

Clinical Assessment of Attachment Patterns and Personality Disorder in Adolescents and Adults

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The relevance of attachment theory and research for practice has become increasingly clear. The authors describe a series of studies with 3 aims: (a) to validate measures of attachment for use by clinicians with adolescents and adults, (b) to examine the relation between attachment and personality pathology, and (c) to ascertain whether factor analysis can recover dimensions of attachment reflecting both interpersonal and narrative style. In 3 studies, experienced clinicians provided psychometric data using 1 of 4 attachment questionnaires (2 adolescent and 2 adult samples). Attachment dimensions predicted both personality pathology and developmental experiences in predictable ways. Factor analysis identified 4 dimensions that replicated across adolescent and adult samples on the basis of a combination of interpersonal and narrative indicators: secure, dismissing, preoccupied, and incoherent/disorganized.

Keywords: attachment, clinical prediction, dismissing, disorganized, personality disorders

Attachment theory provides a powerful framework for understanding both the nature of close relationships and the links between mental representations in intimate relations, patterns of emotion regulation, and psychopathology (Bowlby, 1969, 1973, 1980). As a consequence, it has generated tremendous clinical interest (e.g., Fonagy et al., 1996; Kobak & Sceery, 1988; Muller, Sicoli, & Lemieux, 2000; Sable, 1995). However, precisely how it links to related clinical constructs such as personality disorders (PDs), which are also characterized by relational and affect-regulatory patterns; how it can be used clinically; and whether clinicians can reliably assess attachment patterns in treatment are all unanswered questions.

Assessment of Adult and Adolescent Attachment Patterns

Bowlby suggested that children form internal working models: cognitive/affective representations derived from relationships with childhood attachment figures that shape relationship patterns (Hamilton, 2000; Lewis, Feiring, & Rosenthal, 2000; Sroufe, Fox, & Pancake, 1983; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Ainsworth, Blehar, Waters, and Wall (1978) classified infants' attachment styles empirically on the basis of a structured series of separations and reunions between the infant and caregiver called the Strange Situation. On reunion, *secure* infants seek comforting contact with the caregiver. These infants learn to

rely on the availability and sensitivity of the caregiver if the need arises. Ainsworth and colleagues identified two variations of insecure attachment patterns: *Avoidant* infants are indifferent or ignore the return of the caregiver after separation; *anxious/ambivalent* infants seek contact with the caregiver but fail to be soothed by him or her. Main and Solomon (1986) later added a fourth attachment style—*disorganized*—characterized by the lack of a coherent pattern of responding to separation and reunion, contradictory behavior patterns, disorganization, and disorientation. This pattern was frequently observed among children of maltreating or psychiatrically disordered parents (Main, 1995).

Bowlby's concept of internal working models provided ground for the growing interest in the continuity of attachment patterns from infancy into childhood and adulthood (e.g., Grossman & Grossman, 1991; Hamilton, 1994; Main, Kaplan, & Cassidy, 1985; Waters, Treboux, Crowell, & Albersheim, 1995). Researchers have used two measurement strategies for assessing adult and adolescent attachment, one based on narrative assessment and the other on self-reports. These approaches differ not only in their methodology but also in the traditions from which they emerged, with narrative approaches emerging from developmental research and naturalistic observation and questionnaire approaches emerging from social and personality psychology.

Narrative-Based Measures

The narrative tradition emerged from the infant attachment literature with the development of the Adult Attachment Interview (AAI) by Main and colleagues (George, Kaplan, & Main, 1996; Main et al., 1985). The AAI is a narrative-based interview in which participants first provide five adjectives that describe their relationship to each parent and then provide specific memories that support each adjective. This approach classifies adult attachment through examination of the person's state of mind about attach-

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ment as expressed in psycholinguistic qualities of the individual's narratives. This state of mind is revealed through the coherence of these narratives rather than their content (e.g., the way their parents behaved toward them). The psycholinguistic basis of the AAI grew out of Main et al.'s (1985) discovery that analogues of attachment behavior in infants and young children can be identified by studying the coherence of discourse of adults.

The discourse of secure adults tends to be clear, direct, and fluid. Secure individuals are able to support their general descriptions of early attachments with specific examples, and they neither idealize nor remain preoccupied with early parental figures. The discourse of dismissing individuals (the adult analog of avoidant attachment) tends to be restricted. These individuals often minimize the importance of attachment, either by idealizing painful relationships or derogating attachment figures or the importance of attachments. They often have great difficulty accessing childhood memories. The discourse of preoccupied individuals (the adult analog of anxious/ambivalent attachment) tends to be verbose, vague, and digressive. The story line is often interrupted with irrelevancies and distractions. Preoccupied individuals often use psychological jargon, nonsense words, and childlike speech.

A fourth classification—*unresolved with respect to loss and trauma*—corresponds roughly to the infant classification of disorganized attachment, although it can be assigned as a qualifier to individuals otherwise classified with any of the other three attachment patterns, and it is continuing to evolve as a construct. The unresolved status is assigned to participants whose narratives indicate affective disruption of coherence. Theory and preliminary research suggest that these individuals often have suffered significant childhood separation, loss, or trauma that has not been adequately grieved or “worked through,” so that derivatives of these experiences remain emotionally disruptive or prone to expression in dissociative or quasi-dissociative experiences in everyday life (Main & Goldwyn, 1994). As a result, the discourse of unresolved individuals is often characterized by lapses in reasoning, such as confusion of past and present or place and time. Extremely long silences, dissociative episodes, and shifts in mental states can also appear in the narratives of individuals classified as unresolved. Noteworthy is the well-replicated finding that mothers' unresolved classification, manifest in lapses in “metacognitive monitoring” of their discourse or reasoning during discussions of loss or trauma on the AAI, predicts disorganized attachment in their infants (e.g., Steele, Steele, & Fonagy, 1996).

Although Main's coding system is the most widely used with the AAI, Kobak, Cole, Ferenz-Gillies, Fleming, and Gamble (1993) developed the Adult Attachment Q-sort from a similar tradition. The instrument generates scores on two dimensions: security/anxiety and deactivation/hyperactivation. Deactivating strategies are characteristic of avoidant individuals, whereas hyperactivating strategies are characteristic of preoccupied attachment. Among other correlates, the instrument predicts psychophysiology in individuals with deactivating (dismissing) strategies, who have difficulty describing or acknowledging negative or painful episodes with their attachment figures but whose skin conductance betrays heightened activity as they are denying negative feelings (Dozier & Kobak, 1992). Both the AAI and Kobak's Q-sort have been used to study not only adult attachment patterns but also attachment in adolescents (Allen, Hauser, & Borman-Spurrell, 1996; Kobak & Sceery, 1988; Rice, 1990), with slight

adaptations in wording for adolescents (Allen et al., 2003; Allen, Moore, Kuperminc, & Bell, 1998; Ward & Carlson, 1995).

Self-Report Questionnaires

The second tradition in adult and adolescent attachment research emerged from social psychology and relies on self-report questionnaires. The first such questionnaires were simple, prototype-based measures: the Adult Attachment Scale (AAS; Hazan & Shaver, 1987) and the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). The AAS focuses on adult romantic relationships and asks individuals to choose one of three prototypes that best describes themselves in relation to their most meaningful romantic relationships. The prototypes are based on Ainsworth's (1979) description of secure, avoidant, and preoccupied patterns. Rather than measuring the way participants talk about their prior attachment figures, these prototypes describe adult interpersonal patterns with romantic partners.

The RQ, adapted from Hazan and Shaver's (1987) prototype measure, consists of four prototypes, derived by crossing two theoretical dimensions of representations in attachment relationships: view of self (positive/negative) and view of other (positive/negative). The first three prototypes resemble those of Hazan and Shaver (e.g., the secure prototype describes a person for whom becoming emotionally close to others is easy and mutual dependence is experienced as safe and comfortable, reflecting a positive view of self and a positive view of the other). The fourth prototype—*fearful avoidant*—represents negative internal working models of both self and others. This prototype describes a person who is drawn to others but has difficulty with trust.

Subsequently, researchers developed a number of more traditional self-report questionnaires for which standard metrics of reliability could be assessed. In 1998, Brennan, Clark, and Shaver jointly factor analyzed all existing English-language attachment measures of this sort and concluded that adult attachment styles are best characterized in two-dimensional space, similar in some respects to the dimensions identified by both Bartholomew and Horowitz (1991) and Kobak and colleagues (1993): *attachment-related anxiety* (fear of separation and abandonment) and *attachment-related avoidance* (discomfort with closeness and dependency). Brennan and colleagues developed the Experiences in Close Relationships (ECR) questionnaire, which comprises two 18-item scales measuring attachment anxiety and avoidance. Items focus on behaviors and feelings in close relationships. As in Bartholomew and Horowitz's system, crossing the two dimensions yields the three traditional attachment statuses and one additional (fearful) status: *secure attachment*, characterized by low anxiety and low avoidance; *preoccupied attachment*, characterized by high anxiety and low avoidance; *dismissing attachment*, characterized by low (self-reported) anxiety and high avoidance; and *fearful avoidance*, characterized by high anxiety and high avoidance. This measure and its related dimensions are now widely used and have been highly generative of research (see Mikulincer & Shaver, 2005).

The Relation Between Narrative and Self-Report Attachment Measures

Although both the developmental and the social psychology attachment traditions have similar roots in Bowlby's work, they

differ substantially in both the measures they use (narrative interviews vs. self-reports) and the qualities they code (structural properties of narratives vs. interpersonal patterns in intimate relationships). To what extent they measure the same constructs is not entirely clear. On the one hand, some investigators have found significant associations between self-reports and the AAI, particularly for measures of preoccupied and dismissing attachment (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Griffin & Bartholomew, 1994; Shaver, Belsky, & Brennan, 2000). Other investigators, however, have found the two approaches to be only minimally related (Crowell, Treboux, & Waters, 1999; Simpson, Rholes, Orina, & Grich, 2002; Waters, Crowell, Elliott, Corcoran, & Treboux, 2002). As with other constructs in which implicit and explicit measures are only inconsistently correlated (e.g., Calabrese, Farber, & Westen, 2005; Clifton, Turkheimer, & Oltmanns, 2005; Fazio, Jackson, Dunton, & Williams, 1995), both narrative and self-report attachment measures have predictable, if often different, correlates. For example, Waters and colleagues (2002) found that the AAI predicted measures of parent-child interaction (e.g., laboratory observations of attachment security in infancy and childhood), whereas the ECR predicted self-reports of marital satisfaction, commitment, passion, and intimacy. One of the questions we address in this article is whether the kind of syntactic/narrative dimensions assessed using the AAI are associated with the interpersonal dimensions emphasized by self-reports when both are assessed by clinically trained observers (i.e., decoupling informant effects—interviewers vs. self-reports—from assessment focus—narrative coherence vs. ways of relating in current attachment relationships).

Attachment and Personality Disorders

From both theoretical and empirical points of view, one would expect a relationship between attachment and psychopathology, particularly pathology involving interpersonal functioning and affect regulation. Bowlby (1973) linked insecure attachment styles to depression and anxiety, and research has supported the view that attachment patterns provide a diathesis for various forms of psychopathology in adulthood (e.g., Bender, Farber, & Geller, 2001; Dozier, 1990; Dozier, Stevenson, Lee, & Velligan, 1991; Levinson & Fonagy, 2004; Muller et al., 2000; Sable, 1995; Sroufe & Egeland, 1989). Of particular interest is the relationship between attachment styles and PDs, given that personality refers to enduring patterns of thought, motivation, emotion, emotion regulation, impulse regulation, and interpersonal functioning, and attachment is related to all of these domains. Pilkonis (Meyer & Pilkonis, 2005; Meyer, Pilkonis, Prioetti, Heape, & Egan, 2001; Pilkonis, 1988) developed a prototype rating measure of adult attachment that blends attachment and PD constructs, assessing seven attachment styles rated by clinical consensus from all available data.

Using self-reports, Bender and colleagues (2001) found higher prevalence of insecure attachment patterns in individuals diagnosed with Cluster B PDs in adult outpatients. Brennan and Shaver (1998) found that individuals characterized by fearful attachment had the highest likelihood of at least one PD diagnosis, with a particular affinity for avoidant PD (see also Lyddon & Sherry, 2001). Additional research using self-report measures has found a relationship between avoidant and dependent PDs and preoccupied attachment and between schizoid, narcissistic, antisocial, and paranoid PDs and dismissing attachment (Fossati et al., 2003; Levy,

1993; Livesley, 1987; Livesley, Schroeder, & Jackson, 1990; West, Rose, & Sheldon-Keller, 1994). Using the AAI, Fonagy (1999; Fonagy et al., 1996; Fonagy, Target, & Gergely, 2000) found an association between borderline PD (BPD) and a subtype of preoccupied attachment (see also Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004; Patrick, Hobson, Castle, Howard, & Maughan, 1994). Other research using the AAI has linked BPD to unresolved status (Barone, 2003).

Similar patterns have emerged in adolescent samples. Rosenstein and Horowitz (1996) found that dismissing adolescents assessed by the AAI were at elevated risk for PDs, notably narcissistic and antisocial disorders (as well as conduct disorder and substance use). Preoccupied adolescents, in contrast, were more likely to have a range of PDs, such as histrionic, borderline, and schizotypal. Using a clinician-report adaptation of the Bartholomew RQ, Nakash-Eisikovits, Dutra, and Westen (2002) found that secure attachment was negatively correlated with nearly all PDs in an adolescent clinical sample. In contrast, fearful attachment was positively correlated with virtually all PDs, with a particular association with BPD. Avoidant attachment was most strongly associated with Cluster A PDs (i.e., paranoid, schizoid, and schizotypal), which are characterized by social withdrawal. As in adult samples, avoidant attachment was not associated with avoidant PD, which includes criteria specifying that the person consciously wishes for more contact with people but fears and hence avoids it (see Pilkonis, 1995). Anxious/ambivalent attachment was associated with PDs characterized by neediness and dependency in relationships, including borderline, histrionic, and dependent PDs.

In general, research suggests links between insecure attachment patterns and multiple forms of personality pathology. However, several questions remain. First, researchers assessing the links between specific attachment patterns and specific PDs frequently have not controlled for the high rates of co-occurrence (i.e., overestimates of comorbidity) of Axis II disorders, leading to patterns of findings that are often diffuse, given the overlapping constructs and high rates of co-occurrence among the PDs in both adolescent and adult samples. Second, questions remain as to whether attachment patterns and personality pathology are best assessed dimensionally or categorically. Attachment status and PDs are often assessed categorically in research despite evidence that dimensional data tend to outperform categorical data, at least in PD research (Widiger, 1993). Third, ambiguity revolves around the relation between avoidant PD and avoidant/dismissing attachment patterns, as the avoidant PD diagnosis has evolved in a more manifestly anxious direction in recent editions of the *Diagnostic and Statistical Manual of Mental Disorders*, in large part to minimize comorbidity with schizoid PD, and the schizoid diagnosis has been crafted to emphasize social indifference and lack of anxiety that empirically may not accurately characterize schizoid individuals (Westen & Shedler, 1999a, 1999b). Fearful attachment as assessed by self-report shows a strong relation to avoidant PD, as both constructs require the individual to acknowledge conscious anxiety.

The Present Studies

In this article, we describe a series of studies with three aims. The first aim was to provide initial data on two measures of attachment patterns for adults and two corresponding measures for

adolescents designed for use in ongoing therapy by experienced clinicians (to assess both initial attachment status and changes over time). (The two measures were also designed so that they could be completed following a systematic clinical interview designed to assess personality and psychopathology in both research and practice; Westen, 2004; Westen & Muderrisoglu, 2003, 2006.) The two instruments have the structure of self-report attachment measures, one a prototype measure and the other a multi-item questionnaire. However, both resemble narrative-based approaches using the AAI because they rely on clinicians to make subtle judgments not only about interpersonal behavior in attachment relationships but also about representations of self, others, and relationships (both implicit and explicit); patterns of discourse; and ways of regulating emotions in close relationships that are revealed in the way patients talk about significant relational experiences. Research on personality characteristics relevant to attachment has found that when clinicians make judgments regarding such characteristics, they do so primarily by drawing inferences from patients' narratives about significant interpersonal events and observing their interpersonal behavior with the clinician (Westen, 1997). The clinical setting is one in which patients typically have the opportunity to provide narratives about many situations and relationships over time and to form an intimate relationship with a clinician that mirrors certain aspects of attachment relationships (for empirical data, see Bradley, Heim, & Westen, 2005). Thus, we expected clinicians to make use of such information in completing measures of attachment that ask explicitly about such processes.

The second aim was to examine the relation between attachment patterns and personality pathology in clinical samples of adolescents and adults. By studying four independent adolescent and adult samples using two different instruments (each with adult and adolescent versions), we were essentially able to build in consistency checks to see whether attachment patterns would be associated in similar ways with specific PDs across samples and measurement strategies. We also obtained large enough samples that we could covary for the other PDs when assessing the relationship between a given attachment status and a given PD to obtain a clear picture of specific associations not confounded by the artifactual comorbidity built into the Axis II PDs.

The final goal was to examine the extent to which factor analysis can recover four attachment statuses on the basis of a combination of syntactic/narrative and interpersonal indicators and to see whether a similar factor structure emerges in both adolescent and adult samples. Our multi-item attachment questionnaire (like our prototype questionnaire) assesses patients' ways of interacting with attachment figures, as well as their characteristic modes of discourse regarding attachment relationships. Thus, we were interested to learn not only whether factor analysis of an item set designed to capture salient aspects of attachment assessed clinically would yield attachment dimensions comparable to prior measures but also whether narrative/syntactic and interpersonal items would load on the same factors despite their very different content and focus (i.e., substantial method variance). This would provide support for the robustness of the association of linguistic and interpersonal markers of attachment status in a highly ecologically valid and clinically relevant situation (the consulting room).

Overview of Methods

We collected adolescent and adult samples as part of two projects funded by the National Institute of Mental Health on the nature and classification of adolescent and adult personality pathology broadly defined, including not only the severe disturbances captured on Axis II of the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) but the wider range of personality problems seen in patients currently described as having "subthreshold" pathology. We report here primarily on dimensional assessment of both PDs and attachment status because of its advantages in terms of statistical power and fewer assumptions about the distribution of the variables in nature, although categorical data provided similar results throughout. In brief, 951 doctoral-level clinicians who treat adolescents completed a battery of psychometric instruments on a randomly selected 13- to 18-year-old patient in their care. Of these, a subset of 150 randomly selected clinicians completed the prototype attachment questionnaire as the final measure of the study, and a different subset of 125 completed a 37-item attachment questionnaire designed to assess similar content (see Appendices A and B). Similarly, 1,201 doctoral-level clinicians described a randomly selected adult patient in their care. Of these, a subset of 145 completed the prototype attachment questionnaire as the final measure of the study, and a different subset of 158 completed a 37-item attachment questionnaire designed to assess similar content. Each clinician provided data on only one patient; thus, there was no overlap among informants or patients across the studies. The adolescent and adult versions of the attachment questionnaires were identical, except for minor changes designed to maximize the age-appropriateness of the adolescent instruments (described below). All clinicians completed measures of personality pathology, adaptive functioning, and developmental history that we used as criterion variables to assess validity and association with personality pathology.

Study 1: Attachment Prototypes and Personality Pathology in Adolescents

Method

Sample

We contacted a random national sample of psychiatrists and psychologists with at least 5 years' experience postresidency (MDs) or postlicensure (PhDs) from the membership registers of the American Psychiatric and American Psychological Associations. We selected all clinicians whose membership records indicated an interest in children or adolescents and supplemented this where necessary with a general sample, given that many clinicians treat adolescents as well as adults. More than one third of clinicians agreed to participate in the study. Participating clinicians received a consulting fee of \$200 for a procedure that required approximately 2 hr of time.

We asked clinicians to describe "an adolescent patient you are currently treating or evaluating who has enduring patterns of thoughts, feeling, motivation, or behavior—that is, personality problems—that cause distress or dysfunction." To obtain a broad range of personality pathology, from relatively minimal to substantial, we emphasized that patients must have problematic personality traits but need not have a PD diagnosis. To avoid biasing the sample one way or another, we instructed clinicians to disregard the caveats in the *DSM-IV* regarding the application of Axis II diagnoses to adolescents and simply to select a patient with any degree or form of

personality pathology as defined above. We obtained a stratified random sample, stratifying on age (13–18 years) and sex. The only exclusion criteria were chronic psychosis and mental retardation. In addition, we asked clinicians to select a patient whose personality they felt they knew, using as a guideline ≥ 6 hr of clinical contact but ≤ 2 years (to minimize confounds imposed by personality change with treatment).

To minimize selection biases, we directed clinicians to consult their calendars to select the last patient they had seen during the previous week who met study criteria, regardless of setting (e.g., private practice, residential facility). To maximize participation, we offered clinicians the opportunity to participate either on paper or over the Internet using our secure Web site (www.psychsystems.net). As in prior research, and in line with meta-analytic findings on paper- versus computer-administered questionnaires (Richman, Kiesler, Weisband, & Drasgow, 1999), we have found no systematic differences between the two methods. To avoid compromising patient confidentiality or interfering in any way with ongoing clinical work, clinicians provided no identifying information about the patient (e.g., name, initials) and were instructed to use only information already available to them from their contacts with the patient. This study, like the others reported here, had the approval of the Emory University Institutional Review Board, and all respondents provided informed consent.

Measures

Clinical Data Form for Adolescents (CDF-A). The CDF (which has adult and adolescent versions, the CDF and CDF-A) is a clinician-report form developed over several years that assesses a range of variables relevant to demographics, diagnosis, and etiology (e.g., Westen & Shedler, 1999a; Westen, Shedler, Durrett, Glass, & Martens, 2003). Clinicians first provide demographic data on themselves and the patient. They then rate the patient's adaptive functioning using a number of indices, such as ratings of school performance and peer relations, as well as relatively objective indicators, such as history of arrests, suicide attempts, and psychiatric hospitalizations. Research has demonstrated that clinician ratings of adaptive functioning variables show high interrater reliability and validity (e.g., correlations with the same data obtained by independent interview $r > .60$; Hilsenroth et al., 2000; Westen, Muderrisoglu, Fowler, Shedler, & Koren, 1997). The next section of the CDF assesses aspects of the patient's developmental and family history with which clinicians who have met with adolescents or their parents over several sessions are likely to be familiar. The CDF assesses a wide range of variables of potential etiological relevance, such as history of foster care, family stability, and physical and sexual abuse. Clinicians working with adolescent patients generally have relatively direct access to such information, from having met with parents or other collateral sources.

In prior studies with both adolescent and adult samples, clinicians' judgments on these variables have predicted theoretically relevant criterion variables and have reflected reasonable (and conservative) decision rules (e.g., Dutra, Campbell, & Westen, 2004; Nakash-Eisikovits et al., 2002). For example, when asked to indicate reasons for their belief that a patient had a history of sexual abuse, virtually all clinicians checked items indicating involvement of authorities such as police or departments of social services, intact pretreatment memories of sexual abuse, and corroboration from family members or court records; less than 5% indicated that their judgment reflected inferences from the symptom picture or memories recovered in treatment, and clinicians tended to rate cases with questionable or ambiguous reasons for inference as "unsure" (Russ, Heim, & Westen, 2003; Wilkinson-Ryan & Westen, 2000). CDF ratings of quality of patients' relationships with their parents also correlated strongly with scores on a clinician-report Parental Bonding Inventory (Parker, Tupling, & Brown, 1979; Russ et al., 2003), which has similar factor structure and correlates to the self-report version.

Axis II checklist. To generate both categorical and dimensional DSM-IV PD diagnoses (without depending on clinicians to make free-form diagnoses, which tend to be unreliable), we presented clinicians with a

randomly ordered checklist of the criteria for all Axis II disorders. In prior studies, this method has produced results that mirror findings based on structured interviews such as the Structured Clinical Interview for DSM-IV Personality Disorders (e.g., Blais & Norman, 1997; Morey, 1988; Westen et al., 2003). To create categorical diagnoses, we applied DSM-IV decision rules to the present/absent data. To generate DSM-IV dimensional diagnoses that mirror those widely used in the PD literature, we summed the number of criteria judged present for each disorder. Prior research with both adolescents and adults has found that Axis II ratings collected in this manner have similar correlates and produce similar patterns of comorbidity to those obtained in structured interviews (e.g., Westen et al., 2003; Zittel & Westen, 2005).

PD construct ratings. To allow clinicians to rate the extent to which the patient resembled each PD construct irrespective of current diagnostic criteria, particularly for adolescents, for whom these criteria were not developed, we asked clinicians to make global PD construct ratings. The construct rating form instructed clinicians to rate each DSM-IV PD on a scale ranging from 1 (*no resemblance*) to 5 (*exemplifies this disorder*). For each diagnosis, we reproduced the single-sentence summary that introduces the disorder in the text of DSM-IV (e.g., "The essential feature of schizotypal personality disorder is a pervasive pattern of social and interpersonal deficits marked by acute discomfort with, and reduced capacity for, close relationships as well as by cognitive or perceptual distortions and eccentricities of behavior"). These PD construct ratings correlated strongly with number of PD symptoms endorsed for each disorder, showing both convergent and discriminant validity (median on-diagonal $r = .59$, range = .53 to .74; median off-diagonal $r = .13$, range = $-.27$ to .50). To maximize reliability of dimensional diagnosis, we standardized (z scored) both the number of DSM-IV symptoms endorsed and PD construct ratings and averaged them for each disorder to create composite variables.

Attachment Prototype Questionnaire—Adolescent Version (APQ-A). The APQ-A (Westen & Nakash, 2005a) was designed for clinically experienced observers and consists of four detailed prototype descriptions: secure; dismissing (avoidant); preoccupied (anxious); and what we refer to here as incoherent/disorganized, intended as an analog to disorganized patterns in infancy and childhood and the unresolved qualifier in adults. (Because the behavioral correlates of unresolved attachment are less well understood in adults and adolescents than the other three attachment statuses, we use the term *incoherent/disorganized* pending further research.) The content of the prototypes was derived from an extensive review of the clinical and empirical attachment literature, including examination of research using the AAI and the item content of the major self-report questionnaires and narrative-based Q-sort (Kobak et al., 1993). All prototypes were designed to assess both interpersonal and narrative indicators of attachment status. Approximately the first half of each prototype describes ways that the patient experiences or interacts with attachment figures, and the latter half describes linguistic markers and qualities of discourse characteristic of that attachment style (see Appendix A).

As in prior attachment prototype research, we asked respondents to make both dimensional and categorical ratings, beginning by rating the extent to which their patient matches or resembles each prototype using a 5-point Likert-type scale ranging from 1 (*no match*) to 5 (*very strong match*). If clinicians indicated that the patient matched to any degree with a prototype (i.e., if they rated the patient a 2 or higher), they were asked to provide two secondary ratings, the first assessing interaction style with attachment figures and the second assessing linguistic markers, using a similar 5-point scale (see Appendix A). Finally, at the end of the questionnaire, we asked clinicians to choose the prototype that best described their patient among the four, yielding a categorical assessment.

Results and Discussion

The clinician sample consisted of 69.3% psychologists, of whom 58.7% were men. The majority was highly experienced ($M = 19.7$ years of experience, $SD = 10.4$). In keeping with other

studies of clinician theoretical orientation (Norcross, Hedges, & Castle, 2002), most clinicians reported an eclectic or integrative theoretical orientation (58.7%), followed by cognitive-behavioral (CBT; 20.0%) and psychodynamic (15.3%). Of the patient sample ($n = 150$), 56% were boys, with a mean age of 15.6 years ($SD = 1.6$) and a mean Global Assessment of Functioning (GAF) score of 56.2 ($SD = 10.4$). The sample was 78% Caucasian, with 8% African American and 8% Hispanic; primarily working class (23.0%) or middle class (37.2%); and primarily seen in private practice (65.3%) or clinic (22.0%) settings (although 8.1% were seen in residential or forensic settings). Median length of treatment was 10 months, so clinicians knew the patients well.

In terms of categorical attachment status, clinicians rated 23.6% of the patients as secure, 28.5% dismissing, 30.6% preoccupied, and 17.4% incoherent/disorganized. With respect to Axis I diagnoses, the most common included dysthymic disorder (41.3%), oppositional defiant disorder (38.7%), attention-deficit/hyperactivity disorder (24.7%), major depression (24.7%), adjustment disorder (24.7%), substance use disorders (16.7%), and conduct disorder (16.0%). Means, standard deviations, and correlations among attachment prototype ratings are presented in Table 1. The only demographic variable significantly associated with prototype rating was patient sex, with lower preoccupied ratings among boys.

As a first pass at validation, we examined the relationship between attachment prototypes and a composite adaptive functioning variable averaging standardized ratings of GAF, level of personality functioning, quality of peer relationships, and school functioning (coefficient alpha = .72). As predicted, this variable was positively associated with secure attachment, $r(148) = .52$, $p < .001$, and negatively related to incoherent/disorganized attachment, $r(148) = -.25$, $p = .002$. The findings are not reducible to shared item content, as school functioning alone correlated positively with secure attachment, $r(148) = .33$, $p < .001$, and negatively with incoherent/disorganized attachment, $r(148) = -.20$, $p < .01$, consistent with either general effects of attachment style or the reciprocal relation between attachment and exploratory motives posited by Bowlby (1969).

We next examined the relation between attachment dimensions and developmental history variables likely to be associated with them. To maximize reliability, we standardized and aggregated ratings to create composite developmental variables from the CDF-A. As predicted, general family environment (a composite variable combining standardized [z scored] ratings of family warmth [1 = *cold/hostile*, 5 = *warm/nurturing*], family stability [1 = *chaotic*, 5 = *predictable/consistent*], relationship with mother and relationship with father [each rated 1 = *poor/conflictual*, 5 = *positive/loving*], and maternal functioning and paternal

functioning [each rated 1 = *psychotic*, 5 = *high-functioning*]; coefficient alpha = .78) was positively associated with secure attachment, $r(148) = .41$, $p < .001$, and negatively correlated with all three forms of insecure attachment (dismissing, preoccupied, and incoherent/disorganized), $r(148) = -.28$, $-.31$, and $-.31$, respectively, all $ps < .001$.

Because of its origins in the “unresolved” construct, we hypothesized a specific association between incoherent/disorganized status and two developmental history variables: attachment disruptions and childhood trauma. We created the attachment disruption variable by aggregating standardized ratings indicating presence of lengthy separations from the primary caregiver before age 6, history of foster placement, history of being sent away from home in childhood, stability of the primary caregiver’s sexual/romantic relationships (1 = *monogamous/stable*, 3 = *somewhat unstable/changing*, 5 = *multiple/indiscriminate partners*), number of residence changes, and presence of an alcoholic (and presumably intermittently unavailable) parent (coefficient alpha = .67).

To create the childhood trauma variable, we aggregated standardized ratings of presence of childhood physical abuse, childhood sexual abuse, witnessing violence between parents, involvement of state agencies charged with protection of children, or maternal history of sexual abuse (coefficient alpha = .69). We used partial correlations to control for overall family environment so that the analyses would be nonredundant. Although these partial correlation analyses are very conservative (because they likely control for some of the variance that legitimately should be assessed; e.g., family stability is a component of the general family environment variable but also would be expected to be low among adolescents with a history of disrupted attachments), they allowed us to obtain relatively unconfounded assessments of the relation between incoherent/disorganized status and two specific variables theoretically linked to it.

Although, as noted above, general family environment showed zero-order correlations with attachment security, as expected on the basis of extant theory and literature, neither attachment disruptions nor childhood trauma was significantly associated with secure, dismissing, or preoccupied ratings after partialling out variance accounted for by general family environment (median $r = .05$). (Here and throughout, we use partial correlations where possible to render results conservative, given the correlations among many of the predictor variables used in this study and more widely, such as general family environment and disrupted attachments.) However, both attachment disruptions and childhood trauma were associated with incoherent/disorganized attachment, $r(148) = .25$, $p < .01$, and $r(148) = .31$, $p < .001$, respectively. In a second set of analyses, we tested whether these relationships

Table 1
Means, Standard Deviations, and Correlations for Adolescent Prototype Ratings

Attachment rating	M	SD	Correlation			
			Secure	Dismissing	Preoccupied	Incoherent/disorganized
Secure	2.0	1.1	—			
Dismissing	2.1	1.2	-.39	—		
Preoccupied	2.3	1.2	-.16	-.07	—	
Incoherent/disorganized	1.8	1.1	-.35	.13	.26	—

Table 2

Zero-Order and Partial Correlations Between Adolescent Attachment Ratings and Dimensional Personality Disorder Scales (Partial Correlations Holding Constant Other Personality Disorders and Patient Sex)

Composite personality disorder rating	Attachment prototype rating							
	Zero-order correlation				Partial correlation			
	Secure	Dismissing	Preoccupied	Incoherent/disorganized	Secure	Dismissing	Preoccupied	Incoherent/disorganized
Cluster A								
Paranoid	-.35***	.26***	.06	.20*	-.10	.10	.11	.03
Schizoid	-.37***	.48***	-.12	.19*	-.15	.32***	-.13	.03
Schizotypal	-.39***	.28***	-.02	.34***	-.12	-.11	-.10	.22**
Cluster B								
Antisocial	-.29***	.17*	.11	.12	-.14	.13	-.09	-.05
Borderline	-.40***	.19*	.44***	.40***	-.18*	.14	.35***	.36***
Histrionic	-.17	-.04	.36	.12	.06	-.07	-.02	-.14
Narcissistic	-.26***	.16*	.18*	.11	-.02	-.04	.13	.01
Cluster C								
Avoidant	-.19*	.25**	.06	.08	.03	.06	.07	-.11
Dependent	-.15	-.02	.27***	.13	.03	-.15	.10	.04
Obsessive	-.02	.11	.04	.06	.08	.02	.07	.05

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

would hold when examining the secondary attachment ratings of syntactic/narrative characteristics for each attachment prototype. Once again, partialling out general family environment, the narrative styles associated with secure and dismissing attachment showed no association with either variable (median $r = .03$), whereas ratings of narrative disorganization (incoherent/disorganized status) showed significant correlations with both variables, $r(148) = .34$ and $.32$, respectively, $p < .001$. Ratings of tangentiality characteristic of preoccupied attachment also showed small to moderate associations with attachment disruptions and childhood trauma, $r(148) = .15$, $p < .05$, and $r = .25$, $p < .01$, respectively.

Finally, we examined the relation between attachment prototype ratings and dimensional PD scales. For each analysis, we report both the zero-order and partial correlations, partialling out the variance accounted for by all other PD dimensional scores and patient sex (given that sex was associated with one of the variables: preoccupied attachment). The partial correlations represent particularly conservative analyses, given that the median correlation among PD dimensions was $r = .21$ (range = $-.13$ to $.56$), with several correlations in the .40s and .50s (consistent with all PD research using structured interviews).

The results are depicted in Table 2. Of particular note is the association between BPD and both preoccupied and incoherent/disorganized dimensions for both zero-order and partial correlations. Also of note is the relation between avoidant attachment and both avoidant and schizoid PDs, although the former disappears when partialling out the other PDs. Many associations (e.g., between dependent PD and preoccupied attachment) were significant when we examined zero-order correlations, but they were no longer present when we eliminated shared variance with other PDs, although the partial correlations provided very stringent criteria, given the sample size and number of correlated covariates.

Secondary analyses of attachment status treated categorically produced similar results. For example, Figure 1 depicts dimensional borderline scores in patients categorically identified with

each of the four attachment statuses. As can be seen, secure patients are unlikely to have high BPD ratings, whereas the opposite is true for patients categorically rated as preoccupied or incoherent/disorganized. We tested this more formally with a priori contrast analysis, using the contrast weights $-2, 0, 1, 1$ (indicating the prediction secure $<$ dismissing $<$ preoccupied, incoherent/disorganized). The contrast was highly significant, $t(70.8) = 8.29$, $p < .001$, $r = .70$.¹

The results of this study suggest that clinicians' prototype ratings of adolescent attachment status bear predictable relations to both adaptive functioning and developmental history variables, supporting the validity of the measure. In addition, particular PDs show expected relations with attachment dimensions and categories. Perhaps most interesting, BPD showed the expected association with both preoccupied and incoherent/disorganized dimensions, and these findings held for more specific syntactic/narrative ratings as well.

Study 2: Attachment Prototypes and Personality Pathology in Adults

Method

The methods for Study 2 were highly similar to those for Study 1, except for the focus on adults rather than adolescents and the absence of stratification for age and gender. We contacted a random national sample of psychiatrists and psychologists from the registers of the American Psychiatric and American Psychological Associations, describing the study and inviting their participation. Once again, more than one third of the clinicians agreed to participate. We asked clinicians to describe "an adult patient you are currently treating or evaluating who has enduring patterns of thoughts, feeling, motivation, or behavior—that is, personality problems—that cause distress or dysfunction." To obtain a broad range of

¹ The degrees of freedom reflect our use of contrasts assuming unequal variance, given that the variances differed by Levene's test at $p > .001$.

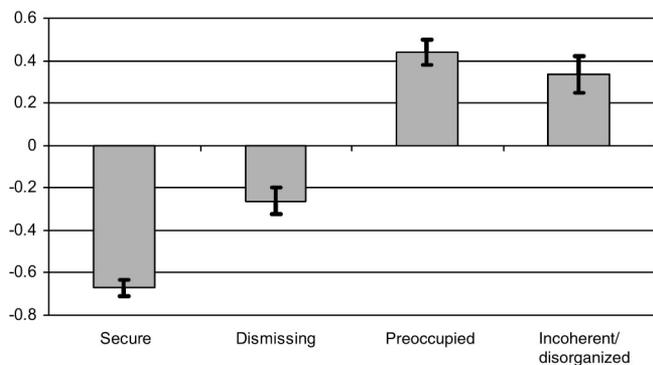


Figure 1. Borderline personality disorder dimensional scores for adolescents diagnosed categorically as primarily secure, dismissing, preoccupied, or incoherent/disorganized.

personality pathology, we emphasized that patients need not have a PD diagnosis. Patients had to meet the following additional inclusion criteria: older than age 18, not currently psychotic, and known well by the clinician (once again using the guideline of ≥ 6 hr of clinical contact but ≤ 2 years). To minimize selection biases, we once again directed clinicians to consult their calendars to select the last patient they had seen during the previous week who met study criteria. On recontact by e-mail, 96% reported having followed the directions for random patient selection. Procedures were identical to Study 1, except that we used the adult forms of all measures (the CDF, Axis II checklist, PD construct ratings, and APQ).

Results and Discussion

The clinician sample consisted of 65.3% psychologists, of whom 51% were men. The majority was again highly experienced ($M = 20.8$ years, $SD = 9.7$). As in Study 1, most clinicians reported an eclectic or integrative theoretical orientation (49.7%), followed by psychodynamic (30.4%) and CBT (13%). Consistent with patterns of treatment seeking in the community, 64% of the patients ($n = 145$) were women, with a mean age of 42.4 years ($SD = 12.3$) and mean GAF of 58.4 ($SD = 10.6$). The sample was 79% Caucasian, with 8% African American and 9% Hispanic; primarily working class (39.6%) or middle class (32.6%); and primarily seen in private practice (77.9%) or clinic (14.5%) settings (although 6.3% were seen in residential or forensic settings). Median length of treatment was 15 months, so clinicians knew the patients well.

Regarding categorical attachment status, clinicians rated 21.0% of the patients as secure, 16.1% dismissing, 39.9% preoccupied, 23.0% incoherent/disorganized. The most common Axis I diagnoses included dysthymic disorder (52.4%), major depression

(34.5%), posttraumatic stress disorder (18.6%), substance use disorders (17.2%), adjustment disorder (15.9%), and generalized anxiety disorder (15.0%). Means, standard deviations, and correlations between attachment prototype ratings are presented in Table 3. The only demographic variable significantly associated with prototype rating was patient sex, with lower dismissing and higher preoccupied and incoherent/disorganized ratings among women.

As in Study 1, we examined the relationship between attachment prototypes and a composite adaptive functioning variable averaging standardized GAF ratings, level of personality functioning, quality of friendships, quality of romantic relationships, work functioning, and social support (number of confidantes; coefficient alpha = .78). As predicted, this variable was once again positively associated with secure attachment, $r(143) = .56$, $p < .001$, and negatively related to incoherent/disorganized, $r(143) = -.33$, $p < .001$. Once again, similar findings emerged when we used quality of work functioning as the criterion variable (particularly for secure attachment), suggesting that shared item content did not account for the findings.

As in Study 1, we next examined the relation between attachment dimensions and developmental history variables. Once again, to maximize reliability, we standardized and aggregated multiple ratings to create composite developmental variables from the CDF. As predicted, general family environment (coefficient alpha = .82) was positively associated with secure attachment, $r(142) = .34$, $p < .001$, and negatively correlated with incoherent/disorganized attachment, $r(142) = [-.24]$, $p = .003$. Neither dismissing nor preoccupied attachment was significantly correlated with childhood family environment.

We once again hypothesized a specific association between incoherent/disorganized status and two composite variables calculated similarly as in Study 1: attachment disruptions (coefficient alpha = .53) and childhood trauma (coefficient alpha = .62). We used partial correlations to control for overall family environment. As predicted, neither attachment disruptions nor childhood trauma was significantly associated with secure, dismissing, or preoccupied ratings when partialling out general family environment (median $r = -.06$). However, both childhood variables were associated with incoherent/disorganized attachment after partialling out shared variance with family environment, $r(141) = .17$, $p = .04$, and $r(141) = .28$, $p = .001$, respectively. In a second set of analyses, we tested whether these relationships would hold when examining the secondary syntactic/narrative ratings. The narrative styles associated with secure and dismissing attachment again showed no association with either variable (median $r = -.07$), whereas ratings of narrative disorganization (incoherent/disorganized status) showed significant correlations with both variables,

Table 3
Means, Standard Deviations, and Correlations for Adult Prototype Ratings

Attachment rating	M	SD	Correlation			
			Secure	Dismissing	Preoccupied	Incoherent/ disorganized
Secure	2.0	0.9	—			
Dismissing	1.8	1.0	-.12	—		
Preoccupied	2.4	1.2	-.02	-.16	—	
Incoherent/disorganized	2.1	1.2	-.22	-.05	.17	—

$r(133) = .19, p = .03$, and $r(133) = .27, p = .002$, respectively. Tangential (preoccupied) narratives did not correlate with either incoherent/disorganized or preoccupied prototype ratings.

Finally, we examined the relation between attachment prototype ratings and dimensional PD scales, again using both zero-order correlations and partial correlations, partialling out the effects of all other PD dimensional scales and patient sex (given that sex was again associated with attachment dimensions). The results are depicted in Table 4. Again, BPD was associated with both preoccupied and incoherent/disorganized dimensions, and schizoid (but not avoidant) PD was associated with dismissing attachment. In this sample, some additional correlations emerged, including negative correlations between secure attachment and both BPD and avoidant PD; a theoretically predictable positive association between narcissistic PD and dismissing attachment; and expectable correlations between preoccupied attachment and both histrionic and dependent PD, even after holding other PDs (including BPD) constant. Categorical analyses produced similar findings to those in Study 1.

The results are largely consistent with those of Study 1, suggesting that clinicians' prototype ratings of adult attachment status bear predictable relations to both adaptive functioning and developmental history variables, as well as to particular PDs. As in the adolescent sample, BPD was associated with both preoccupied and incoherent/disorganized dimensions, and these findings held for more specific syntactic/narrative ratings as well.

Study 3: The Structure of Attachment as Assessed Clinically—A Factor-Analytic Examination

The first two studies had the advantage of simplicity of measurement of attachment variables (simple prototype ratings) and provided highly coherent results. However, they did not allow us to assess whether four attachment statuses would emerge from data from psychotherapy hours via an empirical procedure, such as factor analysis, or whether interpersonal and narrative/syntactic markers of attachment dimensions would load on separate method variance factors or would cohere into unitary factors. The primary goal of Study 3 was to address these questions and to see whether the factor structure that emerged would be empirically similar in adolescent and adult samples.

Method

Sample and Questionnaire

The data for Study 3 consisted of two samples, one adolescent and one adult. We used the same methods and procedures as described in Studies 1 and 2, with the exception that we replaced the APQ with the adolescent or adult version of the Attachment Questionnaire (AQ; Westen & Nakash, 2005b), a 37-item clinician-report psychometric instrument (Appendix B), and used different subsamples of clinicians so that responses on one version of the attachment measure would not bias responses on the other. Although the content of the AQ is essentially the same as the APQ, instead of making global prototype ratings, clinicians rate each of 37 items on a 7-point Likert-type scale ranging from 1 (*not true*) to 7 (*very true*). We generated items in the same manner as used to generate the attachment prototypes, consulting experts in the field for feedback. Roughly half the items in the final item set assessed ways of interacting with attachment figures (e.g., "Tends to expect that s/he can rely on the availability and responsiveness of the people who are important to him/her"), and the other half described narrative/linguistic markers (e.g., "Shows signs of disorien-

tation, disorganization, or dissociation when talking about traumatic events [e.g., loss or abuse]; seems to lose the capacity to monitor his/her discourse to keep in mind the perspective of the listener").²

Data Analysis

We used factor analysis to identify attachment dimensions, with the goals of assessing the validity of the hypothesized constructs (including the convergence of interpersonal and syntactic/narrative indicators), comparing the structure of attachment in adolescents and adults, and creating scales that could be used in clinical practice and subsequent research. Although item content was theoretically and empirically driven, and hence we had a priori expectations about the organization of factors, these expectations were not rigid because the items in the questionnaire were novel and used in a different context (generalizations across clinical hours) than in prior research. We considered deriving factors using exploratory factor analysis (EFA) in one sample and applying confirmatory factor analysis (CFA) to the other; however, researchers have identified limitations in the use of CFA for purposes such as this, given the number of variables that influence fit indices other than the hypothesis being tested (McCrae, Zonderman, Costa, Bond, & Paunonen, 1996; see also Tomarken & Waller, 2003). The alternative advocated by McCrae and colleagues (1996), which we employed here, is to use EFA procedures with Procrustes rotation and to calculate coefficients of congruence. This procedure combines EFA's robustness to minor, sample-specific fluctuations in the covariance matrix with some of CFA's emphasis on objective criteria for assessing the degree of similarity between observed results and prior expectations.

The procedure uses the Tucker–Burt–Wrigley–Neuhaus coefficient of congruence as the basis for assessing similarity between corresponding factors in an observed and an expected factor pattern. The statistic, which is interpretable in a manner similar to a correlation coefficient, has been shown to be an effective method to evaluate similarity between factors relative to a variety of alternatives previously proposed in the literature (Guadagnoli & Velicer, 1991). A rough "rule of thumb" has been established that a value of .90 or greater indicates matching factors (Barrett, 1986). The advantage of using a Procrustes rotation is that it minimizes arbitrary differences in rotation between two factor patterns, so that the patterns can be compared directly. One criticism of using Procrustes rotations has been that they can capitalize on chance to inflate the similarity between two factor patterns. The procedure advocated by McCrae et al. (1996) addresses this issue through Monte Carlo simulations designed to establish p values for determining beyond a given degree of uncertainty (e.g., $p < .05$) that congruence between factors could not have resulted from chance characteristics of the data. Paunonen and colleagues have provided further details on these procedures and their rationale (Paunonen, 1997; Paunonen, Jackson, Trzebinski, & Forsterling, 1992).

² Six items were modified in developing the adolescent version of the instrument, and one item was replaced. The purpose of these changes was to preserve the meaning in the context of differing developmental and relational circumstances. Thus, we changed items to clarify references to childhood experiences (e.g., Item 19, change in italics: "Has minimal access to specific memories from *earlier in* childhood and little interest in exploring or retrieving them") or in recognition of differences in age-appropriate behavior (e.g., Item 11: "Derives a sense of self-worth from being independent and self-sufficient, *in a way that seems to deny the importance of attachment relationships*"). We replaced Item 12 ("Seems to be mired in, or preoccupied with, past attachment relationships, e.g., seems still to be fighting old battles with mother, father etc.") with a more developmentally appropriate alternative ("Protests that s/he wants autonomy or distance from attachment figures, while behaving in ways that keep them uncomfortably involved or overinvolved").

Table 4

Zero-Order and Partial Correlations Between Adult Attachment Ratings and Dimensional Personality Disorder Scales (Partial Correlations Holding Constant Other Personality Disorders and Patient Sex)

Composite personality disorder rating	Attachment prototype rating							
	Zero-order correlation				Partial correlation			
	Secure	Dismissing	Preoccupied	Incoherent/disorganized	Secure	Dismissing	Preoccupied	Incoherent/disorganized
Cluster A								
Paranoid	-.32***	.24**	.11	.29***	-.12	-.01	.08	.20**
Schizoid	-.31***	.49***	-.29***	.03	-.20**	.34***	-.16*	-.05
Schizotypal	-.28***	.32***	-.06	.15	.08	.01	-.05	.06
Cluster B								
Antisocial	-.29***	.10	.05	.11	-.15	-.10	-.16*	.05
Borderline	-.29***	-.05	.48***	.37***	-.20**	.01	.27***	.22**
Histrionic	-.11	-.11	.51***	.24**	.12	-.09	.20**	-.03
Narcissistic	-.22*	.32***	.12	.01	-.10	.30***	.01	-.14
Cluster C								
Avoidant	-.22**	.03	-.05	.02	-.21**	-.17*	.01	.01
Dependent	-.09	-.14	.32***	.11	-.04	-.02	.19*	.01
Obsessive	.04	.30***	-.18*	-.08	.17*	.10	-.05	-.01

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Results and Discussion

Clinician and Patient Characteristics

This study included data from two samples, one adolescent and one adult, drawn from the larger projects described in Studies 1 and 2. In both samples, the majority of clinicians were psychologists (58.9% and 66.5%, adolescent and adult samples, respectively) with considerable posttraining experience ($M = 19.1$ years, $SD = 9.1$; $M = 22$ years, $SD = 10.3$). The majority of clinicians reported an eclectic or integrative theoretical orientation (48.4% and 47.5%), followed by psychodynamic (20.2% and 28.5%) and CBT (19.4% and 14.6%). In the adolescent sample, 62.1% of the patients ($n = 125$) were girls, with a mean age of 15.6 years ($SD = 1.6$) and mean GAF of 56.8 ($SD = 9.8$). In the adult sample ($n = 158$), 46.0% of the patients were men, with a mean age of 43.2 years ($SD = 12.2$) and mean GAF of 58.7 ($SD = 11.4$). The adolescent sample was 69.4% Caucasian, with the next most common groups represented being Hispanic (10.5%) and African American (9.7%). For the adult sample, the comparable percentages were 84.2%, 6.3%, and 3.8%. Both samples were primarily working class (27.4% and 23.4%) or middle class (34.7% and 37.3%) and primarily seen in private practice (66.1% and 74.7%) or clinic (17.7% and 14.6%) settings. Median lengths of treatment were 7 months and 13 months, respectively. Among the adolescent patients, the most common Axis I diagnoses included dysthymic disorder (33.9%), oppositional defiant disorder (36.6%), major depression (33.9%), attention-deficit/hyperactivity disorder (31.5%), adjustment disorder (25%), mood disorder not otherwise specified (NOS; 23.4%), and substance use disorders (21.8%). Among the adult patients, the most common Axis I diagnoses included dysthymic disorder (44.9%), major depression (35.4%), anxiety disorder NOS (16.5%), adjustment disorder (16.5%), generalized anxiety disorder (15.8%), and substance use disorders (15.2%).

Factor Analyses

Examination of the scree (Cattell, 1966), percentage of variance accounted for, and parallel analysis (employing a recent refinement by Glorfeld, 1995; Horn, 1965; Matthews & Oddy, 1993; Zwick & Velicer, 1986) indicated in both samples that as many as five factors should be retained for rotation. Consequently, we examined both four- and five-factor solutions for interpretability (Gorsuch, 1983) and to determine the degree of replicability across samples.³

Replicability of factor structure across samples. The factor structure of the four-factor, varimax-rotated solution was most clearly interpretable in both samples and was, in fact, highly consistent with theoretical expectations. We assessed the replicability of the factor structure using the methods discussed above. Independent varimax rotations were performed on the four- and five-factor solutions from both samples. We had more confidence in the reliability of the adolescent factor pattern because the adolescent sample required minimal oversampling (other than for ethnic and racial diversity), whereas the adult subsample from which these data were drawn was ascertained toward the end of the study when we were oversampling by gender (to increase the percentage of male patients) and by setting (nonoutpatient). This

³ In both samples, clinicians tended to use all categories of the scale, and given that the current samples were not sufficiently large to consider using polychoric correlations, variables were treated as quasi-continuous for further analyses. For most items in both samples, distributions showed a mild tendency to be platykurtic and positively skewed but did in general sufficiently approximate normality. Exceptions were a few items that were more severely positively skewed and, in one case, severely leptokurtic. Logarithmic transformations resulted in some improvement in the distributions of three of the items. Factor analyses were run using the transformed variables, but results did not differ substantially from those based on the raw data. Consequently, only results based on the untransformed variables are reported here.

oversampling resulted in a subsample that was slightly more heavily weighted than the population to which we hoped to generalize toward more severely ill men for whom syntactic or narrative features might have a different mix of meanings than in a general clinical sample of patients with personality pathology. Consequently, the varimax-rotated factor pattern from the adolescent sample was identified as the target matrix for orthogonal and oblique Procrustes rotations.

For all rotations, we calculated coefficients of congruence for the individual factors within the matrix as well as across the matrix as a whole (see Table 5). For the independent rotation, we calculated congruences for individual factors by reorganizing the rotated factor pattern from the adult sample so that factors corresponded. With a criterion of .90 as a threshold for identifying a match between factors, the four-factor solution provides evidence of a high degree of similarity on all four factors. The full matrix after both Procrustes rotations meets the standard for congruence, and only one of the factors appears to be more than negligibly below the .90 cutoff. The underlying structure of both factor patterns also appears to be consistent with simple structure, as the independent varimax rotation appeared to have resulted in a nearly identical orientation of axes across samples. In contrast, the five-factor solution showed very little evidence of congruence on an additional fifth factor.

Given that the independent rotations of the four-factor solutions revealed such a high degree of similarity between factor patterns, there seemed little doubt that the results of the level of congruence seen in the Procrustes rotations could not be due to chance alone. Nevertheless, we performed Monte Carlo simulations to assess this issue formally, as suggested by Paunonen (1997). We performed simulations by reordering the rows of the target matrix for the Procrustes rotations in a random manner. The resulting target matrix thus had a random relationship to the variables being analyzed, but it retained some of the same basic matrix characteristics as the original target matrix. We performed 1,000 simulations for each Procrustes rotation, with the adult factor pattern rotated to the pseudorandomly generated targets. Coefficients of congruence were calculated in the same manner as above after each rotation. Probabilities of congruences due to chance could then be produced from the distributions of the coefficients of

congruence that had been generated. Probability values presented in Table 5 are based on these distributions. As expected, the results indicate that the factor congruences for the four-factor solutions exceed values that can be accounted for by chance at a level that is highly significant. The results of the Monte Carlo solutions do not support a fifth factor.

Factor structure and correlates of the Attachment Questionnaire. The varimax-rotated factor pattern for the adolescent sample (which we replicated using the Procrustes rotation in the adult sample) is presented in Table 6. (A promax [oblique] rotation for the four-factor solution revealed a similar structure with low interfactor correlations, with the greatest absolute value = .23. However, promax solutions would have complicated comparisons across samples and would have been inappropriate in defining a target matrix for the orthogonal Procrustes rotation. Thus, we report the varimax solutions.) As examination of the table makes evident, the four factors that emerge are highly consistent with the four hypothesized attachment styles. (Once again, we called the fourth *incoherent/disorganized*, until future data demonstrate its convergence with the AAI unresolved dimension.) With a few exceptions (noted below), items with the highest loadings on each of the factors appear to be highly characteristic of the corresponding attachment prototype. In addition, and providing striking confirmation of links between discourse style and attachment status in AAI narratives (Main et al., 1985), all but one of the factors (preoccupied) include both hypothesized interpersonal characteristics as well as corresponding narrative/syntactic characteristics. The results provide clear evidence of both the convergent and discriminant validity of the four attachment styles and demonstrate that both interpersonal and syntactic markers are integral aspects of attachment style that are recoverable from psychometric data obtained by clinicians on the basis of ongoing observation during clinical hours.

In general, deviations from expectations at the item level were minor. The major exceptions were syntactic items hypothesized to be related to preoccupied (or, in one case, dismissing) attachment that loaded more strongly on the incoherent/disorganized factor and incoherent/disorganized items that involved contradictory or mistrustful responses to attachment figures that loaded on the other insecure factors. All of the items intended to assess secure attach-

Table 5
Coefficients of Congruence Across Adolescent and Adult Samples

Rotation method	Factor					General matrix
	1	2	3	4	5	
4 factor						
Independent varimax	.94	.84	.90	.88	—	.89
Orthogonal	.94***	.85***	.89***	.90***	—	.90***
Oblique	.95***	.86***	.91***	.91***	—	.90***
5 factor						
Independent varimax	.85	.89	.76	.79	-.25	.59
Orthogonal	.95***	.91***	.93***	.82***	.48	.85***
Oblique	.96***	.92***	.94***	.85***	.61***	.80***

Note. Orthogonal = orthogonal Procrustes with varimax-rotated factor pattern for adolescent sample as target matrix; Oblique = oblique Procrustes with varimax-rotated factor pattern for adolescent sample as target matrix; General = general matrix coefficient of congruence.

*** $p < .001$ (p values for Procrustes rotations only, reflecting comparison with 1,000 pseudorandomly generated target matrices in Monte Carlo simulations).

Table 6
Varimax-Rotated Factor Pattern for the Adolescent Sample

SEC	Factor loading			Attachment dimension ^a
	DIS	PRE	INC	
.72	.13	-.01	-.04	Is sensitive to other people's "signals"; tends to be empathic and emotionally "present."
.70	-.10	.02	.11	Tends to feel comfortable depending on others and having others depending on him/her.
.69	-.31	.17	-.22	Is able to explore and openly talk about emotionally significant events, even when doing so is painful.
.69	.09	-.27	-.19	Is able to problem solve and think constructively when in emotionally difficult interpersonal situations.
.68	-.12	-.11	-.36	Tends to speak clearly and coherently when recounting emotionally significant life experiences or describing important relationships.
.66	-.40	-.02	-.07	Is able to become emotionally close and express affection toward significant others.
.64	-.07	-.30	-.28	Tends to have balanced, realistic views of significant others.
.61	-.30	-.05	.03	Tends to feel calmed and comforted by contact and support s/he receives from significant others when distressed.
.61	-.18	.01	-.16	Is able to reflect on his/her childhood experiences and their effects on who s/he is today.
.46	-.36	-.13	-.08	Views him/herself as lovable and worthy of care.
.42	-.29	-.15	-.03	Tends to expect that s/he can rely on the availability and responsiveness of people who are important to him/her.
-.14	.77	.00	-.02	Tends to avoid closeness with others; is uncomfortable with emotional intimacy, physical contact, etc.
.08	.76	.09	.06	When distressed, tends to withdraw or attempt to cope by him/herself.
-.31	.65	.17	-.22	Tends to minimize or dismiss the importance of close relationships with others.
-.26	.56	-.05	.35	Tends to offer sparse narratives about interpersonal events; unwilling or unable to describe interpersonal experiences in detail.
-.20	.56	.39	.07	Has difficulty trusting significant others; is afraid of getting hurt if turns to others when scared, distressed, or in need.
-.38	.54	.22	.12	Disparages sentimentality, tenderness, or discussion or expression of feelings.
-.40	.48	-.04	.20	Has minimal access to specific memories from earlier in childhood and little interest in exploring or retrieving them.
-.10	.40	.28	-.22	Derives a sense of self-worth from being self-sufficient in a way that seems to deny the importance of attachment relationships.
.00	.35	-.01	.07	Takes an excessively pragmatic approach to language; has no use for "wasted words."
-.09	.09	.61	.20	Feels simultaneously smothered by significant others but never quite given enough, taken care of well enough, etc.
.12	.12	.61	.19	Experiences significant others as less accessible/responsive than s/he wants them to be, leading to distress, passive helplessness, etc.
.17	.20	.55	.27	Seeks close relationships but constantly feels ambivalent about them.
-.08	.05	.55	-.02	Protests that s/he wants autonomy or distance from attachment figures while behaving in ways that keep them overinvolved.
.10	-.01	.51	.27	When distressed, turns to significant others for comfort but chronically feels disappointed, misunderstood, not responded to, etc.
-.26	.09	.51	.33	Tends to manifest contradictory responses when distressed or in need (e.g., pushing the other away while demanding help).
-.37	.25	.50	-.20	Tends to disparage or belittle his/her parents or their role in his/her development in an attempt to dismiss their importance.
-.25	-.29	.43	.02	Tends to be controlling in close relationships, either through punitive responses or through overinvolved caregiving.
-.14	.11	-.07	.62	Tends to use vague, meaningless, or empty words (e.g., "dadadada") or to use psychobabble when describing interpersonal events.
-.12	.04	.20	.55	Shows signs of disorientation, disorganization, or dissociation when talking about traumatic events (e.g., loss or abuse).
-.07	.21	.23	.49	May lapse into prolonged silences, unfinished sentences or stilted, "eulogistic" speech when describing traumatic events or losses.
-.18	-.11	.11	.49	Shows signs of illogical, childish, or peculiar reasoning when describing traumatic events or losses.
-.36	.15	.34	.46	Strong emotions disrupt or derail narrative descriptions of events, rendering them incoherent, difficult to follow, etc.
.41	.14	.20	.43	Tends to worry that something might happen to those s/he loves and to have difficulty with separations from them.
-.13	.23	.28	.42	Tends to offer generalizations about his/her relationships that do not cohere with supporting details.
.29	-.12	.05	.36	Overly idealizes parents or attachment figures; has trouble acknowledging their imperfections.
-.27	.03	.23	.32	Has trouble staying on topic when discussing significant interpersonal events or relationships.

Note. Loadings $\geq .35$ are presented in bold type. SEC = secure; DIS = dismissing; PRE = preoccupied; INC = incoherent/disorganized.

^a Longer Adolescent Attachment Questionnaire items have been abbreviated for convenience of tabular presentation.

ment had higher loadings on that factor than any absolute loadings of items intended to assess alternative attachment styles. In general, items that loaded on different factors than those for which they were written appeared to do so in ways that are theoretically intelligible.

In examining salient loadings in the adult factor pattern, the match demonstrated with the coefficients of congruence is quite evident. In this respect, examination of the dismissing factor is noteworthy, given that it had the lowest coefficient of congruence (.04 to .05 below the .90 cutoff). In the oblique Procrustes rotation, all of the same items have salient loadings on the dismissing factor as in the adolescent sample, with the following exceptions: The item intended to represent an aspect of dismissing discourse—"Tends to offer generalizations about his/her relationships that do not cohere with supporting details"—had a salient secondary loading on the dismissing factor in the adult sample (.36 vs. .23 in the adolescent sample). Two of the secure items had salient secondary loadings on the dismissing factor in one but not both samples (−.36 vs. .11 and −.30 vs. −.36 for the adolescent and adult samples, respectively). The minor nature of these discrepancies is indicative of the similarity of the factors defined in both samples.

We derived scales to assess each of the four attachment constructs, by unit-weighting and aggregating items with a primary loading with absolute value $\geq .30$. As standard procedure in creating factor-based scores, we did not include secondary loadings to avoid item overlap among scales. One item was dropped from the incoherent/disorganized scale (Item 28) and one from the dismissing scale (Item 11) because of low item-total correlations ($< .25$ in either sample). Means, standard deviations, coefficients alpha, and correlations between scales are presented for both samples in Table 7.

The pattern of correlates was similar for both samples to Studies 1 and 2. For example, for adolescents, holding constant other PDs and sex, BPD was negatively correlated with secure attachment, $r(111) = -.27, p = .004$, and positively correlated with preoccupied, $r(111) = .39, p < .001$, and incoherent/disorganized, $r(111) = .21, p = .02$, attachment. Attachment disruption and childhood trauma were uniquely associated with the incoherent/disorganized dimension, $r(119) = .21$ and $.18, p = .02$ and $.05$, two-tailed, respectively, holding constant childhood family environment and patient sex (which was significantly associated with two of the childhood variables in zero-order correlation analyses). For adults, BPD was associated only with preoccupied attachment, $r(145) = .28, p = .001$, but histrionic PD was associated with incoherent/disorganized attachment, $r(145) = .24, p = .002$. Attachment disruption and childhood trauma again were uniquely

associated with incoherent/disorganized attachment, $r(154) = .10$ and $.27, p = .10$ and $.001$, two-tailed, respectively, holding constant general family environment and patient sex, although the correlation with attachment disruption was only a trend. Of particular note is that when we deleted the three incoherent/disorganized items that referenced traumatic events, the scale continued to correlate with the composite traumatic events developmental variable, partialling out family environment and sex, in adolescents, $r(119) = .17, p = .065$, and adults, $r(154) = .24, p = .003$, and continued to be associated with attachment disruptions in adolescents, $r(119) = .22, p = .016$. Thus, the findings do not appear reducible to shared item content in the predictor and criterion variables.

Replicating a two-factor solution. The view supported by the above analysis suggests that the four attachment styles from the AAI can be understood as discrete constructs (dimensions). An alternative perspective, derived from self-report attachment research, suggests that the four styles might represent the four quadrants of a two dimensional-space, defined by one dimension indexing attachment anxiety and the other indexing attachment avoidance. Such a perspective is by no means incompatible with our results, as hierarchical structures are often noted in the study of both normal (Costa & McCrae, 1995; Saucier & Ostendorf, 1999) and abnormal (Markon, Krueger, & Watson, 2005) personality.

To assess the possibility that higher order dimensions were present that conformed to the expectations of the two-dimensional perspective, we again performed factor analyses on both samples. We retained two factors, submitting the resulting factor patterns to independent promax rotations. Results were quite similar across samples, with coefficients of congruence for corresponding factors equal to .91 and .93. The factors were clearly interpretable and were consistent with expectations based on the model of Brennan et al. (1998). Avoidant items loaded on the first factor, and anxious items loaded specifically on the second factor. Secure items had primary (negative) loadings on the avoidant factor, and incoherent/disorganized items loaded primarily on the anxious factor.

The only notable difference between our results and those of the Brennan et al. (1998) study was that a principal components analysis showed that only 34% (adolescent) and 30% (adult) of the variance were accounted for by the first two components in our samples. This contrasts with 63% of the variance accounted for by the first two components in Brennan et al. (1998). This difference is not simply a result of differences in the reliability of items, as communalities in our study were in the moderate to high range (between .5 and .8 for all items). To what extent this reflects the broader item domain included in the present study, including

Table 7
Descriptive Statistics and Intercorrelations for Factor-Based Attachment Scales in the Adolescent and Adult Samples

Scale	Adolescent sample						Adult sample					
	M	SD	Secure	Dismissing	Preoccupied	Incoherent/ disorganized	M	SD	Secure	Dismissing	Preoccupied	Incoherent/ disorganized
Secure	37.3	12.1	(.89)				41.6	11.4	(.85)			
Dismissing	26.6	8.9	−.51	(.83)			25.8	8.4	−.41	(.77)		
Preoccupied	30.5	8.6	−.25	.26	(.77)		31.1	8.8	.00	.05	(.76)	
Incoherent/disorganized	18.8	7.1	−.31	.27	.46	(.73)	18.8	7.6	−.29	.23	.31	(.76)

Note. Coefficients alpha are in parentheses.

aspects of behavior (e.g., narrative style) that can be observed but cannot be assessed with self-report measures, awaits future research in which we administer self-reports, AAIs, and clinician reports with the same sample.

General Discussion

The results of these three studies point to the following general conclusions. First, clinicians can reliably assess attachment patterns from ongoing psychotherapy hours, and their ratings are associated with correlates (e.g., adaptive functioning, childhood history variables) in theoretically predictable ways suggestive of validity. We found that attachment security is associated with global functioning and general childhood family environment. Furthermore, the data suggest that the incoherent/disorganized dimension is uniquely associated with history of disrupted attachments and childhood trauma in ways predicted by prior theory, even when avoiding all potentially overlapping items from factor-analytically derived scales. This latter finding is important given the dearth of studies testing this hypothesized relationship (see Abrams, Rifkin, & Hesse, 2006; Madigan, Moran, & Pederson, 2006). The pattern of correlates, despite some variations, appears to be relatively consistent across adolescent and adult clinical samples.

Second, attachment patterns appear to be associated with personality pathology in relatively specific ways in both adolescent and adult clinical samples. The most consistent findings were as follows. Partialling out the extensive co-occurrence of the other PD dimensions, BPD in these four samples was associated with both preoccupied and incoherent/disorganized attachment. This makes sense in light of both the push-pull dynamics and rejection-sensitivity (preoccupied dimension) and the cognitive-linguistic slippage (incoherent/disorganized dimension) seen in the narratives of BPD patients. Prior research on early memories, Thematic Apperception Test responses, and stories told for the Picture Arrangement subtest of the Wechsler Adult Intelligence Scale in BPD patients similarly found disruptions in their understanding of social causality indexed by narrative incoherence (see Westen, 1991; Westen, Lohr, Silk, Gold, & Kerber, 1990), and other research has found "soft-sign" disturbances in thought and language to be distinctive of both BPD and schizotypal PD (see Shedler & Westen, 2004). Zero-order correlations showed considerably more significant associations, and some partial correlations emerged as predicted in either the adult or the adolescent sample, such as links between preoccupied status and dependent and histrionic PDs and between dismissing attachment and narcissistic PD.

Third, as documented in Study 3, we were able to recover robust factors resembling all three AAI attachment statuses and a fourth—incoherent/disorganized—dimension that resembles both unresolved attachment in adults and disorganized attachment in infants and children, using EFA that replicated across samples. Thus, the structure of attachment dimensions appears similar in adults and adolescents. Furthermore, patients' ways of interacting with attachment figures and their characteristic modes of discourse converged to produce four theoretically coherent dimensions, providing strong independent support for the linguistic approach that underlies the AAI and bridging interpersonal and narrative traditions in the measurement of attachment status. With relatively minor deviations (e.g., preoccupied linguistic items loading with incoherent/disorganized items), items loaded as theoretically ex-

pected, and factor analysis did not generate method factors despite the strong "pull" of the item set to do so (e.g., to produce one set of factors comprising interpersonal items and another set comprising linguistic/narrative items). We were also able to identify a two-factor solution resembling the two factors identified in the self-report literature, although they accounted for substantially less variance than the four-factor solution, which may be unsurprising given that the item set included constructs not assessed by self-report measures.

Limitations

The studies reported here have two primary limitations. First and most important, a single observer, the treating clinician, provided all data on each patient. Although single-informant studies (usually using self-reports or structured interviews that rely heavily on self-report) are the norm in research in clinical and personality psychology, future research clearly should collect independent data from multiple informants. Of particular interest would be collection of data on a sample of patients using the APQ and AQ, the AAI, and the ECR self-report questionnaire to assess both their convergence and their correlates. Without such data, we cannot be certain to what extent the constructs we measured here map onto constructs from either the AAI or self-report attachment literatures.

Although this is a clear limitation of the data presented here, two points are worthy of note. First, the correlates of the attachment dimensions were largely as predicted and similar to findings using other measures, suggesting that the measures we used are indeed tapping similar constructs. Second, these are the first three studies using these measures and represent a beginning, not an endpoint of their validation. (As we have known since Cronbach and Meehl, validation of measures and constructs is never "finished"; rather, it is recursive, as new data influence both constructs and their measurement.) Our goal was to provide initial data on validity and derive the factor structure with a large-sample study, to be followed by studies using multiple informants, observers, and measures. Indeed, only after some years and a number of interesting findings did researchers collect AAI and self-report attachment measures on the same subjects and find that they were tapping only partially overlapping constructs. Research has begun coding AAI data and our attachment measures from the same AAI data, and thus far the instruments are showing high concordance (K. Levy, personal communication, April 2006), although we will have to await the results from the full-sample study before drawing any conclusions. We are also now collecting clinician-report and self-report attachment data in a large inner-city African American sample, for which we have in-depth independent assessments of developmental history (e.g., physical and sexual abuse), personality, and molecular genetics, so we can begin examining gene-environment interactions in attachment dimensions in a high-risk nonclinical sample.

Second, because we did not want to overtax clinician respondents and were concerned that responses on one instrument would bias those on the other, we did not collect both questionnaires on the same patients. Although this gave us the advantage of four independent samples, it did not allow us to assess the convergence of the APQ and AQ or to determine whether one or the other is preferable for research or practice. The correlates of the APQ prototypes were generally "cleaner" than those of the AQ, and the

intercorrelations among factors were negligible, unlike the AQ. This suggests advantages of the APQ, perhaps reflecting the advantages of configural rather than piecemeal diagnosis; however, these advantages could equally reflect the impact of schema-driven biases elicited by prototype descriptions. These differences raise important methodological questions about the measurement of constellational variables (e.g., attachment status, PDs) versus traits.

Implications

The findings have a number of implications. First, they suggest that clinicians can assess attachment patterns in ongoing practice with some reliability. The development of clinician-report questionnaires should allow clinicians to measure attachment dimensions early in treatment and to track changes over time in patients for whom insecure attachment patterns are clinically relevant. This may be of particular importance given the increasing role emotion regulation plays in both cognitive-behavioral and psychodynamic approaches to treatment and the role of attachment relationships in the development of emotion regulation strategies. To what extent, and in which patients, problematic patterns of emotion regulation strategies will respond to skills training, as in dialectical behavior therapy (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991) and many recent offshoots (Cloitre, Koenen, Cohen, & Han, 2002), or will require broader changes in attachment patterns likely to occur through experiences in the therapeutic relationship, is a crucial area for future research (Bradley et al., 2005).

Second, the linguistic markers of attachment dimensions emphasized in AAI research may prove useful clinically as either targets of change or markers of change. At this point, we do not know to what extent helping patients with BPD resolve traumatic experiences will alter enduring disturbances of thought, memory, metacognition, or communication. Nor do we know to what extent focusing on problematic patterns of discourse or their presumptive diatheses will alter fundamental BPD interpersonal dynamics such as rejection sensitivity, although some intriguing data are emerging from psychoanalytic therapies aimed at treating the mental representations of self and others in BPD (Bateman & Fonagy, 2004; Clarkin, Levy, Lenzenweger, & Kernberg, 2004). In any case, it may be useful to teach clinicians how to recognize and measure subtle narrative and syntactic indicators that may have clinical significance and may currently be assessed implicitly or unsystematically or be underused clinically (see, e.g., Alexander, 1988).

Third, the fact that the preoccupied linguistic markers in Study 3 loaded in both samples with the disorganized factor raises intriguing questions. On the one hand, it is likely that we need to take the next step in scale development, namely, to revise items that are lacking in clarity or distinctiveness. On the other hand, it may also be the case that in a clinical sample, particularly one with a heavy representation of BPD, some linguistic indicators of preoccupied attachment in the normal samples used to construct the AAI may have different meaning. In this respect, it is of interest that in Study 1 secondary ratings of narrative/linguistic properties associated with preoccupied attachment were associated with both a history of disrupted attachments and childhood traumatic experiences, as were ratings of the disorganized narratives characteristic of incoherent/disorganized status.

Fourth, from a methodological standpoint, the data point to the importance of collecting large enough samples to covary for the

presence of other PDs treated dimensionally when assessing the relation between PDs and attachment status (and virtually every other construct). Given the high rates of redundancy of the Axis II PD constructs, knowledge about the relation between attachment and PDs is unlikely to progress without controlling for shared sources of variance in overlapping PD diagnoses.

Finally, this study did not address the question of the incremental clinical utility of attachment constructs relative to PD constructs. Although attachment constructs have many advantages (particularly their links to developmental research), to what extent diagnosing a patient with preoccupied and incoherent/disorganized status has advantages over diagnosing the patient with BPD is unclear. On the other hand, from a clinical standpoint, the concepts of dismissing and preoccupied attachment appear broadly applicable to many patients who are not well characterized by avoidant, schizoid, or BPD-spectrum pathology and, hence, are likely providing very useful incremental data. In the case of both attachment research and Axis II research, what is most likely to be clinically useful is a focus on processes and functions, such as emotion regulation and mental representation (internal working models) associated with different forms or dimensions of attachment (see Westen, Gabbard, & Blagov, 2006).

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Appendix A

Adolescent Attachment Prototype Questionnaire

Instructions. What follows are descriptions of four attachment styles or prototypes. Please read the statements that define each prototype and form an overall impression of the type of person being described. Then rate the extent to which your patient matches or resembles the prototype, using the following scale: 1 = *no match*, 3 = *moderate match*, 5 = *very strong match*. (Remember, if your patient has changed substantially during treatment, please describe him/her *at the time s/he began treatment with you*.)

A. Patients who match this prototype tend to expect that they can rely on the availability and sensitivity of the people they love. They are able to become emotionally close and express affection toward significant others. They tend to feel comfortable depending on others and having others depend on them, and they tend to feel calmed and comforted by contact and support they receive when distressed. They are generally sensitive to other people's "signals," tend to be empathic and emotionally "present," and are able to problem solve and think constructively when in emotionally difficult interpersonal situations. They tend to have balanced, realistic views of significant others and view themselves as lovable and worthy of care. Individuals who match this prototype are able to explore and talk openly about emotionally significant events, even when doing so is painful. They are generally able to tell coherent narratives about significant life events, answer comfortably when asked for details and examples, and reflect on their childhood and its effects on who they are today.

Rating: (circle one) 1 2 3 4 5
(1 = *no match*, 3 = *moderate match*, 5 = *very strong match*)

If the patient received a rating of 2 or more, please rate the following:

The patient tends to expect that s/he can rely on the availability and sensitivity of significant others.

Rating: ___ (1 = *untrue*, 3 = *moderately true*, 5 = *very true*)

The patient is able to explore and openly discuss emotionally significant experiences with significant others, even when doing so is painful.

Rating: ___ (1 = *untrue*, 3 = *moderately true*, 5 = *very true*)

B. Patients who match this prototype tend to minimize or dismiss the importance of close relationships. They are uncomfortable with emotional intimacy, physical contact, etc. They tend to derive a sense of self-worth by being independent and self-sufficient and disparage sentimentality, tenderness, or discussion or expression of feelings. When distressed, they tend to withdraw or attempt to cope by themselves. They may overly idealize their parents or attachment figures, having trouble acknowledging their imperfections. Alternatively, they may disparage, contemptuously derogate, or belittle their parents or their role in their own development in an attempt to dismiss their importance. Patients who match this prototype have minimal access to specific memories from childhood and little interest in exploring or retrieving them. They tend to offer sparse narratives about interpersonal events and appear unwilling or unable to describe interpersonal experiences in detail or to provide specific examples. They often offer generalizations about their significant relationships that do not cohere with supporting details (e.g., they may describe their relationship with

their mother as “loving” but, when pressed for specific examples, provide memories that seem distant or unpleasant). They tend to take an excessively pragmatic approach to language, having no use for “wasted words.”

Rating: (circle one) 1 2 3 4 5

(1 = no match, 3 = moderate match, 5 = very strong match)

If the patient received a rating of 2 or more, please rate the following:

The patient tends to minimize or dismiss the importance of close relationships.

Rating: ___ (1 = untrue, 3 = moderately true, 5 = very true)

The patient tends to offer sparse narratives about interpersonal events and appears unwilling or unable to provide specific examples.

Rating: ___ (1 = untrue, 3 = moderately true, 5 = very true)

C. Individuals who match this prototype seek intense emotional intimacy with others but constantly feel ambivalent about them. They tend to experience significant others (within and without the family) as less accessible or responsive than they want them to be, leading to distress, frustration, anger, anxiety, passive helplessness, etc. They may feel smothered by significant others at the same time as never quite given enough, taken care of well enough, etc. When distressed, they turn to significant others for comfort, but they chronically feel disappointed. They may protest that they want autonomy or distance from attachment figures while behaving in ways that keep them uncomfortably involved or over-involved. Individuals who match this prototype tend to have trouble staying on topic when discussing significant interpersonal events or relationships, often offering excessively long descriptions of events, wandering from topic to topic, crying continuously while describing past events, etc. They tend to use vague, meaningless, or empty words when describing interpersonal events (e.g., may insert nonsense words such as “dadadada” into sentences, use psychobabble such as “she has a lot of material around that issue,” etc.).

Rating: (circle one) 1 2 3 4 5

(1 = no match, 3 = moderate match, 5 = very strong match)

If the patient received a rating of 2 or more, please rate the following:

The patient tends to seek intense emotional intimacy with others but constantly feels ambivalent about them and experiences significant others as less responsive than s/he would like, etc.

Rating: ___ (1 = untrue, 3 = moderately true, 5 = very true)

The patient tends to have trouble staying on topic, offers overly lengthy or rambling descriptions of interpersonal events, etc.

Rating: ___ (1 = untrue, 3 = moderately true, 5 = very true)

D. Individuals who match this prototype have had trouble getting beyond, mastering, resolving, or making meaning of traumatic events (e.g., loss or abuse), so that they tend to respond in intimate relationships in ways that appear inconsistent, contradictory, or dissociative. They have difficulty trusting significant others and tend to manifest contradictory responses when distressed or in need of help (e.g., pushing the other away while demanding help or responding simultaneously with anger and help-seeking). They tend to be controlling in close relationships, either through hostile, critical, or punitive responses, or through overinvolved, “enmeshed,” or smothering caregiving. Individuals who match this prototype experience strong emotions that often disrupt or derail their narrative descriptions of interpersonal events, rendering these descriptions incoherent, difficult to follow, etc. When talking about traumatic events (e.g., loss or abuse), they tend to show signs of disorientation, disorganization, or dissociation; seem to lose the capacity to keep in mind the perspective of the listener; and show signs of illogical, childish, or peculiar reasoning (e.g., indicating that a dead person is still alive in the physical sense, or appearing convinced that their thoughts or feelings killed someone in childhood). They may lapse into prolonged silences, unfinished sentences, or stilted, “eulogistic” speech when describing traumatic events or losses.

Rating: (circle one) 1 2 3 4 5

(1 = no match, 3 = moderate match, 5 = very strong match)

If the patient received a rating of 2 or more, please rate the following:

The patient has had trouble getting beyond or making meaning of traumatic events and tends to respond in intimate relationships in ways that appear inconsistent or contradictory.

Rating: ___ (1 = untrue, 3 = moderately true, 5 = very true)

When talking about traumatic events, the patient tends to show signs of disorientation, disorganization, or dissociation.

Rating: ___ (1 = untrue, 3 = moderately true, 5 = very true)

Primary attachment style. If you had to choose among these four prototypes, which one best describes your patient (A, B, C, or D)? _____

(Appendixes continue)

Appendix B

Adolescent Attachment Questionnaire

Please rate the extent to which the following items are descriptive of your patient, where 1 = *not true at all*, 4 = *somewhat true*, and 7 = *very true*.

	<i>Not true</i>							<i>Very true</i>
	1	2	3	4	5	6	7	7
1. Tends to expect that s/he can rely on the availability and responsiveness of the people who are important to him/her.	1	2	3	4	5	6	7	7
2. Tends to offer sparse narratives about interpersonal events; appears unwilling or unable to describe interpersonal experiences in detail or to provide specific examples.	1	2	3	4	5	6	7	7
3. Tends to worry that something might happen to those s/he loves and to have difficulty with separations from them.	1	2	3	4	5	6	7	7
4. Tends to use vague, meaningless, or empty words when describing interpersonal events (e.g., may insert nonsense words such as "dadadada" into sentences, use psychobabble such as "she has a lot of material around that issue," etc.)	1	2	3	4	5	6	7	7
5. Shows signs of disorientation, disorganization, or dissociation when talking about traumatic events (e.g., loss or abuse); seems to lose the capacity to monitor his/her discourse to keep in mind the perspective of the listener.	1	2	3	4	5	6	7	7
6. May lapse into prolonged silences, unfinished sentences, or stilted, "eulogistic" speech when describing traumatic events or losses.	1	2	3	4	5	6	7	7
7. Tends to offer generalizations about his/her relationships that do not cohere with supporting details (e.g., may describe relationship with mother as "loving" but, when pressed for examples, provides specific memories that seem distant, hostile, or unpleasant).	1	2	3	4	5	6	7	7
8. Seeks close relationships but constantly feels ambivalent about them.	1	2	3	4	5	6	7	7
9. Tends to have balanced, realistic views of significant others.	1	2	3	4	5	6	7	7
10. Views him/herself as lovable and worthy of care.	1	2	3	4	5	6	7	7
11. Derives a sense of self-worth from being independent and self-sufficient in a way that seems to deny the importance of attachment relationships.	1	2	3	4	5	6	7	7
12. Protests that s/he wants autonomy or distance from attachment figures while behaving in ways that keep them uncomfortably involved or overinvolved.	1	2	3	4	5	6	7	7
13. Tends to be controlling in close relationships.	1	2	3	4	5	6	7	7
14. Takes an excessively pragmatic approach to language; has no use for "wasted words."	1	2	3	4	5	6	7	7
15. Strong emotions disrupt or derail narrative descriptions of events, rendering them incoherent, difficult to follow, etc.	1	2	3	4	5	6	7	7
16. Is able to become emotionally close and express affection toward significant others.	1	2	3	4	5	6	7	7
17. Tends to speak clearly and coherently when recounting emotionally significant life experiences or describing important relationships; is able to elaborate with relevant information and examples.	1	2	3	4	5	6	7	7
18. Tends to minimize or dismiss the importance of close relationships with others.	1	2	3	4	5	6	7	7
19. Has minimal access to specific memories from earlier in childhood and little interest in exploring or retrieving them.	1	2	3	4	5	6	7	7
20. Has trouble staying on topic when discussing significant interpersonal events or relationships; may offer excessively long descriptions of events, wander from topic to topic, be unable to stop crying while describing past events, etc.	1	2	3	4	5	6	7	7

21. Tends to feel calmed and comforted by contact and support s/he receives from significant others when distressed.	1	2	3	4	5	6	7
22. Tends to disparage, contemptuously derogate, or belittle his/her parents or their role in his/her development, in an attempt to dismiss their importance, beyond what is normative for someone of his/her age, ethnicity, etc.	1	2	3	4	5	6	7
23. Feels simultaneously smothered by significant others but never quite given enough, taken care of well enough, etc.	1	2	3	4	5	6	7
24. Shows signs of illogical, childish, or peculiar reasoning when describing traumatic events or losses (e.g., indicates that a dead person is still alive in the physical sense, or appears convinced that his/her thoughts or feelings in childhood actually killed someone).	1	2	3	4	5	6	7
25. Experiences significant others (within and without the family) as less accessible or responsive than s/he wants them to be, leading to distress, frustration, anger, anxiety, passive helplessness, etc.	1	2	3	4	5	6	7
26. Is able to reflect on his/her childhood experiences and their effects on who s/he is today.	1	2	3	4	5	6	7
27. Tends to avoid closeness with others; is uncomfortable with emotional intimacy, physical contact, etc.	1	2	3	4	5	6	7
28. Overly idealizes parents or attachment figures; has trouble acknowledging their imperfections.	1	2	3	4	5	6	7
29. Has difficulty trusting significant others; is afraid of getting hurt if turns to others when scared, distressed, or in need.	1	2	3	4	5	6	7
30. Is sensitive to other people's "signals"; tends to be empathic and emotionally "present."	1	2	3	4	5	6	7
31. Tends to feel comfortable depending on others and having others depend on him/her; is able to take care of and be taken care of by others.	1	2	3	4	5	6	7
32. When distressed, turns to significant others for comfort but chronically feels disappointed, misunderstood, not responded to, etc.	1	2	3	4	5	6	7
33. Is able to explore and talk openly about emotionally significant events, even when doing so is painful.	1	2	3	4	5	6	7
34. Tends to manifest contradictory responses when distressed or in need (e.g., pushing the other away while demanding help, responding simultaneously with anger and help-seeking).	1	2	3	4	5	6	7
35. Disparages sentimentality, tenderness, or discussion or expression of feelings.	1	2	3	4	5	6	7
36. When distressed, tends to withdraw or attempt to cope by him/herself.	1	2	3	4	5	6	7
37. Is able to problem solve and think constructively when in emotionally difficult interpersonal situations.	1	2	3	4	5	6	7

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