

DISORGANIZED/
DISORIENTED
ATTACHMENT IN THE
ETIOLOGY OF THE
DISSOCIATIVE DISORDERS

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ABSTRACT

It has been suggested that multiple personality disorder (MPD) may be seen as an attachment disorder, related to the process of detachment (Barach, 1991). To think in terms of disorganized/disoriented (D) attachment seems a better way of conceptualizing not only MPD, but all the dissociative disorders in relation to difficulties experienced in early attachment relationships. This paper reviews recent findings concerning D (disorganized/disoriented) attachment in infants and its correlates in unresolved parental traumas (quite often, losses through death of significant others). It is proposed that D attachment in infancy may lead to increased vulnerability to dissociative disorders via a linking mechanism proposed by Main and Hesse (1990, 1992): parental frightened and/or frightening behavior. Mothers of dissociative patients were reported much more often than mothers of other psychiatric patients to have suffered the loss through death of a significant other in the two years before—two years after the patient's birth. This finding supports the hypothesis that many dissociative patients may have been infants attached in a disorganized/disoriented way to at least one attachment figure.

INTRODUCTION

In a recent paper, Barach (1991) has cogently called attention to attachment-related traumatic experiences in the etiology of Multiple Personality Disorder (MPD). Barach (1991) suggests that Bowlby's concept of detachment (Bowlby, 1982, 1988) reflects a type of dissociation. Detachment depends on the active exclusion from conscious processing of information that would activate the innate behavioral-motivational system controlling attachment behavior: in this sense, it is a type of dissociation. Detachment is first enacted by the child within his/her early attachment relationships as a consequence of the caregivers' prolonged emotional or physical unavailability. Since it is a way of keeping information segregated or dissociated from conscious processing, detachment may be seen, according to Barach, as an early type of

dissociative defense, that "set the stage for reliance on dissociation as a response to [later] active abuse" (Barach, 1991, p. 117).

The recent discovery of a disorganized/disoriented pattern of attachment (Main & Solomon, 1986, 1990) suggests that much more than detachment may be at work within early attachment relationships to "set the stage for dissociation" as a defensive reaction to later traumatic experiences (Liotti, in press). In order to appreciate the possible implication of disorganized/disoriented attachment in the etiology of the dissociative disorders, a previous description of the main patterns of early attachment is mandatory.

PATTERNS OF ATTACHMENT

Ainsworth, Blehar, Waters and Wall (1978) have provided the first systematic description of how attachment behavior is shaped by the caregiver's behavior in infants about one year old. The laboratory procedure designed by Ainsworth et al. (1978) to assess the different forms attachment behavior may take in one-year-old human infants is known as the Strange Situation (SS). In the SS, the infant is exposed to an unfamiliar environment from which the accompanying parent twice leaves for a few minutes and twice returns. Three main patterns of attachment were identified in the SS by Ainsworth and her collaborators: A (avoidant), B (secure), and C (anxious-resistant).

The majority of infants classify within the category of *secure attachment* (B) in the SS. They cry and show clear signs of missing the mother during her absences in the SS, and are quickly comforted by her on reunion. This pattern of attachment has been found to correlate with the mother's sensitivity and availability to the signals and communications of the infant at home (see Bretherton, 1985, for a review).

A minority of infants show little or no distress during separation from the mother during the SS, and actively avoid contact with her when she returns. The mothers of these infants, who show an *avoidant attachment* (A), were found actively rejecting of attachment behavior in the home environment. It is this pattern which seems more obviously linkable to detachment, as defined in Barach's 1991 paper (see, e.g., Bowlby, 1980, p. 70; Bowlby, 1988, p. 124). This is not, however, the early pattern of attachment more likely to be related to manifest signs of dissociation in infants, as it will be argued below.

Another minor percentage of infants are highly dis-

tressed during separation from the mother in the SS and, contrary to the secure babies, are not quickly relieved from their discomfort when the mother returns. Since these infants seem to resist the comfort offered by the mother on reunion, they are said to show an anxious-resistant pattern of attachment (C). The mothers of these babies have been described as unpredictably available to their children's requests for comfort at home, and prone to intrude upon the babies' autonomous activities of exploration of the home environment.

In all the samples that have been observed within the SS in many different countries, some infants have appeared *unclassifiable* in the above threefold classification system (A, B, C) of attachment behavior. It is within this subgroup of previously unclassifiable infants that Main and Solomon (1986, 1990) identified the disorganized/disoriented (D) pattern of attachment. What the infants showing a *disorganized/disoriented (D) pattern of attachment* share in common is the display of odd, disorganized, seemingly inexplicable and conflicting behavior patterns in the parent's presence (Main & Solomon, 1986, 1990; Main & Hesse, 1992). Contradictions in movement pattern (e.g., approaching the parent with the head averted) which suggest contradictions in intention, and/or lack of orientation to the present environment (e.g., *sudden immobility accompanied by a dazed expression*) characterize the D infants. The other three patterns of attachment are, in contrast, characterized by relatively well organized and oriented behavioral and attentional strategies in the interaction with the parent during the SS (Main & Hesse, 1992). It is noteworthy that detachment may conceivably be a consequence of extremely avoidant (A) strategies of interaction with a rejecting, hostile parent. If detachment is thus produced, it does not bring with itself those alteration of consciousness and those features of dissociated behavior (see below) that seem evident in some D babies observed by Main and Solomon (1990). Disorganized/disoriented attachment seems, therefore, a different and more suitable construct than detachment (as suggested by Barach, 1991) for studying the relationships between early attachment patterns and dissociative disorders.

Main and Hesse (1992) followed upon this hypothesis of a link between infant D attachment and dissociative disorders (as advanced by Liotti, Intreccialagli & Cecere, 1991), with a review of infant behavior suggestive of dissociation within their sample of D babies. In some of these babies, they indeed found support to the hypothesis. Here I summarize some of their observations and remarks.

Disorientation in the attachment relationship is, in itself, suggestive of a disorder of consciousness (Main & Hesse, 1992). This disorder of consciousness cannot be attributed to any organic dysfunction of the central nervous system: Infants that are disorganized/disoriented in the SS with one parent may show another (oriented and organized) pattern of attachment behavior, in the same situation and in the same period of their life, with the other parent (Main & Solomon, 1986, 1990). Some instances of attachment behavior observed in the group of D infants are straightforward examples of dissociated actions. For instance:

Creeping rapidly forward toward father [a 12-month old infant observed in the SS]...suddenly stopped and turned her head to the side and - while gazing blanking at the wall - slapped a toy and then her empty hand on the floor in a clearly angry gesture, still with head averted and gaze blank. This interruption lasted only three to four seconds. She then continued her strong approach and reached to be picked up. (Main & Solomon, 1990, p. 142)

Or, still more impressively:

The baby [on reunion with mother after the first separation in the SS] hears mother's voice and turns and looks to the door. Her look is initially blank...Looks up at mother, averts gaze for a moment, facial expression then divides in two (left vs. right half of face) uplifting left mouth-corner only. In these microseconds her eyes widen and as she looks at mother the asymmetry makes her appear puzzled, disgusted or fearful. Her face then breaks into an extremely wide smile. (Main & Solomon, 1990, p. 143)

These behaviors seem such clear and early indicators of dissociation that a close scrutiny of the mechanisms that may be responsible for their appearance—mechanisms that are at work during the parent-child interactions in the first year of the infant's life—should be of obvious interest for any student of dissociation.

PARENTAL BEHAVIOR HYPOTHESIZED TO BE RESPONSIBLE FOR THE CHILD'S DISORGANIZED/DISORIENTED ATTACHMENT

Main & Hesse (1990, 1992) have undertaken a careful inquiry on the parent's attitudes that may be related to D attachment in the child (remember that the parent's sensitivity and availability are related to secure (B) attachment, the parent's rejecting attitudes are related to avoidant (A) attachment, and the parent's erratic, unpredictable positive responses to the child's requests for comfort are related to anxious-resistant (C) attachment).

The main feature that differentiate parents of D infants from parents of A, B, and C infants is related to traumas that have not been successfully elaborated and resolved (Main & Hesse, 1990, 1992). Parents of D babies seem, much more often than parents of babies with other types of attachment, to be worried by traumatic memories that divert their attention from the requirements of any efficient style of parental caregiving. These unresolved traumas are related to past abuse, or to loss through death of significant others—a finding by Main and Hesse (1990, 1992) replicated by Ainsworth and Eichberg (1991).

Main and Hesse (1990, 1992) advanced the hypothesis that frightening and/or frightened parental behavior during the interaction with their children may be the outcome of parent's unresolved trauma and may explain the origins

of the child's disorganized/disoriented attachment behavior. Let us now look at the links between unresolved trauma in the parent, frightening parental behavior, and disorganization of attachment in the child.

Unresolved traumas tend to activate the attachment behavioral-motivational system along the whole life-span. The attachment system, it should be remembered, is an innate behavioral control system that motivates primates to search for the protective proximity of conspecifics whenever the individual is distressed, threatened, or frightened by environmental danger (Bowlby, 1982). Attachment behavior "is held to characterize human beings from the cradle to the grave" (Bowlby, 1979, p. 129).

Parents whose attachment system is activated by the distressing (perhaps still frightening) memories of past unresolved traumas may unwittingly invert the normal attachment relationship with their children, acting as if they unconsciously expect their children to sooth their own discomfort (Bowlby, 1985).

When the child fails to match the parent unconscious expectation to be cared for (and it is obvious that a child will fail in such a task), the parent may become aggressive and therefore frightening to child. Anger at an attachment figure who fails in providing the expected comfort is an aspect of the functioning of the attachment system: when the attachment relationship between a parent and a child is inverted (with the parent treating the child as an attachment figure, rather than accepting to meet the child's requests for proximity and comfort) the stage is set for a great deal of parental aggression directed toward the child (Bowlby, 1985).

A frightening parent presents a child (and an infant particularly so) with a paradox that cannot be solved—namely, to simultaneously flee from the parent as a source of danger, and to approach the parent (who necessarily is the child's attachment figure) as a haven of safety (Main, 1981). The more the threatening condition, created by parental aggression, goes on in time and increases in intensity, the more the infant's attachment system is activated. The more the attachment system is activated, the more the infant is driven to approach the attachment figure who, in this paradoxical situation, is the threatening parent him/herself. Increasing the distance from the attachment figure in a threatening situation (as implied by the child's tendency to flee from the threatening parent) causes more fear and more intense strivings to approach the attachment figure. A positive feedback loop, of fear-> avoidance-> fear, is thus created in infants dealing with a threatening attachment figure (Main, 1981). At high intensity this loop may lead to the collapse of behavioral and attentional strategies observed in disorganized/disoriented attachment behavior (Main & Hesse, 1990). It may be hypothesized that innate behavioral-motivational systems other than attachment (e.g., the behavioral system controlling ritual agonistic behavior in primates: Gilbert, 1989) are activated in the infant, together with the attachment system, in the effort to cope with this paradoxical situation. Since the operations of these two innate behavioral systems, the attachment system and the agonistic system, are mutually incompatible, dissociated actions necessarily follow (e.g., the dissociated actions of the little girl in the first

vignette of the above paragraph, who showed the overlap of approach toward the father and redirected aggression during the SS; it may be interesting to mention here that the father of this little girl suffered from homicidal and suicidal fantasies).

Main and Hesse (1990) hypothesized that frightened as well as frightening parental behavior could place an infant in an irresolvable situation. Frightened parental behavior during interactions with the infant may occur when the traumatized parent responds to distressing memories (possibly only weakly accessible or dissociated) related to loss or abuse. Frightened parental behavior during the SS has been described by Main and Hesse (1990, 1992). The more obvious examples are frightened facial expressions as the infant pursues proximity to the parent, or reaches toward the parent's face. Sometimes, however, the parents' fear is inferred by startling vocal changes, sudden immobilized postures and trance-like, dazed expressions—all of this suggesting that dissociative defenses are operating in the parents as painful, frightening memories are surfacing in their mind while they are interacting with their children in the SS. In a few SS observations, immobilization accompanied by trance-like expression in the parent has been noted to be immediately followed by disorganized/disoriented behavior in the infant.

From the infant's point of view, what is frightening to the parent is unidentifiable as to source (Main & Hesse, 1990). The child's alarm in response to alarmed and/or inexplicable parental expressions is the effect of an immediate attunement of emotional states that has been well documented by developmental psychologists (see Stern, 1985). The child's alarm will be further exacerbated if the parent indicates a tendency to flee from the situation—and therefore from the infant itself. In this situation, the frightened infant's attempts to approach the attachment figure as a haven of safety leads the parent to reduce the infant's safety through increased signs of fear, trance-like expressions related to the parent's dissociative defenses in the face of surfacing traumatic memories, or overt tendencies to flight (Main & Hesse, 1990, 1992).

The different implications in the etiology of dissociation of the two attachment-related constructs—detachment as a consequence of parental nonresponsivity (Barach, 1991) and disorganized/disoriented attachment as a response to frightened/frightening parental behavior (Main & Hesse, 1992)—may now be more fully understood. A clinical example, quoted by Barach (1991) to illustrate how detachment may be produced in the child of an emotionally unavailable mother, may further clarify these different implications:

Fraiberg, Adelson and Shapiro (1974/1987) provide a painfully vivid description of a dissociative mother and her child's detachment. The mother had been grudgingly parented by relatives after her mother's postpartum attempted suicide and had been sexually abused by her father and a cousin. During a testing session, her baby begins to cry. It is a hoarse, eerie cry...On tape, we see the baby in her mother's arms screaming hopelessly; *she does not turn to her mother for com-*

fort. The mother looks distant, self-absorbed. She makes an absent gesture to comfort the baby, then gives up. She looks away. The screaming continues for five dreadful minutes on tape. In the background we hear Mrs. Adelson's voice, gently encouraging the mother. 'What do you do to comfort Mary when she cries like this?' (The mother) murmurs something inaudible....As we watched this tape later..., we said to each other incredulously, 'It's as if this mother doesn't hear her baby's cries!' (pp. 104-105; the italics are mine) (Barach, 1991, p.119).

If one looks for signs of detachment in the child of a traumatized, dissociative parent as the mother of the above vignette, one is led to put the emphasis—as Barach does—on the fact that the baby does not turn to the mother for comfort. If, on the other side, one is looking for evidence of D attachment, the emphasis will be put on the fact that the baby *keeps on crying* (that is, asks for attention and comfort) while *at the same time* avoids full contact with the mother. This is an index of conflictful or perhaps truly dissociated attachment behavior, rather than a hint that the child is becoming detached. That we are here witnessing dissociated rather than conflictful behavior is suggested by the fact that the baby's cry has an *erie* quality, indicative perhaps of an altered state of consciousness contingent upon the dissociation of executive and monitoring controls (Hilgard, 1986). Furthermore, if one looks only to the mother's emotional unavailability to the infant's cry—as the idea of equating the child's supposed detachment to dissociation leads one to do—one misses the fact that the mother's behavior in the above vignette is frightening to the infant (even if not directly threatening). The self-absorption (indicative of a trance-like state), the absent gestures, the voice that whispers something inaudible are, from the infant's point of view, all inexplicable and frightening non-verbal messages. At the same time, the mother is there, and does not give straightforward signals of rejecting the infant's requests for attention as would have done the mother of an avoidant infant. Straightforward signals of rejection are, one could argue, potentially much more explicable (for instance, by assuming that the self is unlovable and the mother unloving) and therefore much less frightening to the child. Dissociated, frightened and frightening parental behavior—rather than simple emotional non-responsivity—seems at work in the genesis of dissociated attachment behavior in the child.

The infant's disorganized/disoriented attachment behavior, it may be hypothesized, correspond to the construction of an internal working model of self and the attachment figure (Bowlby, 1973, 1979, 1980) that is multiple and incoherent. Multiple internal working models, as it will now be argued, may be held responsible for the D child's later predisposition to dissociation in the face of further traumatic experiences.

MULTIPLE WORKING MODEL OF SELF IN D INFANTS

Contemporary theories of cognitive development stemming from the first interpersonal experiences in the infant's life (Stern, 1985) allow for some inferences concerning the cognitive representations of self and other people (interpersonal cognitive schemata: see Safran, 1990) that may be constructed stemming from different patterns of attachment. For more details, and some empirical evidence supporting these inferences, that will be now presented in a very schematic form, the reader may consult some recent research and review papers by Bretherton (1985, 1990), Cassidy (1988), and Main, Kaplan and Cassidy (1985).

Secure (B) infants construct internal working models of self and the attachment figure that are notably coherent and unitary. On the basis of these early working models, the self comes later to be propositionally represented as lovable, and the attachment figure as trustworthy and available in case of need. Avoidant (A) children also construct coherent interpersonal schemata, in which the self is portrayed as unlovable and the attachment figure as rejecting or hostile. Later on, the parent may be idealized and a second interpersonal schema may be constructed on the basis of this idealization (Bowlby, 1973, 1980, 1988). In the absence of such an idealization or before it takes place, however, the avoidant child's first-hand information is such as to correspond to the construction of a coherent, unitary representation of self and the attachment figure. Anxious-resistant (C) children may construct since the beginning (that is, before any idealization of the parents) double models of self and the attachment figure. In one model, stemming from the instances of positive interaction with the attachment figure, the self is portrayed as lovable and the attachment figure as available; in the other model, stemming from the unpredictable episodes of unavailability of the attachment figure, the self is portrayed as threatened by loneliness and the attachment figure as untrustworthy. The cognitive apparatus may gradually become capable of treating these two models as the basis for issues of ambivalence (Attili, 1989) that may be dealt with without dissociation. D children, on the contrary, may construct multiple, incoherent or incompatible models of self and the attachment figure (Main, 1991)—not simply ambivalent ones. It is conceivable that the capacity for integration of the child's consciousness and memory is exceeded when, during the same attachment interaction, it is confronted with multiple models of self, the attachment figure and the attachment relationship. Massive dissociation will then take place. Let us now examine how multiple models of self can be constructed by D children—at least, by those D children that have been exposed, when infants, to extreme forms of frightened/frightening parental behavior.

When confronted with a frightened/frightening attachment figure, a child may construct the self as helplessly vulnerable and the attachment figure as threatening. The D child, however, has also ground for constructing the attachment figure as helpless and vulnerable (the parent looks inexplicably frightened), and the self as threatening—that is, endowed with mysteriously dangerous potentialities that

may be responsible for the attachment figure's frightened expressions while the child is approaching him/her (Main & Hesse, 1990). This view of the self as threatening may be reinforced if, as suggested above, anger related to the agonistic system (rather than to the attachment system) is mobilized while the child approaches the frightened attachment figure. Evidence that children that have been disorganized/disoriented infants in the SS construct models of the self as "bad" is now available (Cassidy, 1988).

A third interpersonal schema may be constructed by D children on the basis of the parent's tendency to somehow invert the attachment relationship (i.e., the parent unconsciously expects the infant to soothe his/her discomfort). Inverted attachment relationship set the stage for the child's self-perception as the rescuer of the frightened, distressed parent. It has been in fact observed that children classified as D when 12-18 month old display protective attitudes toward their parents when examined at school age (Main, Kaplan & Cassidy, 1985, p. 96). How this early representation of the self as the rescuer of a frightened, traumatized parent may be related to feelings of being doomed to fail and being incompetent, and/or to classical psychoanalytic issues of omnipotence, is readily apparent. The rescuer, the victim and the persecutor of the frightened/frightening attachment figure are, thus, self-representations that may simultaneously outgrow from the early experience of disorganized/disoriented attachment.

These three possibilities do not, however, exhaust the potentiality for the construction of multiple interpersonal schemata provided by D attachments. The parent, although perhaps with a frightened expression, is at time at least physically available to the disorganized/disoriented child—and therefore at least a prototypical version of the self-representation as lovable and of the attachment figure as loving is possible. In other moments, however, when the consequences of the unresolved traumas lead the parent to withdraw from the relationship with the child (because of depression, alcohol abuse, or the like), the child also has reasons for constructing the self as abandoned and unlovable and the attachment figure as deserting or neglecting.

It should not be assumed that every D infant is actually bound to develop and simultaneously entertain all these models of self and the attachment figure. Great variations in the parents' frightened/frightening behavior, and in the corresponding infants' disorganization/disorientation—ranging from extremely mild to extremely severe—have been observed and inferred in samples of D infants (Main & Hesse, 1990, 1992; Main & Solomon, 1990). The varieties of attachment to a frightened/frightening parent allow for different qualities and number of interpersonal schemata.

Let us now consider how the simultaneous construction of multiple, incompatible representations of self and the attachment figure, as it may take place in D babies, could put the dissociative dynamics of human memory and consciousness into motion.

DISSOCIATION AND MULTIPLE WORKING MODEL OF SELF

Contemporary cognitive theories of conscious and unconscious processing (see, e.g., Baars, 1988; Kihlstrom, 1987; Spiegel, 1991) are based on the view that information, both pertaining to different sensory channels and organized in separate complex domains of meaning, is processed in a parallel distributed process outside of consciousness. Consciousness, in these models, is related to the sequential processing of information that becomes then available for propositional (lexical) representation. The propositional structures of self-knowledge, according to some of these models, play a key role in the continuous, serial, conscious selection and integration (sequential orchestration: see also Tinnin 1990) of the information that is being unconsciously processed in a parallel distributed way. If the structures of propositional self-knowledge are fragmented rather than coherent, competing rather than harmoniously orchestrated, and mutually incompatible rather than reciprocally integrated, the serial organization of information may be hindered. Simultaneous or rapidly alternating incompatible, dissociated actions may then be observed, while altered states of consciousness will be subjectively experienced. Trance-like states such as those observed both in D infants and in adults suffering from MPD or from other dissociative disorders may thus be related to the existence of multiple, incoherent, mutually incompatible models of self (Spiegel, 1991; Tinnin, 1990).

The switch process (Putnam, 1988) that leads from an aspect of a multiple model of self to another (or in MPD patients, from one alter personality to another) can be profitably examined in terms of Edelman's theory of consciousness (Edelman, 1989)—a theory that masterfully combines biological-evolutionary, neurophysiological, connectionist and psychological themes. According to Edelman, a primary form of consciousness, shared by man and at least some other animal species, emerges from the matching of ongoing perceptual information related to outside reality with a particular memory structure. This memory structure relates information pertaining to the biological self (e.g., visceral and emotional information) to stored information pertaining to outside reality (christened not-self-by Edelman, 1989). Ongoing perceptual information that is assimilated to the not-self aspect of this memory structure is thus evaluated according to the related memory of the self. Primary consciousness (PC) emerges from this process. PC is the basis for a higher level of consciousness, specific to human beings, for which a conceptual memory of the distinction between self and not-self is necessary. The conceptual memory of self/not-self is the immediate antecedent of the propositional, verbalizable aspects of self-knowledge. In this sense, the higher-order consciousness (HOC) of human beings is related to the sequential nature of language and to the analytic-lexical operations of the left hemisphere in right-handed people. (see Tinnin, 1990). The working model of self and the attachment figure is an early aspect of the conceptual memory of self-not self. In order for the processes of HOC to proceed properly, the matching of ongoing environmental information with a coherent

(if not unitary) conceptual memory of self/not-self is necessary. If the conceptual memory schemata of the self/not-self distinction against which the ongoing environmental information is *at a given moment* matched, are multiple and incompatible, HOC will tend to collapse. It is likely that, *in that particular moment*, the subjective experience of the person will tend to be reduced to the PC. An altered state of consciousness will be experienced, inside which the non-conceptual, non-verbalizable aspects of the biological self (visceral and emotional information) will be confronted with stored and ongoing information concerning outside reality. If two or more of the incompatible conceptual models of self/not-self alternate rapidly during this altered state of consciousness, dissociated actions (each related to one of these incompatible models) such as those observed in D babies during the SS may make their appearance. If one among the competing conceptual models (let us label it CM1) is then selected for the matching with ongoing environmental information, the altered state of consciousness will come to an end, and HOC will be resumed. An amnesia barrier, however, will separate the information pertaining to CM1 from that pertaining to other models (CM2, CM3, etc.) when they will be eventually called into operation by new configurations of environmental stimuli. Until the process of switching from one CM to another in matching environmental information is completed, an altered state of consciousness (that is, a lapse of HOC and a resurgence of PC) will be subjectively experienced.

The above description applies equally well to the switches of internal working models in D infants during the interaction with the frightened/frightening parents, and to the switches of alters in patients suffering from MPD. This structural similarity suggests to look more closely for a possible etiological relationship between MPD, or other dissociative disorders, and disorganized/disoriented attachment.

D ATTACHMENT AND THE ETIOLOGY OF THE DISSOCIATIVE DISORDERS

At least three developmental pathways are laid open by multiple models of self, as those that have been here hypothesized to stem from an early D attachment. Two of these developmental pathways may, it is responsible to hypothesize, lead to dissociative disorders (one of them to relatively mild form of dissociative disorders, the other to the most severe form, i.e., MPD). The third developmental pathway is compatible with normal functioning of the personality. Let us examine these three possibilities, beginning with the last one.

1. One of the various models of the self and the attachment figure stemming from a D attachment may be selected much more often than the others during the interpersonal interactions the child comes to be engaged in. This may depend on relatively minor degrees of exposure to parental frightened/frightening behavior, on the stabilizing influence of attachment figures different from the frightened/frightening parent, or on the gradual elaboration of personal traumatic memories by the parent as the child grows older. In this case, switches of different representational

models are rare, and the cognitive-emotional development may proceed along lines compatible with unimpaired personality function. The existence of latent, dissociated models of a D attachment in a child whose development turns out favorably may reflect itself in a particular proneness to normal dissociative experiences (from intense involvement in daydreaming to mild forms of derealization). As an otherwise normal adult, such a former D infant may score high in the Dissociative Experiences Scale (for a study of dissociative experiences in a non-clinical population see Ross, Joshi & Currie, 1990), or may be highly hypnotizable (Hilgard, 1986; Bliss, 1986).

2. If the child entertaining a multiple model of D attachment has less favorable communicative experiences than in the above described case, but is not exposed to serious maltreatment or sexual abuse, he or she may become predisposed to develop a relatively mild dissociative disorder when confronted, as an adult, with specific interpersonal stressors (in particular, unhappy relationships involving attachment). It is likely that switches of the different models of self will continue to happen while such a child is confronted with unhappy even if not directly traumatic interpersonal events within the family and in his/her extrafamilial life. Dissociation may thus become a facilitated way of responding to interpersonal difficulties.

3. The various models of the self stemming from an early D attachment may become the basis on which the first alter personalities characterizing a MPD are developed. This is likely to happen if the D child becomes the victim of serious physical or sexual abuse (see, e.g., Bliss, 1986; Ross, 1989). The sequence of etiological events may be schematized as follows: (a) The predisposition to dissociate implied by the multiple model of a previous D attachment constitutes the ground for (b) entering in an altered state of consciousness while (c) abuse is taking place. (d) One among the already existing models of the self may be used as a template for the construction of an alter personality during this altered state of consciousness (primary consciousness according to Edelman (1989)). (e) The recurrence of the abuse strengthens the process of construction of the alter, which becomes then more and more easily relatable to propositional structures and able to sustain the process of higher order consciousness. (f) Switches between the primary personality and the alter will correspondingly imply even briefer states of altered (primary) consciousness: the phenomenology of trance-like expressions and dazed behavior while the switch is taking place may become more difficult to observe, while at the same time the amnesic barrier between the primary personality and the alter remains functioning. (g) Different models of the self stemming from the early D attachment may be used, in the face of different patterns of traumatic experiences, for the construction of different alters. These first alters, being grounded on the reality-based models of D attachment, may resemble real people more than personalities developed later—either out of intense absorption in imagination, or out of "elaborate pretending", Ross, 1989, p. 109).

The above hypothesis on the etiology of the dissociative disorders leaves open the possibility that massive disso-

ciation in response to severe traumas takes place even in children with a pattern of attachment different from the disorganized/disoriented one. It is however likely that, in the absence of multiple models of D attachment or of a genetically determined high hypnotizability (Bliss, 1986), the experience of abuse sets the stage for psychopathological disturbances other than the dissociative disorders.

The etiological model outlined above is also compatible with the possibility that D attachment, combined with other specific risk factors (e.g., a genetic predisposition to schizophrenia) may be a developmental step in the genesis of psychopathological syndromes different from the dissociative disorders. In this case, massive dissociative experiences should be expected to constitute at least an aspect of the psychopathological syndrome.

EVIDENCE LINKING D ATTACHMENT TO DISSOCIATIVE DISORDERS

The hypothesis that there is a high incidence of transgenerational transmission of dissociation and MPD (Braun, 1985) could find support in some recent findings of research on the intergenerational transmission of attachment patterns (Main, 1991). Clinical observations pointing to the fact that many MPD patients have been traumatized by parents who themselves suffer from MPD, remind closely the phenomenology of frightened parents who are frightening to their children highlighted by Main and Hesse (1990, 1992). Dissociative parental behavior during the SS has been noted, even if only sporadically, to be immediately followed by infant's dissociative behavior (Main & Hesse, 1992). There is, then, a coherent theme, related to the effect of traumas across generations, that seems to run across research on D attachment and research on MPD, both seen as intergenerational or family problems. This research theme could, in the near future, provide strong evidence for the hypothesis that D attachment is often the first developmental step in the genesis of a dissociative disorder.

Indirect evidence that a D pattern of attachment may play a role in the etiology of the dissociative disorders comes from a consideration of the dynamics of attachment mobilized inside the therapeutic relationship during the treatment of dissociative patients. Attachment patterns tend often to emerge inside the therapeutic relationship, that are notably similar to the patterns of attachment observed in the SS (Liotti, 1991). Patients suffering from the dissociative disorders often oscillate quickly between clinging to the therapist, emotionally withdrawing from him or her, and becoming frightened as if expecting to be assaulted by the therapist (cf. Barach, 1991, p. 120). Sometimes the display by these incompatible types of interpersonal behavior is almost simultaneous, taking place within a single session: in this case, the patient may show a trance-like or dazed expression while shifting from an attitude to the other. This is, of course, strongly reminiscent of some instances of disorganized/disoriented behavior observed in infants during the SS.

More direct evidence in support of the hypothesis that D attachment is an antecedent of the dissociative disorders comes from a recent study by Liotti, Intreccialagli and Cecere

(1991). The statistical finding that the parents of D infants often suffer from unresolved traumas related to the *loss through death of an attachment figure*, or other related traumas, (Main & Hesse, 1990; Ainsworth & Eichberg, 1991) allows for an easily testable hypothesis: If most patients suffering from dissociative disorders have been disorganized/disoriented infants, then dissociative patients should be, more often than other psychiatric patients, the offspring of parents who suffered a serious loss through death of a significant other immediately before or immediately after the patients' birth. Liotti et al. (1991) have asked a group of 46 patients suffering from various dissociative disorders (the "cases"), and to a group of 119 patients with other psychiatric diagnosis (the "controls"), the following question: "Did your mother suffer the loss through death of one of her parents, a sibling, a child, or her husband in the two years before—two years after your birth?" About 62% of the cases and only about 13% of the controls answered this question in the affirmative—a difference that is statistically highly significant (Liotti et al., 1991).

There is, then, evidence that a high percentage of the mothers of dissociative patients were mourning over a serious loss in the period during which their children were becoming attached to them. Frightening memories and feelings are part of most unresolved mourning processes (Bowlby, 1980; Parkes, 1972; Worden, 1982). In order to explain Liotti's finding (Liotti, Intreccialagli, and Cecere, 1991), then, it may be hypothesized that unresolved mourning processes in the mothers of as many as 62% of their cases (dissociative patients) could have been the source, or one of the sources, of frightened behavior while dealing with the infants. These infants, then, could have acquired their vulnerability to the dissociative disorders through the mediation of disorganized/disoriented attachment.

CONCLUSION

The possibility of tracing the etiology of the dissociative disorders back to an early disorganized/disoriented attachment, if confirmed, could have important consequences for research, prevention and therapy. Dissociation could become a major topic for further research on infants' socio-cognitive developmental processes—a research area that is proving able to clarify many complex issues of adult psychology and psychopathology (Stern, 1985). Prevention of the dissociative disorders could make resource of specifically tailored counseling services offered to parents who are suffering from serious losses or other unresolved traumas while taking care of their infant children. Therapists treating dissociative patients could find solid theoretical grounds for the understanding of the relationships between (a) attachment dynamics in the patient's present and past interpersonal world (including the therapeutic relationship), and (b) dissociative defenses, symptoms and experiences. It is worth hoping, then, that the observations and the hypotheses reported in this article will be the object of further inquiry. ■

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