresolved parent approaches her child from behind, sliding both hands around the infant's neck; other parents freeze, with a "dead" stare, unblinking, in the face of the infant's cry for help; some parents manifest a paradoxically deferential attitude toward the infant; still others seem to seek safety and comfort from the infant, in a patent inversion of the attachment relationship.

Interactions involving a strong activation of the attachment system that, although not obviously comprising maltreatment, can induce a failure in the integrative functions of consciousness at the beginning of life deserve the name of "early relational trauma" (Schore, 2001). Early relational trauma (leading to attachment disorganization) seems to exert negative influences on the infant's developing brain. The right-brain system (connecting limbic emotional centers to the neocortex through the crossroad of the orbitofrontal cortex) that is involved in coping with emotional stressors develops along unfavorable lines in the face of chronic early relational traumas (Schore, 2001, 2002). This may be the neurological basis for the vulnerability to dissociative reactions in response to traumatic stressors later in life.

It is worth noticing that when early attachment disorganization is followed by traumas inflicted by the parents during childhood and adolescence (not a rare occurrence), the new traumatic interactions are a renewal and a confirmation, on a wider scale of intensity, of the frightening parent-child relationship that was responsible for attachment disorganization since infancy. On the other hand, it is of the utmost importance to remember that early disorganized attachment by no means condemns anybody to later dissociative disorders or to vulnerability to PTSD: During development, many corrective experiences of attachment and many protective factors may intervene in safeguarding the once-disorganized infant from any pathological consequence. For instance, other attachment figures may provide the child with positive attachment experiences, thereby exerting a corrective influence on the memory structures of disorganized attachment developed in the relationship with the "unresolved" parent. Alternately, the parent that had been "unresolved" may become gradually capable (e.g., thanks to psychotherapy) of elaborat-

ing personal traumatic memories, thereby offering, over the years, a progressively more secure and stable type of attachment experience to the child (for a more detailed discussion of the different developmental pathways that may stem from early disorganized attachment, see Liotti, 1992).

Dissociation Within the Internal Working Model of Disorganized Attachment

Traumatic experiences, attachment dynamics, and dissociative reactions are, in the above outlined research paradigm, inextricably intertwined, like three threads woven into a single strand. This strand may extend into developmental pathways leading, in the presence of later traumas, to complex forms of PTSD, dissociative disorders, and BPD. Understanding the memory representation of early relational trauma is necessary in order to follow such developmental pathways.

According to attachment theory, the memories of attachment interactions are the basis for the construction of internal working models (IWM) of self, attachment figures, and their accessibility or inaccessibility. The IWM is conceptualized as a cognitive structure based on generalized memories of past interactions with the attachment figure and provides expectations as to the attachment figure's future responses to the child's attachment needs. When activated, an IWM can co-opt all the typical emotions of the attachment motivational system (fear of separation, anger-protest at expected separations, sadness, joy at reunion, felt security, etc.). At the beginning of life, the IWM is a structure of implicit memory (Amini et al., 1996), that is, a part of the type of memory that does not require language nor consciousness for its operations. (In contrast, explicit memory is conscious and mediated by language; it can operate both on a semantic level of generalized meanings or on an episodic level of retrieved specific events.) During development, part of the formerly implicit IWM may become explicit and enter both in the consciously held meanings attributed to attachment needs and into the narratives of autobiographic memory.

Although open to modification because of later attachment experiences, the early IWMs show a remarkable stability over time (presumably because the relational style between child and parents also remains stable; Bowlby, 1982, 1988). Once established, the IWM guides both attach-

ment behavior and the appraisal of attachment emotions in self and others. If the attachment figure has been accessible to the child in real-life situations, the corresponding IWM of the developing child conveys an inner sense of legitimacy of the attachment emotions and of potential accessibility of help and comfort even when the attachment figure is not actually present during distressing experiences. This is the IWM of secure attachments. On the contrary, the IWMs of insecure attachments (avoidant, ambivalent, or disorganized) convey expectations that the attachment figure will not be available or will respond negatively to requests of help and comfort. The IWM of disorganized attachment differs from that of avoidant and ambivalent attachments because it not only prefigures negative consequences of asking for help and comfort, it also brings on a dissociated (nonintegrated) multiplicity of dramatic and contradictory expectations (Hesse & Main, 1999, 2000; Hesse et al., 2003; Liotti, 1992, 1995, 1999, 2000, 2002; Main, 1995; Main & Hesse, 1990; Main & Morgan, 1996).

Disorganized Attachment and the “Drama Triangle”

In order to summarize the components of the multiple, dramatic, and reciprocally nonintegrated (i.e., dissociated) representations that compose the IWM of disorganized attachment, Liotti (1999, 2000, 2002) proposed using the metaphor of the “drama triangle”—originally formulated by Karpman (1968) with the purpose of identifying the basic structure both of fairy tales and tragic plays in classic theater. This metaphor suggests that the disorganized child has reasons for construing, simultaneously or in quick sequence, both the attachment figure and the self according to the three basic positions of the drama triangle: persecutor, rescuer, and victim. The attachment figure is represented negatively, as the cause of the ever-growing fear experienced by the self (self as victim of a persecutor), but also positively, as a rescuer: The parent, although frightened by unresolved traumatic memories, is nevertheless usually willing to offer comfort to the child, and the child may feel such comforting availability in conjunction with the fear. Together with these two opposed representations of the attachment figure (persecutor and rescuer) meeting a vulnerable and helpless (victim) self, the IWM

of disorganized attachment also conveys a negative representation of a powerful, evil self meeting a fragile or even devitalized attachment figure (persecutor self, held responsible for the fear expressed by the attachment figure). Moreover, there is the possibility, for the child, of representing both the self and the attachment figure as the helpless victims of a mysterious, invisible source of danger. Since the frightened attachment figure may be comforted by the tender feelings evoked by contact with the child, the implicit memories of disorganized attachment may also convey the possibility of construing the self as the powerful rescuer of a fragile attachment figure (i.e., the little child perceives the self as able to comfort a frightened adult). Indirect empirical support to this hypothesis is provided by data indicating that formerly disorganized infants assume, when they reach school age, either caregiving (rescuer) or punitive (persecutor) attitudes toward their caregivers (Hesse & Main, 2000; Hesse et al., 2003; Lyons-Ruth & Jacobvitz, 1999).

The sequence, in the child’s mind, of multiple representations in which both the self and the other person shift among the three incompatible roles of persecutor, rescuer, and victim should be understood as a metaphorical rendition of the construction of contradictory emotional (i.e., preverbal) schemata that arose during the interactions that led to disorganized attachment. These emotional-relational mental structures, encoded in implicit memory, are too complex and intrinsically contradictory to be later synthesized in a unitary, cohesive structure of explicit, semantic memory. In this sense, the IWM of early disorganized attachment is intrinsically dissociative (for a general discussion of dissociation in the context of the operations of the attachment system, see Cortina, 2003).

A dynamic understanding of the role of early attachment disorganization in the vulnerability to trauma-related disorders requires consideration of the consequences of an intrinsically dissociated IWM when facing later traumas. This is the topic of the next two sections of the article.

Pathway Leading From Attachment Disorganization to Trauma-Related Disorders

Whenever, from infancy to old age, human beings are called to cope with a traumatic stressor, their attachment system is activated (i.e., they experience a strong wish to seek help and comfort).

When the operations of the attachment system are guided by an insecure IWM, emotional reactions to distressing experiences may be made even more painful by the automatic inner evaluation that one's wishes for comfort are either illegitimate or produce additional painful interactions with the attachment figures. Attachment theory suggests, on these grounds, that all types of insecure IWMs may generically increase the vulnerability to trauma-related *emotional* disorders (while, in contrast, the IWM of secure attachment is a protective factor; Adam, Keller, & West, 1995; Dozier et al., 1999). The IWM of early disorganized attachment adds specificity to this generic vulnerability, in the direction of greatly facilitating *dissociative* reactions to later traumas throughout the life span. Figure 1 summarizes this line of reasoning.

The diagram acknowledges that, besides early disorganized attachment, other risk factors intervene in the pathogenesis of disorders that imply dissociation. Genetic, temperamental, and neurobiological vulnerabilities; the severity and type of traumatic experiences during childhood and adolescence; and the individual organization of mental defenses against psychological pain may be legitimately considered among these risk factors. The inclusion of BPD among the disorders whose pathogenesis involves dissociation is supported by the fact that transient dissociative experiences are among the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* criteria for BPD

(American Psychiatric Association, 1994). The inclusion of PTSD is justified by the finding that peritraumatic dissociation (i.e., dissociative states of mind, taking place during or immediately after a traumatic experience) is often the first step in the genesis of this disorder (Birmes et al., 2001; Cardeña & Spiegel, 1993; Harvey & Bryant, 1998; Marmar et al., 1994; Shalev, Peri, Canetti, & Schreiber, 1996; Ursano, Fullerton, Epstein, Crowley, & Vance, 1999).

I should now address an important question: What happens to the dissociated representations of the drama triangle before they are elicited by a traumatic stressor? Are they simply dormant, or are they actively kept at bay by some type of mental-relational strategy? Research findings on the developmental pathways stemming from infant attachment disorganization suggest that the second possibility is closer to the truth.

Developmental Pathways Stemming From Early Attachment Disorganization

Two prospective longitudinal studies (reviewed by Lyons-Ruth & Jacobvitz, 1999) demonstrate a shift from disorganized attachment in infancy to a type of child behavior toward the caregiver at Age 6 that has been labeled "controlling." Over 80% of school-age children who have been classified "disorganized" in infancy display either punitive-dominant or caregiving behavior toward the attachment figure. These two attitudes

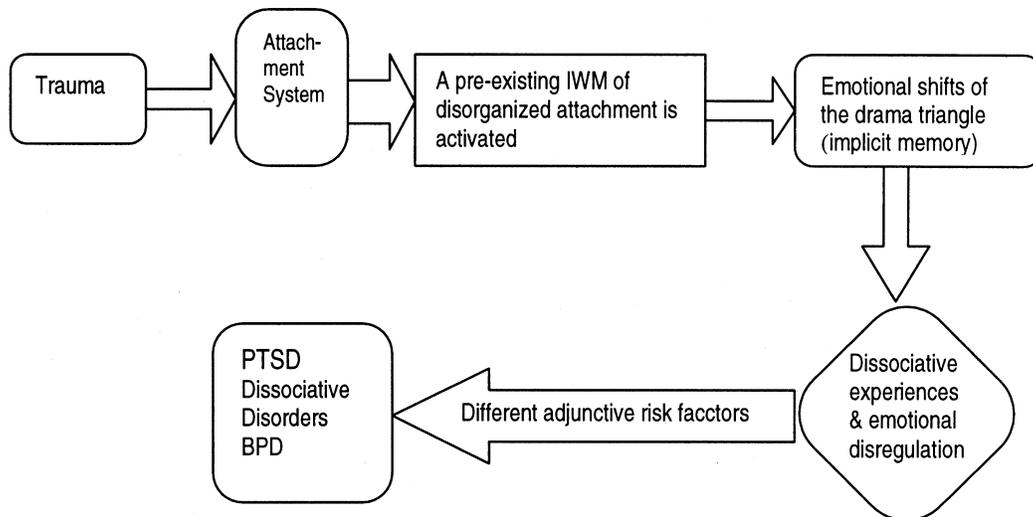


FIGURE 1. The sequence leading to trauma-related disorders through the mediation of the internal working model (IWM) of disorganized attachment. PTSD = posttraumatic stress disorder; BPD = borderline personality disorder.

have both been subsumed under the heading “controlling” because, through either of them, the child can exert active control on “the parent’s attention and behavior and assume a role which is usually considered more appropriate for a parent with reference to a child” (Main & Cassidy, 1988, p. 418).

Children who exert control over the parent through a caregiving strategy seem to have inverted the usual direction of the attachment interaction, as if these children have activated, instead of their attachment system, their caregiving motivational system. This explanation of the motivational underpinnings of the controlling strategy is based on the consideration that the caregiving system is as innate in mammalian species as the care-seeking (i.e., attachment) system (cf. George & Solomon, 1999; Gilbert, 1989; Panksepp, 1998). Children who control the parent (in relation to whom their infant attachment was disorganized) through punitive-dominant strategies seem to have activated another inborn motivational system to substitute for the normal activation of the attachment system: namely, the evolved system that regulates interactions aimed at defining the reciprocal roles of dominance and submission in the social group of most mammal species (identified by ethologists as the social-ranking system; Gilbert, 1989). The interaction of controlling-punitive children with their parents seems regulated more often by an aggressive striving for dominance than by care-seeking (Sloman, Atkinson, Milligan, & Liotti, 2002).

Parents who show frightened/frightening behaviors toward their (disorganized) children also display toward them an unusual array of submissive, care-seeking, or even sexualized behaviors (Hesse et al., 2003). These competitively aggressive caregiving or sexualized interactions, substituting for the activation of the attachment system, limit the influence of the IWM on the child’s current thought, emotion, and behavior (Liotti, 2000, 2002). They, however, do not correct nor cancel the IWM of disorganized attachment from the child’s mind, as becomes obvious when the child’s attachment system is activated by conditions that are able to overcome its relative inhibition. The collapse of the seemingly coherence-yielding strategy of controlling/disorganized children in the face of a powerful activation of the attachment system illustrates an important process in the pathogenesis of trauma-related disorders based on a disorganized IWM. The relative

inhibition of the attachment system through the defensive activation of other equally inborn motivational systems (the caregiving, the social-ranking, and/or perhaps the sexual system, as may occur in some sexually abusive families) is forcefully suspended under the influence of a powerful stressor. The coherence of thought, emotion, and behavior that has been secured thanks to the defensive activation of other motivational systems disappears. The intrinsically dissociative IWM of disorganized attachment intervenes (together with the not always overwhelming emotions evoked by the stressor) in determining the dissociative response. This type of pathogenetic process may explain the intriguing cases of delayed manifestation or exacerbation of a dissociative disorder years after the original traumatic experience and without any repetition of the trauma.

Delayed Dissociative Responses to Traumatic Memories

The issue of the *veracity of delayed recall* of childhood abuse has been the subject of much legal and scientific controversy in recent years (for recent reviews, see, e.g., Bremner, 2003; McNally, 2003; Mollon, 2002). This controversy may have hindered the exploration of the equally important theoretical problem posed by the *emergence of delayed dissociative reactions* to traumatic memories that had been always accessible to recall.

Major changes in the *meaning* of significant relationships precipitate until-then latent dissociative processes that had been held at bay thanks to the defensive inhibition of a disorganized IWM. This possibility may reconcile two seemingly opposite theses: (a) the thesis that delayed recall of trauma lends credence to the authenticity of memories, insofar as it is preceded or accompanied by dissociative symptoms, and (b) the thesis that pre-existing dissociative mental processes may amplify and distort traumatic memories, thereby laying the ground open for the possible construction of false memories of abuse during retrieval of traumatic memories (for recent renditions of this debate, see Bremner, 2003; Mollon, 2002; McNally, 2003). Insofar as the *reactivation* of a disorganized IWM is responsible for the appearance of dissociative symptoms, both possibilities may coexist. On the one hand, the propensity, linked to the disorganized IWM, to

construe both self and others according to the drama triangle may sometimes foster exaggerated memories of evil deeds (e.g., an attachment figure is reconstructed according to the stereotype of the persecutor, and the self is reconstructed according to the stereotype of the helpless frightened victim). On the other hand, the very existence of a disorganized IWM hints, to the very least, at the veracity of early *relational* trauma, even when no other seriously traumatic event might have occurred.

Attachment Dynamics and the Definition of Traumatic Stressor

How the term “trauma” should be defined in conceptualizing the genesis of PTSD is, according to critics, quite problematic (McNally, 2003). Included among traumas considered potentially capable of causing PTSD are such qualitatively different events as direct threats to a person’s life or physical integrity and merely witnessing other people’s exposure to those threats (American Psychiatric Association, 1994). When two so conceptually distinct classes of events are both deemed causally related to the same disorder (PTSD), “it will be difficult to identify common psychobiologic mechanisms underlying symptomatic expression” (McNally, 2003, p. 231).

The model of vulnerability to traumas described here addresses McNally’s (2003) concerns insofar as it identifies in the attachment system such a common psychobiologic mechanism, capable of being activated both by threats to one’s own life or integrity (e.g., fear that help is not forthcoming) and by witnessing other people similarly threatened (e.g., fear of losing the source of help). If careful consideration is paid to the contribution of attachment dynamics to the experience of trauma, then it becomes clear that there is an important difference not between direct and secondhand exposure to traumatic stressors, but between traumas inflicted by an attachment figure and traumas inflicted by an anonymous destructive force. Attachment theory predicts that the dissociating potential of the former is much greater than that of the latter (cf. Freyd, 1997).

The wide-ranging implications of this prediction for our understanding of the pathogenesis of trauma-related disorders is illustrated by reflections on recent findings concerning the intergenerational transmission of traumatic experiences in

three-generation families of Holocaust survivors (Sagi-Schwartz et al., 2003). The daughters of female Holocaust survivors did not differ from the comparison group in terms of attachment representations, emotional disorders, vulnerability to PTSD, and maternal behavior toward their infants. This is a surprising finding, since the AAIs of Holocaust survivors (who lost parents and other family members in the Nazi concentration camps) still evidenced, after half a century, a very high percentage of unresolved states of mind concerning attachment (Sagi, van IJzendoorn, Joels, & Scharf, 2002).

What factors could account for this difference from so many other samples (Lyons-Ruth & Jacobvitz, 1999), in which unresolved states of mind in the parents were strongly linked to attachment disorganization in the children? The possible answer is that, in these other samples, many unresolved states of mind were related to traumas *inflicted by attachment figures* (e.g., incest and/or parental violence toward the child), while in the Holocaust survivors traumas and losses were the deeds of anonymous human beings. Moreover, before being relegated to the concentration camps, the children that survived the Holocaust had benefited from years of secure attachment to their parents (Sagi-Schwartz et al., 2003). In other words, the female survivors of the Holocaust might have been “unresolved” at the AAI classification, without having been disorganized in their early attachments, while most “unresolved” parents in other AAI samples had also been disorganized in their early attachments to their maltreating (i.e., frightening) caregivers. This interpretation, which seems quite plausible, further emphasizes the role of early disorganized attachment both in inducing long-term dissociative reactions (predictive of complex forms of later PTSD) after exposure to traumatic stressors and in the intergenerational transmission of attachment patterns. This role is entrenched with that of the painful emotional experiences (dictated by the exposure to trauma) and with that of unresolved memories and is at least equally important to if not more important than traumatic distress and unresolved memories of trauma.

Some Consequences for the Psychotherapy of Trauma-Related Disorders

The main consequence of this article’s thesis for the psychotherapy of complex trauma-related

disorders is that patients' interpersonal difficulties should receive at least as much attention as their traumatic memories, their dissociative experiences, and their dissociative defenses. The knowledge of the mental processes linked to attachment disorganization should guide the therapist's understanding of these difficulties—as illustrated by clinical studies focusing on the phenomenological overlap and the developmental continuity between infants' disorganized attachment behavior and the behavior of adult dissociative patients within the therapeutic relationship (Fonagy, 1999; Liotti, 1993, 1995; Liotti & Intreccialagli, 2003; Muscetta, Dazzi, DeCoro, Ortu, & Speranza, 1999). Whenever there is a hint that a disorganized IWM is guiding the patient's way of construing the therapeutic relationship, the correction of such a model should become a primary aim of the treatment.

Clinicians willing to introduce principles of attachment theory into their therapeutic practice may find it useful to consult the now abundant references on the applications of this theory to various types of psychotherapy. Cortina (2003); Fonagy (1999, 2001); Holmes (1996); Marrone (1998); Shane, Shane, and Gales (1997); and Slade (1999) provided important contributions to the integration of principles of attachment theory within the practice of various types of psychodynamic psychotherapy. Cognitively oriented psychotherapists may find useful suggestions for integrating attachment principles into their clinical practice by referring to writings by Liotti (1991, 1993), Liotti and Intreccialagli (2003), and Saffran and Segal (1990). Family therapists will find, to the same effect, invaluable information in the works of Byng-Hall (1995, 1999) and Sloman et al. (2002).

Guidelines for the psychotherapy of complex trauma-related disorders that, even if they do not focus explicitly on attachment dynamics, are compatible with the above principles have been advocated in recent years (for reviews, see Courtois, 1997; Liotti, Mollon, & Miti, in press). According to these guidelines, striving for safety and alliance within the therapeutic relationship should take precedence, both temporally and in the hierarchy of therapeutic aims throughout the treatment, over trauma work (i.e., on the reliving of traumatic memories in therapy). Phase-oriented treatments in which stabilization of the therapeutic relationship precedes trauma work has been made necessary by the widespread ob-

servance that trauma-centered therapies (that are often highly effective for *simple* types of PTSD) can exacerbate rather than resolve the patients' difficulties in complex PTSD.

At least three psychotherapeutic models for the treatment of trauma-related disorders have been recently proposed that make explicit reference to attachment disorganization as part of their rationale for paying more therapeutic attention to the patients' past and present relational difficulties than to their traumatic memories (Blizard, 2001; Gold, 2000; Steele, van der Hart, & Nijenhuis, 2001).

The model proposed by Steele et al. (2001) focuses on the difference between secure and insecure dependency (defined in relation to attachment theory) and suggests that striving to overcome "phobias of attachment" should be a major focus from the first phase of the treatment. Steele et al. (2001) offered a detailed description of how phobias of attachment and insecure dependency manifest themselves in patients with disorganized attachment and provided many useful hints at therapeutic maneuvers that may deal with these manifestations.

The model outlined by Blizard (2001) highlights the relational dilemma of attachment disorganization by stating that in order to maintain attachment, traumatic memories of abuses suffered at the hand of family members must be dissociated, but to protect the self from abuse, the need for attachment must be disavowed. This relational dilemma, she asserted, should be addressed throughout the treatment.

Contextual therapy of complex PTSD, as Gold (2000) called his approach, focuses on developing patients' capacities for secure attachments and for more comfortable relationships through three primary components of the treatment: collaborative relating (i.e., alliance building), collaborative conceptualization (i.e., dispelling beliefs of being undeserving and incapable of satisfactory attachment and cooperative interactions), and skill transmission (i.e., social-skills training similar to the one deployed in dialectic behavior therapy; Linehan, 1993). Gold et al. (2001) described three cases of DID successfully treated according to the principles of contextual therapy. These cases illustrate how, when the relational difficulties stemming from disorganized attachment are successfully dealt with in psychotherapy, the process of resolving the traumatic

memories and of giving up dissociative defenses is also set into motion.

The importance of having two or more therapists cooperating in the treatment of patients with complex trauma-related disorders, as for instance in dialectic behavior therapy (Linehan, 1993), is highlighted by the knowledge of attachment disorganization. When the patient is guided by an IWM of disorganized attachment in construing the therapist's behavior, the therapeutic relationship may become unbearably dramatic, changeable, and complex for both partners (Liotti, 1995, 2000, 2002). Untoward countertransference reactions or premature termination of an otherwise promising treatment may be the unfortunate consequences of the reactivation of a disorganized IWM within the therapeutic relationship. The presence of a second therapist (e.g., a group therapist, as in dialectic behavior therapy) to whom the patient is usually less strongly and less dramatically attached may be of great assistance in dealing with the difficulties emerging in the first therapeutic relationship (for a more detailed analysis of this possibility and some clinical illustrations, see Liotti, 2000, 2002).

All these innovative guidelines for the psychotherapy of complex trauma-related disorders may, in the not too distant future, yield outcomes studies supporting, or falsifying, the hypothesis implied by the research findings reviewed in this article: When the contribution of disorganized attachment to the disorder is successfully dealt with, traumatic memories become more easily integrated and dissociative defenses are less difficult to relinquish.

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