

## **Mentalizing and borderline personality disorder**

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### **Abstract**

*Background:* Mentalization-based treatment is a model of psychodynamic therapy rooted in attachment theory that aims to enhance the individual's capacity to represent thoughts, feelings, wishes, beliefs and desires in themselves and in others in the context of attachment relationships.

*Aims:* To describe the normal development of mentalization as well as anomalies in mentalization that can arise and can ultimately lead to the development of personality disorder.

*Method:* Description of the basic principles of mentalization-based treatment as well as the rationale for use of these techniques.

*Results:* Summaries of randomized controlled trial and a description of an ongoing RCT for the outpatient treatment of BPD.

*Conclusion:* MBT is a generic psychotherapeutic treatment which shares many features with other psychotherapeutic approaches but is unique in focusing on enhancing the patient's capacity to think about and regulate mental states.

**Keywords:** *Mentalization-based treatment, borderline personality disorder*

### **Introduction**

This paper will outline a developmental model for understanding borderline personality disorder (BPD) in terms of a deficit in mentalizing capacity, consider the changing views of BPD as a severe and enduring personality disorder, and argue that a focus on mentalization as a core component of treatment facilitates successful outcome not only because it addresses a central problem of the patient, but also because it reduces the likelihood of causing harm in a group of patients who may be particularly vulnerable to the negative effects of psychotherapeutic intervention.

### **Developmental model of mentalization**

Mentalization is the capacity to make sense of self and of others in terms of subjective states and mental processes. Understanding other people's behaviour in terms of their likely thoughts and feelings is a major developmental achievement that, we believe, is facilitated by secure attachment relationships. Our understanding of others critically depends on whether as infants our own mental states were adequately understood by our caregivers. Consequently the process is vulnerable to disruption. Our premise is that unstable or reduced mentalizing capacity is a core feature of borderline personality disorder (BPD).

Therefore, successful treatment must have mentalization as its focus or at least stimulate development of mentalizing as an epiphenomenon.

We take a dynamic developmental view of the causes of a dysfunction of mentalization in BPD (e.g., Crick, Murray-Close, & Woods, 2005; Hughes & Ensor, in press). We assume that a complex function such as mentalization will have multiple components (developmental precursors, alternative mediating mechanisms, and strategies for compensating for a deficit), and that contextual determinants will moderate the relationship of risk factors and pathogenic outcomes. Atypical personality development can only be identified by considering the difficulties in negotiating developmentally appropriate, normative tasks that have relevance for the particular disorder of interest.

The ideal developmental model to describe the emergence of the capacity for mentalization will always be a transactional one. Transactional models consider the impact that individuals have on their environment, an impact that can modify that environment, changing the characteristics of both the person and the environment in ways that will alter the nature of future interactions between the two (Cicchetti & Rogosch, 2002; Steinberg & Avenevoli, 2000). The transactional nature of development is probably key to understanding the emergence of most complex mental health problems such as BPD. For example, disorganisation of the attachment system may cause a child to be increasingly manipulative and controlling over their environment, but such controlling actions may undermine the caregiver's capacity to provide a normative playful environment to his or her toddler.

Our developmental model of borderline personality disorder (Bateman & Fonagy, 2004; Fonagy, Gergely, Jurist, & Target, 2002; Fonagy, Target, Gergely, Allen, & Bateman, 2003) focuses around the development of the social affiliative system, which we consider to facilitate many higher-order social cognitive functions underpinning interpersonal interaction, specifically in an attachment context (Fonagy, Gergely, & Target, in press). Three of these are of primary importance in understanding BPD – affect representation and regulation; attentional control, also with strong links to the regulation of affect; and finally mentalization, a system for interpersonal understanding within the attachment context. We will briefly review the development of these capacities in order to highlight potential aetiological influences on their ontogenetic unfolding. Since they evolve in the context of the child's relationships with its caregivers, they are vulnerable to environmental deficiencies such as neglect and maltreatment.

#### *Fragile affect regulative processes*

The centrality of a failure of affect regulation in borderline patients is generally accepted. The diagnostic criteria of the revised fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-R) include “intense episodic dysphoria, irritability or anxiety”. Siever and colleagues, in their definitive review, consider it one of two endophenotypes of BPD (the other being impulsive aggression) (Siever, Torgersen, Gunderson, Livesley, & Kendler, 2002). The acquisition of emotion regulation skills begins in infancy (Mangelsdorf, Shapiro, & Marzolf, 1995) and continues through childhood and adolescence (Denham, 1998). To achieve normal self-experience the infant needs his emotional signals to be accurately or contingently mirrored by an attachment figure. This is far more than acceptance and validation of the experience by a significant adult and must support the child's sense of agency as an initiating being (Ryan, 2005). Illusory control of the interaction generates a sense of agency and pleasure in the infant (Watson, 1984). The loss of contingency has temporary catastrophic consequences for self-organization and affect regulation (Braungart-Rieker, Garwood, Powers, & Wang, 2001;

Ellsworth, Muir, & Hains, 1993; Haley & Stansbury, 2003; Weinberg & Tronick, 1996; Weinberg & Tronick, 1994). In mirroring the infant, the caregiver must achieve more than contingency (in time, space, and emotional tone). The mirroring must be marked (e.g., exaggerated), in other words slightly distorted, if the infant is to understand the caregiver's display as part of his emotional experience rather than an expression of hers (Fonagy et al., 2002; Gergely, 2004). This will enable the infant to internalize the representation of the reflection of her or his experience and thus generate a representational system for internal states (a kind of social biofeedback system) (Gergely & Watson, 1996).

There is evidence to suggest that the absence of marked contingent mirroring is associated with the later development of disorganized attachment (Gergely, Koós, & Watson, 2002; Koós & Gergely, 2001; Koós & Gergely, 2001). The disorganized pattern in infancy is marked by the infant's incoherent and ineffective attempts to self-regulate upon reunion with their caregiver following a brief period of separation. Infants whose attachment is disorganized go on to develop oppositional, highly controlling behavioural tendencies in middle childhood (Green & Goldwyn, 2002; van IJzendoorn, Scheungel, & Bakermans-Kranenburg, 1999) and dissociative features in adolescence and adulthood (Lyons-Ruth, 2003; Sroufe, Egeland, Carlson, & Collins, 2005; Weinfeld, Whaley, & Egeland, 2004). The work of Kochanska (reviewed below) connects disorganized attachment to limited self-control and affect dysregulation (Kochanska, Coy, & Murray, 2001a; Kochanska & Murray, 2000).

#### *Self-control, attention and effortful control*

Recent studies have highlighted difficulties with attentional control in BPD patients (Hoermann, Clarkin, Hull, & Levy, 2005; Lenzenweger, Clarkin, Fertuck, & Kernberg, 2004; Posner et al., 2002). The failure to voluntarily direct attention may of course link directly to problems of impulsivity, but is also likely to indirectly undermine their capacity to function adequately in interpersonal contexts. How is effortful control related to early experience?

Self-regulation is taught (or more accurately, modelled) by the caregiver's regulatory activity. It has been suggested that joint attention with the caregiver serves a self-organizing function in early development (Mundy & Neal, 2001). Indeed we have long known that intelligence remains related to early attachment security (Cicchetti, Rogosch, & Toth, 2000; Jacobsen, Edelstein, & Hofmann, 1994; Jacobsen & Hofmann, 1997; Jacobsen, Huss, Fendrich, Kruesi, & Ziegenhain, 1997; van IJzendoorn & van Vliet-Visser, 1988). More recently, Jay Belsky and Pasco Fearon have drawn our attention to early attachment relationships as a possible organizer of attentional systems (Belsky & Fearon, 2002; Fearon & Belsky, 2004). Evidence from late-adopted Romanian orphans with profound disorganizations of attachment suggests that quite severe attention problems are more common in this group than would be expected both in relation to other forms of disturbance and epidemiological considerations (Chugani et al., 2001; Kreppner, O'Connor, & Rutter, 2001).

Self-control and the internalization of regulatory capacity appear to be rooted in mutual responsiveness. The longitudinal work of Kochanska and colleagues suggests that higher levels of mutual responsiveness in mother-child dyads between 26 and 41 months predicts greater self-control, the internalization of maternal rules and a lessened need for maternal controlling and coercion. Children in Kochanska's longitudinal sample (Kochanska et al., 2001a; Kochanska & Murray, 2000) manifested more effortful control and were able to follow both do and don't commands better given mother-child mutually responsive orientation. There is considerable evidence that the absence of controlling behaviour on the part of the parent predicts internalized controls in preschool children (Grolnick, 2003). Work by Richard Ryan

and colleagues has demonstrated that on the whole parents who are controlling and less supportive of the child's autonomy have children who are less motivated to achieve, more likely to engage in risky behaviours, and less likely to experience well-being and mental health (Ryan & Deci, 2003). The benign effect of autonomy support persists to adolescence where parental autonomy support has been shown to predict higher sense of self-worth, identity and self-determination (Chirkov & Ryan, 2001; Ryan & Kuczowski, 1994).

### *Attachment and mentalization*

There is limited but suggestive evidence that individuals with BPD have histories of insecure disorganized attachment. Two longitudinal studies following children from infancy to early adulthood have found associations between insecure attachment in early childhood and BPD symptoms on follow-up (Lyons-Ruth, Yellin, Melnick, & Atwood, 2005; Sroufe et al., 2005). Levy (2005) recently reviewed the growing literature on the relationship of BPD and attachment. To date nine studies have examined attachment patterns with patients diagnosed with BPD using the best available assessment of adult attachment, the adult attachment interview; two further studies used rating scales and over a dozen used self report measures. BPD is strongly associated with insecure attachment (6–8%) and there are indications of disorganization (unresolved attachment and cannot classify category of attachment) in interviews and fearful avoidant and preoccupied attachment in questionnaire studies (Levy, 2005). Summarizing across several studies, early insecurity is a relatively stable characteristic of the individual, particularly in conjunction with subsequent negative life events (94%) (Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Weinfield, Sroufe, & Egeland, 2000). Given evidence of the continuity of attachment from early childhood, at least in adverse environments, the extent to which childhood attachment may affect mentalization may be relevant to the development of BPD.

The quality of the children's primary attachment relationship was shown to predict mentalization by a number of studies (e.g., Fonagy & Target, 1997; Harris, 1999; Meins, Fernyhough, Russel, & Clark-Carter, 1998; Ontai & Thompson, 2002; Raikes & Thompson, 2006; Steele, Steele, Croft, & Fonagy, 1999; Symons, 2004; Thompson, 2000). It should be noted that not all studies find this relationship and it is more likely to be observed for emotion understanding than Theory of Mind (ToM). However, in at least two studies, children's Internal Working Model (IWM) of the attachment relationship was shown to correlate with emotion understanding (de Rosnay & Harris, 2002; Fonagy, Redfern, & Charman, 1997). More pertinently for the current set of hypotheses, it is quite likely that family dynamics mediate this relationship via the coherence and mentalizing nature of the general discourse in the home (e.g., Dunn, 1996; Dunn, Brown, Somkowski, Telsa, & Youngblade, 1991; Nelson, 2005; Ruffman, Slade, & Crowe, 2002). In adolescent patients, for example, the tendency to misunderstand people's actions and intentions (poor understanding of social causality), characteristic of BPD, shows a strong ( $r = .51$ ) association with a simple metric of social instability (the number of times the family moved, see Westen, Ludolph, Block, Wixom, & Wiss, 1990).

## **Histories of hostile and violent attachments in BPD**

### *Anomalous attachment experiences*

BPD entails some degree of social inheritance as well as genetic inheritance, but of course the two (in the absence of genetically informed studies) will be hard to separate. As

personality has a large genetic component, it would be surprising if extremes of personality types such as BPD did not have a major genetic component. Current evidence suggests that genes may have both main effects (Torgersen et al., 2000; White, Gunderson, Zanarini, & Hudson, 2003) and interactive effects with anomalous environmental influences (Caspi et al., 2002; Caspi et al., 2003). Longitudinal and genetically sophisticated studies of early environment are essential as we know that children who go on to develop BPD are vulnerable, not least because they are likely to bring hard-to-manage temperaments to the parent-child relationship (Depue & Lenzenweger, 2001).

Childhood histories of lengthy and traumatic separation or permanent losses differentiate BPD patients from other personality disorder as well as from Axis I groups such as schizophrenia and depression (Bradley & Westen, 2005). A meta-analytic review found that 20–40% of BPD patients experienced traumatic separations from one or both parents in childhood (Gunderson & Sabo, 1993). A more recent summary of the literature (Levy, 2005) estimates separation and loss at 37–64% but identifies 4 studies that failed to confirm these findings. Whilst it does not confirm the assumption that all borderline patients have a borderline parent, and whilst we should not exclude the possibility of child-to-parent effects or genetic rather than environmental mediation, there is consistent evidence of problematic parenting and parental bonding with BPD (Frank & Hoffman, 1986; Johnson et al., 2001; Paris, 2003; Paris & Frank, 1989; Russ, Heim, & Westen, 2003; Soloff & Millward, 1983; Young & Gunderson, 1995). Low family cohesion and high instability characterizes families of BPD patients (Feldman et al., 1995). Lyons-Ruth has shown in a small sample that disrupted maternal communications in infancy, such as maternal frightening behaviour, misattunes emotional responding, and role reversal involving seeking comfort from the infant correlated significantly ( $r = .31$ ) with borderline symptoms as assessed at 18 (Lyons-Ruth et al., 2005).

#### *The role of trauma in the acquisition of mentalization*

Numerous studies have linked childhood maltreatment, particularly childhood sexual abuse (CSA), to BPD (Herman, Perry, & van der Kolk, 1989; Ogata et al., 1990; Zanarini, 1997; Zanarini et al., 1997). Some studies make specific claims about the pattern of maltreatment that specifically indicates BPD (McLean & Gallop, 2003; Silk, Lee, Hill, & Lohr, 1995; Yen et al., 2002; Zanarini et al., 2002). Childhood sexual abuse (CSA) is most often considered as aetiologically linked to BPD on the basis of its high prevalence (Battle et al., 2004) and correlation with suicidal behaviour (Battle et al., 2004). In the dialectic model trauma, including CSA, is thought to lead to problems of emotion regulation and thus be a distal cause of the disorder (Fruzzetti, Shenk, & Hoffman, 2005). The MBT model assumes that individuals with BPD, while able to mentalize, are more likely to abandon this capacity under high emotional arousal (in response to maltreatment) because mentalization was not as well established during the first decade of life, in part as a consequence of early maltreatment and its corollaries.

Extensive indirect evidence suggests that early attachment trauma undermines the capacity to think about mental states. Young maltreated children engage in less symbolic and dyadic play (Alessandri, 1991), fail to show typical empathic responses to distress in other children (Howes & Espinosa, 1985; Klimes-Dougan & Kistner, 1990; Main & George, 1985), have a higher incidence of emotionally dysregulated behaviour (e.g., Maughan & Cicchetti, 2002), and make proportionately fewer references to internal states. Maltreating mother-child dyads discuss emotions less frequently than non-maltreating dyads (Beeghly & Cicchetti, 1994; Shipman & Zeman, 1999). In addition to data on emotion understanding, delayed theory-of-mind understanding has also been reported in maltreated children

(Cicchetti, Rogosch, Maughan, Toth, & Bruce, 2003; Pears & Fisher, 2005). In a sample of 86 individuals with PD diagnosis we found that 97% of patients who had a history of maltreatment and low reflective function (RF – an attachment-based measure of mentalization in autobiographical narratives) met criteria for BPD (Fonagy et al., 1996).

As many patients with BPD do not experience sexual or physical abuse (Paris, 2004), an etiological model must also explain the development of BPD for non-traumatized individuals. Given the high prevalence of maltreatment in the history of individuals with BPD, it is easy to lose sight of what may be the critical causal contextual variables. Evidence suggests that contextual factors such as caregiver response to the disclosure of the abuse may be more important than sexual and physical abuse per se in long-term outcome (Horwitz, Widom, McLaughlin, & White, 2001). Numerous aspects of the family environment of maltreatment might undermine the robust development of the child's mentalization, including family chaos, disrupted attachments, multiple caregivers, parental neglect, alcoholism, and affective instability among the family members. As we have seen, the level of mental state understanding (particularly emotion understanding) is closely linked to the extent that emotions are openly discussed in the mother-child dyad. Other relevant features of the emotional climate within the family (e.g., Cassidy, Parke, Butkovsky, & Braungart, 1992) are likely to be disrupted by maltreatment, especially the child's opportunity to engage in pretend play, which also greatly facilitates the emergence of mentalization (Harris, de Rosnay, & Pons, 2005; Jenkins & Astington, 2000; Taylor et al., 1998; Youngblade & Dunn, 1995). Thus the mentalization-based approach predicts that *it is less the fact of maltreatment than a family environment that discourages coherent discourse concerning mental states that is likely to predispose the child to BPD*. In line with this, a number of studies point to the importance of neglect, low parental involvement and emotional maltreatment rather than the presence of physical and sexual abuse as the critical predictor of BPD (Johnson et al., 2001; Ludolph et al., 1990). In our formulation, we consider parental emotional under-involvement with children as most likely to impair the appropriate development of social cognition. We consider that the impact of trauma is most likely to be felt as part of a more general failure of consideration of the child's perspective through neglect, rejection, excessive control, and unsupportiveness. However, we believe that aggression and cruelty directly focused on the child will, if present, often have specific effects in addition to the non-specific influences referred to above. This may be due to (a) the defensive inhibition of the capacity to think about others' malevolent thoughts and feelings about the self; (b) early excessive stress that may distort the functioning of arousal mechanisms inhibiting orbito-frontal cortical activity (mentalizing) at far lower levels of risk than would normally be the case (Arnsten, 1998); (c) chronic arousal of the attachment system (Bartels & Zeki, 2000, 2004). Any trauma arouses the attachment system (seeking for protection) but in the case of attachment trauma, in seeking proximity to the traumatizing attachment figure as a consequence of trauma, the child may naturally be further traumatized. The prolonged activation of the attachment system may be an additional problem, as the arousal of attachment may have specific inhibitory consequences for mentalization in addition to that which might be expected as a consequence of increased emotional arousal.

### **Consequences of the inhibition of mentalization**

We assume that mentalization and the associated capacities for affect representation, affect regulation and attentional control normally obscure the potential for forms of subjectivity that developmentally antedate mentalization. Our central thesis is that the failure of these capacities, in combination with the profound disorganization of self-structure, explain many

facets of borderline personality functioning. The phenomenology of BPD is the consequence of (a) the attachment-related inhibition of mentalization, (b) the re-emergence of modes of experiencing internal reality that antedate the developmental emergence of mentalization and (c) the constant pressure for projective identification, the re-externalization of the self-destructive alien self.

*(a) The attachment-related inhibition of mentalization*

Individuals with borderline personality disorder are normal mentalizers except in the context of attachment relationships. In these contexts a number of indications of a failure of mentalization become apparent. Mentalization (a psychological self-narrative) maintains an agentive sense of self (Fonagy & Target, 1997). Temporary failure of mentalization is invariably associated with changes in the phenomenology of the self. In the face of negative affect individuals with BPD struggle to experience themselves as authors of their actions, leading not only to a sense of temporally diffused identity (Kernberg, 1983), but also to experiences of inauthenticity, incoherence, emptiness and inability to make commitments, disturbances of body image, and gender dysphoria (Akhtar, 1992) borne, all of which are out by factor-analytic studies of data from clinically experienced informants for adult (Wilkinson-Ryan & Westen, 2000) and adolescent patients (Betan & Westen, 2005). In such states the patients tend to misread minds, both their own and those of others. Work from Drew Westen's laboratory has consistently demonstrated that patients with BPD represent others' internal states with less complexity and differentiation than patients with other disorders such as major depression (Baker, Silk, Westen, Nigg, & Lohr, 1992; Westen, Lohr, Silk, Gold, & Kerber, 1990). When the capacity for mentalization is inhibited by emotional arousal, prementalistic modes of organizing subjectivity emerge, which have the power to disorganize relationships and destroy the coherence of self-experience that the narrative provided by normal mentalization generates.

*(b) The re-emergence of prementalistic representations of internal states*

In this way mentalization gives way to psychic equivalence, which clinicians normally consider under the heading "concreteness of thought". No alternative perspectives are possible. There is a suspension of the experience of as if and everything appears to be for real. Patients' exaggerated reactions are justified by the seriousness with which they suddenly experience their own and others' thoughts and feelings. The consequent vivid and bizarre quality of subjective experience can appear as quasipsychotic symptoms (Zanarini, Gunderson, & Frankenburg, 1990) and is reminiscent of the physically compelling memories associated with post-traumatic stress disorder (PTSD) (Morrison, Frame, & Larkin, 2003). Conversely, thoughts and feelings can come to be almost dissociated to the point of near meaninglessness. In these states patients can discuss experiences without contextualizing these in any kind of physical or material reality. Several studies using Rorschach, the thematic apperception test (TAT) and other narrative methods have provided evidence of hypercomplex representations of mental states of others, which are often malevolent and idiosyncratically elaborated (Stuart et al., 1990; Westen, Lohr et al., 1990; Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990). Attempting psychotherapy with patients who are in this mode can lead the therapist to lengthy but inconsequential discussions of internal experience that have no link to genuine experience. Dissociation is now a component of one of the diagnostic criteria of the disorder.

Finally, early modes of conceptualising action in terms of that which is apparent can come to dominate motivation. Within this mode there is a primacy of the physical. Experience is only felt to be valid when its consequences are apparent to all. Affection, for example, is only true when accompanied by physical expression.

*(c) Re-externalization of the alien self*

We speculate that when a child does not have the opportunity to develop a self-representation through the caregiver's mirroring, he internalizes the non-contingent image of the caregiver as part of his self-representation (Winnicott, 1956). We have called this discontinuity within the self the "alien self". We understand the controlling behaviour of children with a history of disorganized attachment (Kochanska, Coy, & Murray, 2001b; Solomon, George, & Dejong, 1995) as persistence of a pattern analogous to projective identification where the experience of incoherence within the self is reduced through externalization. The most disruptive feature of borderline cognition is the apparently unstoppable tendency to create unacceptable experience within the other. Externalization of the alien self is desirable for the child with a disorganized attachment but is a matter of life and death for a traumatized individual who has internalized the abuser as part of the self. The unbearable emotional experience can include feeling abandoned, evil, misunderstood, victimized, inferior, and monstrous (Bradley & Westen, 2005; Zanarini, Frankenburg, Hennen, & Silk, 2003; Zittel Conklin & Westen, 2005). The externalization of these internal states is widely recognized in the common counter-transferential reactions of therapists working with borderline patients – anger and hatred, helplessness and worthlessness, fear and worry, resentment, and urges to save and rescue the patient (Gabbard & Wilkinson, 1994). The alternative to projective identification is obtaining relief from experiences of overwhelming and intolerable emotion through the physical destruction of the self by self-harm and suicide (Kullgren, 1988; Yen et al., 2002). These and other actions can also serve to create a terrified alien self in the other – therapist, friend, parent – who thus becomes the vehicle for what is emotionally unbearable.

We see the capacity to mentalize as particularly helpful when people have been traumatized. Mentalization of adversity can moderate the negative sequelae of psychosocial trauma (Fonagy et al., 1996). The capacity to mentalize gives those who are subjected to traumatic experiences the power to hold back modes of primitive mental functioning, the reemergence may of which have adverse effects. It makes conceptual sense, therefore, that mentalizing should be a focus for therapeutic intervention if we are to help borderline patients bring primitive modes of mental functioning under better regulation and control. But before we discuss treatment we must understand the longitudinal course of BPD, because it is against this background that treatment is applied and potentially can provide great benefit or induce considerable harm.

### **The course of borderline personality disorder**

We expect BPD to have an enduring quality. Early follow-up studies highlighted the inexorable nature of the illness, hinting less at recovery than at a disease process which ran a long-term course (e.g., Stone, 1990). However, two carefully designed fully powered prospective studies have shown that the majority of BPD patients experience a substantial reduction in their symptoms far sooner than previously assumed (Shea et al., 2004; Zanarini et al., 2003). After six years, 75% of patients diagnosed with BPD severe enough to require hospitalization achieve remission by standardized diagnostic criteria (Cohen, Crawford,



Johnson, & Kasen, 2006; Skodol et al., 2006; Zanarini, Frankenburg, Hennen, Reich, & Silk, 2006; Zanarini et al., 2003). Patients with BPD *can* undergo remission – a concept previously solely used in the context of Axis I pathology. About 50% remission rate has occurred by four years but the remission is steady (10–15% per year). Recurrences are rare, perhaps no more than 10% over 6 years. This contrasts with the natural course of many Axis I disorders, such as affective disorder, where improvement may be more rapid but recurrences are common (Keller et al., 1992).

While improvements of BPD are substantial, it is symptoms such as impulsivity and associated self-mutilation and suicidality that show dramatic change, not affective symptoms or social functioning (McGlashan et al., 2005). The dramatic symptoms recede, but abandonment concerns, sense of emptiness, relationship problems, and vulnerability to depression are likely to remain present in at least half the patients. When dramatic improvements occur, they sometimes occur quickly, quite often associated with relief from severely stressful situations (Gunderson et al., 2003). It seems that certain co-morbidities undermine the likelihood of improvement (Zanarini, Frankenburg, Hennen, Reich, & Silk, 2004); the persistence of substance use disorders decreases the likelihood of remission, suggesting that the latter must be treated. In general, we anticipate that contextual conditions which undermine mentalization favourably alter both in spontaneous remission and in treatment, permitting symptomatic improvements. We anticipate the degree of improvement in mentalization to correspond to further changes in affective symptoms and social functioning.

### **The reality of iatrogenic harm**

If the majority of cases of BPD resolve naturally within six years, why have clinicians traditionally agreed about the disorder's treatment-resistant character? As we have argued elsewhere (Fonagy & Bateman, 2006a), one possible conclusion may be that some psychosocial treatments practised currently, and perhaps even more commonly in the past, may have impeded the borderline patient's capacity to recover following the natural course of the disorder and advantageous changes in social circumstances. In Michael Stone's (1990) classic follow-up of patients treated nearly 40 years ago, 66% recovery rate was only achieved in 20 years (four times longer than reported in more recent studies). While it is possible that greater awareness of diagnosis has changed thresholds and allowed less severe cases to enter these follow-along studies, it seems unlikely that the nature of the disorder has changed or that treatments have become that much more effective. The known efficacy of pharmacological agents, new and old, may not account for the difference (Tyrer & Bateman, 2004); nor are the new evidence-based psychosocial treatments widely available. It is as likely that the apparent improvement in the course of BPD is due to harmful treatments being offered less frequently. This change could be a consequence of the changing pattern of healthcare particularly in the United States (Lambert, Bergin AE, & Garfield, 2004), but also of recognition by clinicians of the possibility of iatrogenic deterioration and an avoidance of damaging side effects.

### **Iatrogenesis, psychotherapy and BPD**

Whereas pharmacological studies routinely explore the potential harm that a well-intentioned treatment may cause, in the case of psychosocial treatments we are too ready to assume that they are at worst inert. However, we suggest that in certain disorders psychological therapy may represent a significant risk. Whatever the mechanisms of

therapeutic change may be, traditional psychotherapies depend for their effectiveness on the individual's capacity to consider their experience of their own mental state alongside its representation by the psychotherapist. The integration of one's current experience of mind with the alternative view presented by the psychotherapist is at the foundation of the change process. The capacity to mentalize is essential to achieve this integration.

Thus, individuals with a very poor appreciation of their own and others' perception of mind are unlikely to benefit from traditional (particularly insight-oriented) psychological therapies. We have accumulated some evidence to support the view that individuals with BPD have an impoverished model of their own and others' mental function (Bateman & Fonagy, 2004). Their schematic, rigid and sometimes extreme views make them vulnerable to emotional storms and impulsive actions, and create profound problems of behavioural regulation, including affect regulation. The weaker an individual's sense of their own subjectivity, the harder it is for them to compare the validity of their own perceptions of the way their mind works with that presented by a mind expert. Thus they may all too often accept uncritically or reject wholesale alternative perspectives. Even focusing on how the patient feels can have its dangers. In our experience a person with little capacity to discern the subjective state associated with anger cannot benefit from being told both that they are feeling angry and the underlying cause of that anger. This assertion addresses nothing that is known or can be integrated. It can only be accepted as true or rejected outright, but in neither case is it helpful. The dissonance between the patient's inner experience and the therapist's perspective, in the context of feelings of attachment to the therapist, leads to bewilderment, which in turn leads to instability as the patient attempts to integrate the different views and experiences. Unsurprisingly, this results in more rather than less mental and behavioural disturbance.

### **Mentalizing as the key to successful treatment**

So what should the therapist do? The problem is compounded by the fact that attachment and mentalization are loosely coupled systems existing in a state of partial exclusivity (Fonagy & Bateman, 2006b). Whilst mentalization has its roots in the sense of being understood by an attachment figure, it is also more challenging to maintain in the context of an attachment relationship (e.g., the relationship with the therapist) for those individuals whose problem is fundamentally one of attachment (Gunderson, 1996). Recent intriguing neuro-scientific findings have highlighted that the activation of the attachment system tends temporarily to inhibit or decouple the normal adult's capacity to mentalize (Bartels & Zeki, 2004). We have proposed on the basis of both research findings and clinical observation that individuals with BPD have hyperactive attachment systems as a result of their history and/or biological predisposition (Fonagy & Bateman, 2006c). This may account for their compromised mentalizing capacity.

It follows from the evidence outlined above that the recovery of mentalizing capacity in the context of attachment relationships can be conceived of as a primary objective of all psychosocial treatments for BPD. But we suggest that patients with BPD are particularly vulnerable to side effects of psychotherapeutic treatments that activate the attachment system. Yet without activation of the attachment system borderline patients will never learn to function psychologically in the context of interpersonal relationships. The therapist must tread a precarious path between stimulating a patient's attachment and involvement with treatment whilst helping him to maintain mentalization. Treatment will be effective to the extent that it is able to enhance the patient's mentalising capacities without generating iatrogenic effects as it stimulates the attachment system. In accordance with this principle,

we have developed a treatment focusing on mentalizing and subjected it to research scrutiny. We are by no means maintaining that MBT is the only treatment applying this principle. Many aspects of DBT (see Feigenbaum, this issue), Ryle's cognitive analytic therapy (Ryle, 1990), Hobson's conversational model as applied by Stevenson & Meares (Stevenson & Meares, 1992; Stevenson & Meares, 1999; Stevenson, Meares, & D'Angelo, 2005) include important components facilitating mentalization, discussed in slightly different language, e.g., mindfulness, validation, self-states etc. The sole way that MBT considers itself unique in relation to these other forms of therapy is placing mentalization at the epicentre of therapeutic change. However, we recognize that this focus may not be the most important aspect of the therapeutic approach, and that mentalization may for example be more dramatically facilitated by the coherence of an elaborate treatment programme that concretely demonstrates to the client that their thoughts and feelings are seriously considered by ensuring clarity of communication, minimizing conflicting and contradictory medical advice and offering a clear structure.

MBT aims to develop a therapeutic process in which the mind of the patient becomes the focus of treatment. The objective is for the patient to find out more about how he thinks and feels about himself and others, how that dictates his responses, and how errors in understanding himself and others lead to actions in an attempt to retain stability and to make sense of incomprehensible feelings. It is not for the therapist to tell the patient about how he feels, what he thinks, how he should behave, what the underlying reasons are, conscious or unconscious, for his difficulties. We believe that any therapy approach that moves towards knowing how a patient is, how he should behave and think, and why he is like he is, is likely to be harmful. We recommend an inquisitive or not-knowing stance. This is not synonymous with having no knowledge. The term is an attempt to capture a sense that mental states are opaque and that the therapist can have no more idea of what is in the patient's mind than the patient himself. When the therapist takes a different perspective to the patient this should be verbalised and explored in relation to the patient's alternative perspective, without making assumptions about whose viewpoint has greater validity. The task is to determine the mental processes that have led to alternative viewpoints and to consider each perspective in relation to the other, accepting that diverse outlooks may be acceptable. Where differences are clear and cannot initially be resolved they should be identified, stated, and accepted until resolution seems possible. The therapist is required to own up to his own anti-mentalizing errors, which are treated as opportunities to learn more about feelings and experiences – How was it that I did that at that time? He must articulate what has happened in order to demonstrate that he is continually reflecting on what goes on in his mind and on what he does in relation to the patient. In MBT the principal aims are always the same – to re-instate mentalizing at the point at which it is lost, to stabilize mentalizing in the context of an attachment relationship, to minimize the likelihood of adverse effects, and to allow the patient to discover himself and others through a mind considering a mind. Careful focus on the patient's current state of mind will achieve these aims. The technique of MBT is described in what we hope is a simple, accessible form in our recent practical guide (Bateman & Fonagy, 2006).

### **Research evidence for treatment focusing on mentalizing**

Our programme of mentalization-based treatment was developed and implemented by a team of generically-trained mental health professionals. The research took place within a normal clinical setting and in a locality and healthcare system in which patients were unlikely to be able to obtain treatment elsewhere. This allowed effective tracing of patients within the

service and accurate collection of clinical and service utilisation data. Patients were treated at only two local hospitals for medical emergencies such as self-harm, enabling us to obtain highly accurate data of episodes of self-harm and suicide attempts requiring medical intervention. The programme was complex, but was designed so that it could be dismantled at a later date to determine the therapeutic components.

Our initial task in setting up the treatment programme was to review the literature, to consider the evidence for effective interventions, and to match those to the skills within the team. From the evidence discussed above we concluded that treatments shown to be effective with BPD had certain common features. They tended (a) to be well-structured, (b) to devote considerable effort to the enhancing of adherence, (c) to be clearly focussed, whether that focus was a problem behaviour such as self-harm or an aspect of interpersonal relationship patterns, (d) to be theoretically highly coherent to both therapist and patient, sometimes deliberately omitting information incompatible with the theory, (e) to be relatively long term, (f) to encourage a powerful attachment relationship between therapist and patient, enabling the therapist to adopt a relatively active rather than a passive stance, and (g) to be well integrated with other services available to the patient. While some of these features may be those of a successful research study rather than those of a successful therapy, we concluded that the manner in which treatment protocols were constructed and delivered was probably as important in the success of treatment as the theoretically-driven interventions.

With these general features in mind, we developed a programme of treatment and organized a research programme to test the effectiveness of the intervention. From the outset it was clear that this was to be effectiveness research rather than efficacy research – we would investigate the outcome of BPD treated by generically-trained non-specialist practitioners within a normal clinical setting. In this way, the treatment was more likely to be translatable to other services without extensive and expensive additional training of personnel.

Our evidence base remains small as far as treatment outcome is concerned; yet replication studies are underway and an increasing number of practitioners are using mentalization techniques in treatment, such that more information will become available soon. Our original randomized controlled trial (RCT) of treatment of BPD in a partial hospital programme offering individual and group psychoanalytic psychotherapy (Bateman & Fonagy, 1999, 2001) showed significant and enduring changes in mood states and interpersonal functioning associated with an 18-month programme. The benefits, relative to treatment as usual, were large (numbers needed to treat around 2) and were observed to increase during the follow-up period of 18 months, rather than staying level as with DBT. It should be remembered, however, that this partial hospital programme continued as non-intensive group therapy after 18 months, whereas it is not clear what subsequent treatment patients in the DBT trials received.

Forty-four patients who participated in the original study were assessed at 3-monthly intervals after completion of the earlier trial. Outcome measures included frequency of suicide attempts and acts of self-harm, number and duration of in-patient admissions, service utilization, and self-report measures of depression, anxiety, general symptom distress, interpersonal function and social adjustment. Data analysis used repeated measures analysis of covariance and non-parametric tests of trend. Patients who had received partial hospitalization treatment not only maintained their substantial gains but also showed a statistically significant continued improvement on most measures in contrast to the control group of patients who showed only limited change during the same period. This suggests that rehabilitative changes had developed, enabling patients to negotiate the stresses and strains of everyday life without resorting to former ways of coping such as self-harming activity.

Healthcare utilization of all patients who participated in the trial was assessed using information from case notes and service providers (Bateman & Fonagy, 2003). Costs of psychiatric, pharmacological, and emergency room treatment were compared 6-months prior to treatment, during the 18-months of treatment, and after 18 months as a follow-up. There were no differences between the groups in the costs of service utilization pre-treatment or during treatment. The additional cost of day hospital treatment was offset by less psychiatric in-patient care and reduced emergency room treatment. The trend for costs to decrease in the experimental group during the 18-month follow-up period was not apparent in the control group, suggesting that day hospital treatment for BPD is no more expensive than general psychiatric care and shows considerable cost-savings after treatment. We have just completed the five-year follow-up of this sample and significant differences between the MBT and the treatment as usual (TAU) groups remain.

The effective components of the programme remain unclear, but the common feature of all the different treatment elements was mentalization. Patients received a range of treatments along with group and individual therapy, including psychodrama and other expressive therapies along with some psychoeducation early in treatment. To determine whether the focus on mentalizing is a key component and to see if a more modest programme may be effective in a less severe group of borderline patients, we are currently undertaking an RCT of individual and group psychotherapy only offered in an out-patient programme. Results are not yet available. Nevertheless we have defined interventions that we believe are likely to enhance mentalizing, packaging them within a structured programme.

## Conclusion

All moderately effective current therapies for BPD are able to present a view of the internal world of the patient as stable and coherent, as being clearly perceived, and may be adopted as the reflective part of the self (the self-image of the patient's mind). In other words, it is possible to argue that all these therapies stimulate attachment to the therapist whilst asking the patient to evaluate the accuracy of statements concerning mind states in himself and others. It is the combination of these two treatment components that is probably most helpful in enabling the patient to retain a mentalized understanding of intrapsychic experiences even in the context of a relatively intense relationship. The effectiveness of both lies in creating structures that enable balancing of attachment and mentalizing components. Both need attention and careful planning if the treatment is to be delivered as intended, given the propensity of the client group to treatment defeating behaviour. Focusing solely on cognition or the environment does not satisfy the patient who feels uniquely vulnerable in intimate inter-personal relationships. Focusing exclusively on such relationships risks aggravating problems of mentalization and undermines the possibility of change driven by self-reflection.

## References

- Akhtar, S. (1992). *Broken structures: Severe personality disorders and their treatment*. Northvale, NJ: Jason Aronson.
- Alessandri, S. M. (1991). Play and social behaviours in maltreated preschoolers. *Development and Psychopathology*, 3, 191–206.
- Arnsten, A. F. T. (1998). The biology of being frazzled. *Science*, 280, 1711–1712.
- Baker, L., Silk, K. R., Westen, D., Nigg, J. T., & Lohr, N. E. (1992). Malevolence, splitting, and parental ratings by borderlines. *Journal of Nervous and Mental Disease*, 180, 258–264.
- Bartels, A., & Zeki, S. (2000). The neural basis of romantic love. *Neuroreport*, 11, 3829–3834.

- Bartels, A., & Zeki, S. (2004). The neural correlates of maternal and romantic love. *Neuroimage*, *21*, 1155–1166.
- Bateman, A. W., & Fonagy, P. (1999). The effectiveness of partial hospitalization in the treatment of borderline personality disorder – a randomised controlled trial. *American Journal of Psychiatry*, *156*, 1563–1569.
- Bateman, A. W., & Fonagy, P. (2001). Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalization: an 18-month follow-up. *American Journal of Psychiatry*, *158*, 36–42.
- Bateman, A. W., & Fonagy, P. (2003). Health service utilization costs for borderline personality disorder patients treated with psychoanalytically oriented partial hospitalization versus general psychiatric care. *American Journal of Psychiatry*, *160*, 169–171.
- Bateman, A. W., & Fonagy, P. (2004). *Psychotherapy for borderline personality disorder: Mentalization based treatment*. Oxford: Oxford University Press.
- Bateman, A. W., & Fonagy, P. (2006). *Mentalization based treatment for borderline personality disorder: A practical guide*. Oxford: Oxford University Press.
- Battle, C. L., Shea, M. T., Johnson, D. M., Yen, S., Zlotnick, C., Zanarini, M. C., et al. (2004). Childhood maltreatment associated with adult personality disorders: findings from the Collaborative Longitudinal Personality Disorders Study. *Journal of Personality Disorders*, *18*, 193–211.
- Beehly, M., & Cicchetti, D. (1994). Child maltreatment, attachment, and the self system: Emergence of an internal state lexicon in toddlers at high social risk. *Development and Psychopathology*, *6*, 5–30.
- Belsky, J., & Fearon, R. M. (2002). Infant-mother attachment security, contextual risk, and early development: A moderational analysis. *Development and Psychopathology*, *14*, 293–310.
- Betan, E., & Westen, D. (2005). Identity disturbance in adolescents with personality pathology. Unpublished manuscript, Emory University.
- Bradley, R., & Westen, D. (2005). The psychodynamics of borderline personality disorder: a view from developmental psychopathology. *Developmental Psychopathology*, *17*, 927–957.
- Braungart-Rieker, J. M., Garwood, M. M., Powers, B. P., & Wang, X. (2001). Parental sensitivity, infant affect, and affect regulation: Predictors of later attachment. *Child Development*, *72*, 252–270.
- Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I. W., et al. (2002). Role of genotype in the cycle of violence in maltreated children. *Science*, *297*(5582), 851–854.
- Caspi, A., Sugden, K., Moffitt, T. E., Taylor, A., Craig, I. W., Harrington, H., et al. (2003). Influence of life stress on depression: Moderation by a polymorphism in the 5-HTT gene. *Science*, *301*(5631), 386–389.
- Cassidy, J., Parke, R. D., Butkovsky, L., & Braungart, J. M. (1992). Family-peer connections: The roles of emotional expressiveness within the family and children's understanding of emotion. *Child Development*, *63*, 603–618.
- Chirkov, V., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and U.S. adolescents: Common effects on well-being and academic motivation. *Journal of Cross-Cultural Psychology*, *32*, 618–635.
- Chugani, H. T., Behen, M. E., Muzik, O., Juhasz, C., Nagy, F., & Chugani, D. C. (2001). Local brain functional activity following early deprivation: A study of postinstitutionalized Romanian orphans. *Neuroimage*, *14*, 1290–1301.
- Cicchetti, D., & Rogosch, F. A. (2002). A developmental psychopathology perspective on adolescence. *Journal of Consulting & Clinical Psychology*, *70*, 6–20.
- Cicchetti, D., Rogosch, F. A., Maughan, A., Toth, S. L., & Bruce, J. (2003). False belief understanding in maltreated children. *Developmental Psychopathology*, *15*, 1067–1091.
- Cicchetti, D., Rogosch, F. A., & Toth, S. L. (2000). The efficacy of toddler-parent psychotherapy for fostering cognitive development in offspring of depressed mothers. *Journal of Abnormal Child Psychology*, *28*, 135–148.
- Cohen, P., Crawford, T. N., Johnson, J. G., & Kasen, S. (2006). The Children in the Community Study of developmental course of personality disorder. *Journal of Personality Disorders*, *19*, 466–486.
- Crick, N. R., Murray-Close, D., & Woods, K. (2005). Borderline personality features in childhood: a short-term longitudinal study. *Developmental Psychopathology*, *17*, 1051–1070.
- de Rosnay, M., & Harris, P. L. (2002). Individual differences in children's understanding of emotion: the roles of attachment and language. *Attachment and Human Development*, *4*, 39–54.
- Denham, S. A. (1998). *Emotional development in young children*. New York: Guilford.
- Depue, R. A., & Lenzenweger, M. F. (2001). A neurobehavioral dimensional model of personality disorders. In W. J. Livesley (Ed.), *The handbook of personality disorders* (pp. 136–176). New York: Guilford.
- Dunn, J. (1996). The Emanuel Miller Memorial Lecture 1995. Children's relationships: Bridging the divide between cognitive and social development. *Journal of Child Psychology and Psychiatry*, *37*, 507–518.
- Dunn, J., Brown, J., Somkowski, C., Telsa, C., & Youngblade, L. (1991). Young children's understanding of other people's feelings and beliefs: Individual differences and their antecedents. *Child Development*, *62*, 1352–1366.
- Ellsworth, C. P., Muir, D. W., & Hains, S. M. J. (1993). Social competence and person-object differentiation: an analysis of the still-face effect. *Developmental Psychology*, *29*, 63–73.

- Fearon, R. M., & Belsky, J. (2004). Attachment and attention: Protection in relation to gender and cumulative social-contextual adversity. *Child Development, 75*, 1677–1693.
- Feldman, R. B., Zelikowitz, P., Weiss, M., Vogel, J., Heyman, M., & Paris, J. (1995). A comparison of the families of mothers with borderline and nonborderline personality disorders. *Comprehensive Psychiatry, 36*, 157–163.
- Fonagy, P., & Bateman, A. (2006a). Progress in the treatment of borderline personality disorder. *British Journal of Psychiatry, 188*, 1–3.
- Fonagy, P., & Bateman, A. W. (2006b). Mechanisms of change in mentalization-based treatment of BPD. *Journal of Clinical Psychology, 62*, 411–430.
- Fonagy, P., & Bateman, A. W. (2006c). Mechanisms of change in mentalization-based treatment of BPD. *Journal of Clinical Psychology, 62*, 411–430.
- Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2002). *Affect regulation, mentalization and the development of the self*. New York: Other Press.
- Fonagy, P., Gergely, G., & Target, M. (in press). The parent-infant dyad and the construction of the subjective self. *Journal of Child Psychology and Psychiatry*.
- Fonagy, P., Leigh, T., Steele, M., Steele, H., Kennedy, R., Mattoon, G., et al. (1996). The relation of attachment status, psychiatric classification, and response to psychotherapy. *Journal of Consulting and Clinical Psychology, 64*, 22–31.
- Fonagy, P., Redfern, S., & Charman, T. (1997). The relationship between belief-desire reasoning and a projective measure of attachment security (SAT). *British Journal of Developmental Psychology, 15*, 51–61.
- Fonagy, P., & Target, M. (1997). Attachment and reflective function: Their role in self-organization. *Development and Psychopathology, 9*, 679–700.
- Fonagy, P., Target, M., Gergely, G., Allen, J. G., & Bateman, A. (2003). The developmental roots of borderline personality disorder in early attachment relationships: A theory and some evidence. *Psychoanalytic Inquiry, 23*, 412–459.
- Frank, H., & Hoffman, N. (1986). Borderline empathy: An empirical investigation. *Comprehensive Psychiatry, 27*, 387–395.
- Fruzzetti, A. E., Shenk, C., & Hoffman, P. D. (2005). Family interaction and the development of borderline personality disorder: A transactional model. *Developmental Psychopathology, 17*, 1007–1030.
- Gabbard, G. O., & Wilkinson, S. M. (1994). *Management of countertransference with borderline patients*. Washington, DC: American Psychiatric Press.
- Gergely, G. (2004). The role of contingency detection in early affect-regulative interactions and in the development of different types of infant attachment. *Social Behavior, 13*, 468–478.
- Gergely, G., Koós, O., & Watson, J. S. (2002). Contingency perception and the role of contingent parental reactivity in early socio-emotional development [Perception causale et rôle des comportements imitatifs des parents dans le développement socio-émotionnel précoce]. In J. Nadel & J. Decety (Eds.), *Imiter pour découvrir l'humain: Psychologie, neurobiologie, robotique et philosophie de l'esprit* (pp. 59–82). Paris: Presses Universitaires de France.
- Gergely, G., & Watson, J. (1996). The social biofeedback model of parental affect-mirroring. *International Journal of Psycho-Analysis, 77*, 1181–1212.
- Green, J., & Goldwyn, R. (2002). Annotation: Attachment disorganisation and psychopathology: new findings in attachment research and their potential implications for developmental psychopathology in childhood. *Journal of Child Psychology & Psychiatry, 43*, 835–846.
- Grolnick, W. S. (2003). *The psychology of parental control: How well meant parenting backfires*. Mahwah, NJ: Erlbaum.
- Gunderson, J. G. (1996). The borderline patient's intolerance of aloneness: Insecure attachments and therapist availability. *American Journal of Psychiatry, 153*, 752–758.
- Gunderson, J. G., Bender, D., Sanislow, C., Yen, S., Rettew, J. B., Dolan-Sewell, R., et al. (2003). Plausibility and possible determinants of sudden “remissions” in borderline patients. *Psychiatry, 66*, 111–119.
- Gunderson, J. G., & Sabo, A. N. (1993). The phenomenological and conceptual interface between borderline personality disorder and PTSD. *American Journal of Psychiatry, 150*, 19–27.
- Haley, D. W., & Stansbury, K. (2003). Infant stress and parent responsiveness: Regulation of physiology and behavior during still-face and reunion. *Child Development, 74*, 1534–1546.
- Hamilton, C. E. (2000). Continuity and discontinuity of attachment from infancy through adolescence. *Child Development, 71*, 690–694.
- Harris, P. L. (1999). Individual differences in understanding emotions: The role of attachment status and emotional discourse. *Attachment and Human Development, 1*, 307–324.
- Harris, P. L., de Rosnay, M., & Pons, F. (2005). Language and children's understanding of mental states. *Current Directions in Psychological Science, 14*, 69–73.
- Herman, J. L., Perry, C., & van der Kolk, B. A. (1989). Childhood trauma in borderline personality disorder. *American Journal of Psychiatry, 146*, 490–495.

- Hoermann, S., Clarkin, J. F., Hull, J. W., & Levy, K. N. (2005). The construct of effortful control: An approach to borderline personality disorder heterogeneity. *Psychopathology*, *38*, 82–86.
- Horwitz, A. V., Widom, C. S., McLaughlin, J., & White, H. R. (2001). The impact of childhood abuse and neglect on adult mental health: A prospective study. *Journal of Health and Social Behaviour*, *42*, 184–201.
- Howes, C., & Espinosa, M. P. (1985). The consequences of child abuse for the formation of relationships with peers. *International Journal of Child Abuse and Neglect*, *9*, 397–404.
- Hughes, C., & Ensor, R. (in press). Social cognition and disruptive behaviour disorders in young children: Families matter. In C. Sharp, P. Fonagy, & I. Goodyer (Eds.), *Social cognition and developmental psychopathology*. Oxford: OUP.
- Jacobsen, T., Edelstein, W., & Hofmann, V. (1994). A longitudinal study of the relation between representations of attachment in childhood and cognitive functioning in childhood and adolescence. *Developmental Psychology*, *30*, 112–124.
- Jacobsen, T., & Hofmann, V. (1997). Children's attachment representations: longitudinal relations to school behavior and academic competency in middle childhood and adolescence. *Developmental Psychology*, *33*, 703–710.
- Jacobsen, T., Huss, M., Fendrich, M., Kruesi, M. J. P., & Ziegenhain, U. (1997). Children's ability to delay gratification: Longitudinal relations to mother-child attachment. *Journal of Genetic Psychology*, *158*, 411–426.
- Jenkins, J. M., & Astington, J. W. (2000). Theory of mind and social behavior: Causal models tested in a longitudinal study. *Merrill-Palmer Quarterly*, *46*, 203–220.
- Johnson, J. G., Cohen, P., Smailes, E., Skodol, A., Brown, J., & Oldham, J. (2001). Childhood verbal abuse and risk for personality disorders during adolescence and early adulthood. *Comprehensive Psychiatry*, *42*, 16–23.
- Keller, M. B., Lavori, P. W., Mueller, T. I., Endicott, J., Coryell, W., Hirschfeld, R. M., et al. (1992). Time to recovery, chronicity, and levels of psychopathology in major depression. A 5-year prospective follow-up of 431 subjects. *Archives of General Psychiatry*, *49*, 809–816.
- Kernberg, O. F. (1983). Object relations theory and character analysis. *Journal of the American Psychoanalytic Association*, *31*, 247–271.
- Klimes-Dougan, B., & Kistner, J. (1990). Physically abused preschoolers' responses to peers' distress. *Developmental Psychology*, *25*, 516–524.
- Kochanska, G., Coy, K. C., & Murray, K. T. (2001a). The development of self-regulation in the first four years of life. *Child Development*, *72*, 1091–1111.
- Kochanska, G., Coy, K. C., & Murray, K. T. (2001b). The development of self-regulation in the first four years of life. *Child Development*, *72*, 1091–1111.
- Kochanska, G., & Murray, K. T. (2000). Mother-child mutually responsive orientation and conscience development: From toddler to early school age. *Child Development*, *71*, 417–431.
- Koós, O., & Gergely, G. (2001). A contingency-based approach to the etiology of 'disorganized' attachment: The 'flickering switch' hypothesis. *Bulletin of the Menninger Clinic*, *65*, 397–410.
- Koós, O., & Gergely, G. (2001). The 'flickering switch' hypothesis: A contingency-based approach to the etiology of disorganized attachment in infancy. In J. Allen, P. Fonagy, & G. Gergely (Eds.), *Contingency perception and attachment in infancy, Special Issue of the Bulletin of the Menninger Clinic* (pp. 397–410). New York: Guilford.
- Kreppner, J. M., O'Connor, T. G., & Rutter, M. (2001). Can inattention/overactivity be an institutional deprivation syndrome? *Journal of Abnormal Child Psychology*, *29*, 513–528.
- Kullgren, G. (1988). Factors associated with completed suicide in borderline personality disorder. *Journal of Nervous and Mental Disease*, *176*, 40–44.
- Lambert, M., Bergin, A. E., & Garfield, S. (2004). Introduction and historical overview. In M. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (pp. 3–15). New York: Wiley.
- Lenzenweger, M. F., Clarkin, J. F., Fertuck, E. A., & Kernberg, O. F. (2004). Executive neurocognitive functioning and neurobehavioral systems indicators in borderline personality disorder: A preliminary study. *Journal of Personality Disorders*, *18*, 421–438.
- Levy, K. N. (2005). The implications of attachment theory and research for understanding borderline personality disorder. *Developmental Psychopathology*, *17*, 959–986.
- Ludolph, P. S., Westen, D., Mistle, B., Jackson, A., Wixom, J., & Wiss, F. C. (1990). The borderline diagnosis in adolescents: Symptoms and developmental history. *American Journal of Psychiatry*, *147*, 470–476.
- Lyons-Ruth, K. (2003). Dissociation and the parent-infant dialogue: A longitudinal perspective from attachment research. *Journal of the American Psychoanalysts' Association*, *51*, 883–911.
- Lyons-Ruth, K., Yellin, C., Melnick, S., & Atwood, G. (2005). Expanding the concept of unresolved mental states: Hostile/helpless states of mind on the Adult Attachment Interview are associated with disrupted mother-infant communication and infant disorganization. *Developmental Psychopathology*, *17*, 1–23.



- Main, M., & George, C. (1985). Responses of abused and disadvantaged toddlers to distress in agemates: A study in the daycare setting. *Developmental Psychology, 21*, 407–412.
- Mangelsdorf, S. C., Shapiro, J. R., & Marzolf, D. (1995). Developmental and temperamental differences in emotion regulation in infancy. *Child Development, 66*, 1817–1828.
- Maughan, A., & Cicchetti, D. (2002). Impact of child maltreatment and interadult violence on children's emotion regulation abilities and socioemotional adjustment. *Child Development, 73*, 1525–1542.
- McGlashan, T. H., Grilo, C. M., Sanislow, C. A., Ralevski, E., Morey, L. C., Gunderson, J. G., et al. (2005). Two-year prevalence and stability of individual DSM-IV criteria for schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders: Toward a hybrid model of axis II disorders. *American Journal of Psychiatry, 162*, 883–889.
- McLean, L. M., & Gallop, R. (2003). Implications of childhood sexual abuse for adult borderline personality disorder and complex posttraumatic stress disorder. *American Journal of Psychiatry, 160*, 369–371.
- Meins, E., Fernyhough, C., Russel, J., & Clark-Carter, D. (1998). Security of attachment as a predictor of symbolic and mentalising abilities: A longitudinal study. *Social Development, 7*, 1–24.
- Morrison, A. P., Frame, L., & Larkin, W. (2003). Relationships between trauma and psychosis: A review and integration. *British Journal of Clinical Psychology, 42*, 331–353.
- Mundy, P., & Neal, R. (2001). Neural plasticity, joint attention, and a transactional social-orienting model of autism. In L. Masters Glidden (Ed.), *International review of mental retardation: Autism* (Vol. 23) (pp. 139–168). San Diego, CA: Academic Press.
- Nelson, K. (2005). Language pathways into the community of minds. In J. W. Astington & J. A. Baird (Eds.), *Why language matters for theory of mind* (pp. 26–49). Oxford: Oxford University Press.
- Ogata, S. N., Silk, K. R., Goodrich, S., Lohr, N. E., Westen, D., & Hill, E. (1990). Childhood sexual and physical abuse in adult patients with borderline personality disorder. *American Journal of Psychiatry, 147*, 1008–1013.
- Ontai, L. L., & Thompson, R. A. (2002). Patterns of attachment and maternal discourse effects on children's emotion understanding from 3 to 5 years of age. *Social Development, 11*, 433–450.
- Paris, J. (2003). *Personality disorders over time: Precursors, course, and outcome*. Washington, DC: American Psychiatric Association.
- Paris, J. (2004). Sociocultural factors in the treatment of personality disorders. In W. J. Livesley (Ed.), *Handbook of personality disorders: Theory and practice* (pp. 135–147). New York: Wiley.
- Paris, J., & Frank, H. (1989). Perceptions of parental bonding in borderline patients. *American Journal of Psychiatry, 146*, 1498–1499.
- Pears, K. C., & Fisher, P. A. (2005). Emotion understanding and theory of mind among maltreated children in foster care. *Development and Psychopathology, 17*, 47–65.
- Posner, M. I., Rothbart, M. K., Vizueta, N., Levy, K. N., Evans, D. E., Thomas, K. M., et al. (2002). Attentional mechanisms of borderline personality disorder. *Proceedings of the National Academy of Sciences of the USA, 99*, 16366–16370.
- Raikes, H. A., & Thompson, R. A. (2006). Family emotional climate, attachment security, and young children's emotion knowledge in a high-risk sample. *British Journal of Developmental Psychology, 24*, 89–104.
- Ruffinan, T., Slade, L., & Crowe, E. (2002). The relation between children's and mothers' mental state language and theory-of-mind understanding. *Child Development, 73*, 734–751.
- Russ, E., Heim, A., & Westen, D. (2003). Parental bonding and personality pathology assessed by clinician report. *Journal of Personality Disorders, 17*, 522–536.
- Ryan, R. M. (2005). The developmental line of autonomy in the etiology, dynamics, and treatment of borderline personality disorders. *Developmental Psychopathology, 17*, 987–1006.
- Ryan, R. M., & Deci, E. L. (2003). On assimilating identities to the self: A self-determination theory perspective on internalization and integrity within cultures. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 253–272). New York: Guilford.
- Ryan, R. M., & Kuczowski, R. (1994). The imaginary audience, self-consciousness, and public individuation in adolescence. *Journal of Personality, 62*, 219–238.
- Ryle, A. (1990). *Cognitive Analytic Therapy: Active participation in change*. Chichester: Wiley.
- Shea, M. T., Stout, R. L., Yen, S., Pagano, M. E., Skodol, A. E., Morey, L. C., et al. (2004). Associations in the course of personality disorders and Axis I disorders over time. *Journal of Abnormal Psychology, 113*, 499–508.
- Shipman, K. L., & Zeman, J. (1999). Emotional understanding: A comparison of physically maltreating and nonmaltreating mother-child dyads. *Journal of Clinical Child Psychology, 28*, 407–417.
- Siever, L. J., Torgersen, S., Gunderson, J. G., Livesley, W. J., & Kendler, K. S. (2002). The borderline diagnosis III: Identifying endophenotypes for genetic studies. *Biological Psychiatry, 51*, 964–968.
- Silk, K. R., Lee, S., Hill, E. M., & Lohr, N. E. (1995). Borderline personality disorder symptoms and severity of sexual abuse. *American Journal of Psychiatry, 152*, 1059–1064.

- Skodol, A. E., Gunderson, J., Shea, M. T., McGlashan, T., Morey, L. C., Sanislow, C., et al. (2006). The Collaborative Longitudinal Personality Disorders Study (CLPS): Overview and implications. *Journal of Personality Disorders, 19*, 487–504.
- Soloff, P., & Millward, J. (1983). Developmental histories of borderline patients. *Comprehensive Psychiatry, 24*, 574–588.
- Solomon, J., George, C., & Dejong, A. (1995). Children classified as controlling at age six: Evidence of disorganized representational strategies and aggression at home and at school. *Development and Psychopathology, 7*, 447–463.
- Sroufe, L. A., Egeland, B., Carlson, E., & Collins, W. A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York: Guilford.
- Steele, M., Steele, H., Croft, C., & Fonagy, P. (1999). Infant mother attachment at one year predicts children's understanding of mixed emotions at 6 years. *Social Development, 8*, 161–178.
- Steinberg, L., & Avenevoli, S. (2000). The role of context in the development of psychopathology: A conceptual framework and some speculative propositions. *Child Development, 71*, 66–74.
- Stevenson, J., & Mearns, R. (1992). An outcome study of psychotherapy for patients with borderline personality disorder. *American Journal of Psychiatry, 149*, 358–362.
- Stevenson, J., & Mearns, R. (1999). Psychotherapy with borderline patients: II. A preliminary cost benefit study. *Australian and New Zealand Journal of Psychiatry, 33*, 473–477.
- Stevenson, J., Mearns, R., & D'Angelo, R. (2005). Five-year outcome of outpatient psychotherapy with borderline patients. *Psychology & Medicine, 35*, 79–87.
- Stone, M. H. (1990). *The fate of borderline patients: Successful outcome and psychiatric practice*. New York: Guilford Press.
- Stuart, J., Westen, D., Lohr, N. E., Benjamin, J., Becker, S., & Vorus, N. (1990). Object relations in borderlines, depressives, and normals: An examination of human responses on the Rorschach. *Journal of Personality Assessment, 55*, 296–318.
- Symons, D. K. (2004). Mental state discourse, theory of mind, and the internalization of self-other understanding. *Developmental Review, 24*, 159–188.
- Taylor, S. F., Liberson, I., Fig, L. M., Decker, L. R., Minoshima, S., & Koeppe, R. A. (1998). The effect of emotional content on visual recognition memory: A PET activation study. *Neuroimage, 8*, 188–197.
- Thompson, R. A. (2000). The legacy of early attachments. *Child Development, 71*, 145–152.
- Torgersen, S., Lygren, S., Oien, P. A., Skre, I., Onstad, S., Edvardsen, J., et al. (2000). A twin study of personality disorders. *Comprehensive Psychiatry, 41*, 416–425.
- Tyrer, P., & Bateman, A. (2004). Drug treatments for personality disorders. *Advances in Psychiatric Treatment, 10*, 389–398.
- van IJzendoorn, M., Scheungel, C., & Bakermans-Kranenburg, M. J. (1999). Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants and sequelae. *Development and Psychopathology, 22*, 225–249.
- van IJzendoorn, M. H., & van Vliet-Visser, S. (1988). The relationship between quality of attachment in infancy and IQ in kindergarten. *Journal of Genetic Psychology, 149*, 23–28.
- Waters, E., Merrick, S. K., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security from infancy to early adulthood: A 20 year longitudinal study. *Child Development, 71*, 684–689.
- Watson, J. S. (1984). Bases of causal inference in infancy: Time, space, and sensory relations. In L. P. Lipsitt & C. Rovee-Collier (Eds.), *Advances in infancy research*. Norwood, NJ: Ablex.
- Weinberg, K. M., & Tronick, E. Z. (1996). Infant affective reactions to the resumption of maternal interaction after the Still-Face. *Child Development, 67*, 905–914.
- Weinberg, M. K., & Tronick, E. Z. (1994). Beyond the face: An empirical study of infant affective configurations of facial, vocal, gestural, and regulatory behaviors. *Child Development, 65*, 1503–1515.
- Weinfeld, N., Sroufe, L. A., & Egeland, B. (2000). Attachment from infancy to early adulthood in a high risk sample: Continuity, discontinuity and their correlates. *Child Development, 71*, 695–702.
- Weinfeld, N. S., Whaley, G. J., & Egeland, B. (2004). Continuity, discontinuity, and coherence in attachment from infancy to late adolescence: Sequelae of organization and disorganization. *Attachment and Human Development, 6*, 73–97.
- Westen, D., Lohr, N., Silk, K., Gold, L., & Kerber, K. (1990). Object relations and social cognition in borderlines, major depressives, and normals: A TAT analysis. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2*, 355–364.
- Westen, D., Ludolph, P., Block, M. J., Wixom, J., & Wiss, C. (1990). Developmental history and object relations in psychiatrically disturbed adolescent girls. *American Journal of Psychiatry, 147*, 1061–1068.
- Westen, D., Ludolph, P., Lerner, H., Ruffins, S., & Wiss, F. C. (1990). Object relations in borderline adolescents. *Journal of Academic Child and Adolescent Psychiatry, 29*, 338–348.

- White, C. N., Gunderson, J. G., Zanarini, M. C., & Hudson, J. I. (2003). Family studies of borderline personality disorder: A review. *Harvard Review of Psychiatry, 11*, 8–19.
- Wilkinson-Ryan, T., & Westen, D. (2000). Identity disturbance in borderline personality disorder: An empirical investigation. *American Journal of Psychiatry, 157*, 528–541.
- Winnicott, D. W. (1956). Mirror role of mother and family in child development. In D. W. Winnicott (Ed.), *Playing and reality* (pp. 111–118). London: Tavistock.
- Yen, S., Shea, M. T., Battle, C. L., Johnson, D. M., Zlotnick, C., Dolan-Sewell, R., et al. (2002). Traumatic exposure and posttraumatic stress disorder in borderline, schizotypal, avoidant, and obsessive-compulsive personality disorders: Findings from the collaborative longitudinal personality disorders study. *Journal of Nervous & Mental Disease, 190*, 510–518.
- Young, D. W., & Gunderson, J. G. (1995). Family images of borderline adolescents. *Psychiatry, 58*, 164–172.
- Youngblade, L., & Dunn, J. (1995). Individual differences in young children's pretend play with mother and sibling: Links to relationships and understanding of other people's feelings and beliefs. *Child Development, 66*, 1472–1492.
- Zanarini, M., Gunderson, J. G., & Frankenburg, F. R. (1990). Discriminating borderline personality disorder from other Axis II disorders. *American Journal of Psychiatry, 147*, 161–167.
- Zanarini, M. C. (1997). *Role of sexual abuse in the etiology of borderline personality disorder*. Washington, DC: American Psychiatric Association.
- Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, D. B., & Silk, K. R. (2004). Axis I comorbidity in patients with borderline personality disorder: 6-year follow-up and prediction of time to remission. *American Journal of Psychiatry, 161*, 2108–2114.
- Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, D. B., & Silk, K. R. (2006). The McLean Study of Adult Development (MSAD): Overview and implications of the first six years of prospective follow-up. *Journal of Personality Disorders, 19*, 505–523.
- Zanarini, M. C., Frankenburg, F. R., Hennen, J., & Silk, K. R. (2003). The longitudinal course of borderline psychopathology: 6-year prospective follow-up of the phenomenology of borderline personality disorder. *American Journal of Psychiatry, 160*, 274–283.
- Zanarini, M. C., Williams, A. A., Lewis, R. E., Reich, D. B., Vera, S. C., Marino, M. F., et al. (1997). Reported pathological childhood experiences associated with the development of borderline personality disorder. *American Journal of Psychiatry, 154*, 1101–1106.
- Zanarini, M. C., Yong, L., Frankenburg, F. R., Hennen, J., Reich, D. B., Marino, M. F., et al. (2002). Severity of reported childhood sexual abuse and its relationship to severity of borderline psychopathology and psychosocial impairment among borderline inpatients. *Journal of Nervous & Mental Disease, 190*, 381–387.
- Zittel Conklin, C., & Westen, D. (2005). Borderline personality disorder in clinical practice. *American Journal of Psychiatry, 162*, 867–875.