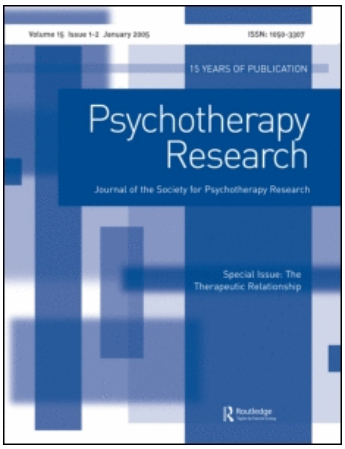

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Use of the adult attachment interview to measure process and change in psychotherapy

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INTERDISCIPLINARY DIALOGUES

Use of the adult attachment interview to measure process and change in psychotherapy

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Abstract
The Adult Attachment Interview (AAI), developed and extensively tested in the domain of developmental psychology, has relevance to psychotherapy research. The authors compare and contrast the ways that social psychologists and developmental psychologists have operationalized the concept of attachment security and discuss corresponding implications for psychotherapy research. In addition, they provide an overview of the AAI and its development, reliability, and validation in developmental psychology and summarize recent work linking AAI responses with distinctive types of psychopathology. A summary of recent work showing the AAI to be a useful indicator of positive outcome in psychotherapy for adults with diverse problems, including depression, borderline personality disorder, and posttraumatic stress disorder, is provided.

Keywords: attachment; process research; psychoanalytic/psychodynamic therapy; process research; trauma; outcome research

The pressure on the psychotherapy professions to demonstrate effectiveness of interventions delivered is substantial and necessary for ethical and economic reasons (Hunsley & Mash, 2007; Jacobson, Roberts, Berns, & McGlinchey, 1999). However, it is by no means clear as to what may constitute the most appropriate measure of psychological health, deviation from this, and movement toward this presumed goal of therapeutic efforts. Self-report questionnaires measuring therapeutic outcome have been developed and validated (e.g., Lambert et al., 1996), yet there is a tangible and appropriate yearning for measures of therapeutic process and outcome that include a humanistic vision and touch the inner experience of the client (Levitt, Stanley, Frankel, & Raina, 2005). Blatt and Auerbach (2003) distinguish between the measurement of outcome in terms of an exclusive focus on relief from symptoms and the psychodynamic perspective that seeks not only symptom relief but also changes in the internal world that make for lasting improvements in many facets of functioning, including the patient's capacity for establishing and maintaining mutually satisfying relationships. To appraise the patient's inner emotional and mental landscape, Blatt and Auerbach argue for the need to rely on standardized interview techniques, including their own rated in terms of their Object Relations Inventory and the Adult Attachment Interview (AAI) rated in terms of reflective functioning (RF; Fonagy, Target, Steele, & Steele, 1998; Steele & Steele, 2008). This article follows up on this latter suggestion regarding the AAI (George, Kaplan, & Main, 1984, 1985, 1996) and the associated system for rating and classifying AAI responses (Main, Goldwyn, & Hesse, 2003; Main, Hesse, & Goldwyn, 2008). This leads into a discussion of various ways the AAI may assist research and therapeutic progress in psychotherapy. These include the reliable identification of unresolved mourning concerning past loss or trauma and strikingly different strategies for dealing with emotional pain, either to severely restrict (dismissively)

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awareness of pain or to allow a pervasive and intrusive (preoccupied) sense of pain that tends to overwhelm the self and others. Patients in psychotherapy may shift from insecure to secure states of mind or one insecure state of mind (dismissal) to another (preoccupation). In each state, particular therapeutic strategies are called for so as not to collude with or reinforce the patient's problematic perspective. This article aims to show how the AAI, when administered to the patient one or more times in the course of therapeutic work, can help the therapist broaden the patient's understanding of past emotional difficulties and open up new vistas for functioning adaptively in the present.

We begin by comparing and contrasting the divergent traditions of attachment research in developmental and social psychology, pointing to the relevance of each to psychotherapeutic work. We then provide a brief history of how the AAI emerged in the field of developmental psychology and its psychometric properties. We elaborate the discussion to show how the AAI may be appealing to clinicians in terms of informing diagnostic judgments, appraising patient needs, and serving as a potential index of change in response to therapy. Importantly, we see the AAI not as being uniquely linked to any one form of psychotherapy but rather, as Slade (2008) commented about attachment theory and research broadly, as having "the potential to *enrich* (rather than dictate) the therapist's understanding of his or her patient. Attachment theory does not dictate a particular *form* of treatment; rather, understanding the nature and dynamics of attachment and of mentalization *informs* rather than *defines* intervention and clinical thinking" (Slade, 2008, p. 763).

Divergent Traditions of Attachment Research in Developmental and Social Psychology

Although this article arises from the way developmental psychologists have applied attachment theory in work aimed at understanding basic processes and individual differences in parent–child relationships (Ainsworth, Blehar, Waters, & Wall, 1978; Main, Kaplan, & Cassidy, 1985), social psychologists have also applied attachment theory in their work aimed at understanding individual differences in adults' romantic relationships (e.g., Griffin & Bartholomew, 1994; Hazan & Shaver, 1987). Different methods have been developed and validated by these two disciplines: Developmental psychologists have relied on observational and interview measures typically in the context of painstaking longitudinal research involving naturalistic settings (Grossmann, Grossmann, & Waters, 2005), whereas social psychologists have relied on less time-consuming self-report questionnaires, affording them the opportunity to study large samples in what are typically lab-based, cross-sectional investigations (Mikulincer & Shaver, 2007).

Self-report measures of attachment style were initially developed by social psychologists expecting that patterns of attachment—secure or insecure (avoidant or ambivalent/resistant)—observed in infant–parent relationships (Ainsworth et al., 1978) could be similarly identified in adult–adult romantic relationships (Bartholomew & Shaver, 1998; Hazan & Shaver, 1987). Despite an absence of any reported empirical overlap between infant patterns of attachment and adults' self-reported attachment, Hazan and Shaver's work led to a number of other self-report attachment questionnaires. These pencil-and-paper tasks require adult respondents to agree or disagree with statements indicating a wish for, and satisfaction with, intimacy in close personal (adult) relationships (e.g., Bartholomew, 1990; Brennan & Shaver, 1995; Collins & Read, 1990; Feeney, Noller, & Hanrahan, 1994; Fraley, Waller, & Brennan, 2000; Griffin & Bartholomew, 1994; Simpson, 1990). Mikulincer and Shaver (2007), in their comprehensive book, review studies using and provide full text examples of six discrete yet overlapping self-report measures of adult attachment styles. An influential factor analysis of these various questionnaires (Brennan, Clark, & Shaver, 1998) revealed that they reflect two major dimensions of adult romantic attachment: attachment-related *anxiety* and *avoidance*; low levels on each of these dimensions approximate a high degree of security.

On the face of it, the language of avoidance, anxiety, and security sounds similar to the classifications assigned to AAI responses, that is, insecurity (dismissal or preoccupation) as opposed to security. However, is conscious, explicit endorsement of statements on a questionnaire similar to the judgments applied by reliable coders to narrative responses to the AAI? Until recently (see Roisman et al., 2007), the field lacked a good quantitative estimate of the extent of convergence between the self-report measures of attachment and the AAI. Roisman et al. (2007) performed a meta-analysis of 10 studies (combined $N = 961$) in which both AAIs and self-reported attachment styles were collected. The association between AAI security versus insecurity and self-reported attachment was equivalent to $r = .09$ (range $= .02$–$.17$), suggesting trivial to small empirical overlap between these measures based on Cohen's (1992) criteria. Similarly, self-reported anxiety did not discriminate between AAI preoccupied and dismissing states of mind ($r = .06$, a trivial effect). In contrast, self-reported avoidance

was linked to AAI dismissing (vs. preoccupied) states of mind ($r = .15$, a small effect). Regarding findings specific to the clinically common phenomenon of unresolved states of mind, anxiety was significantly associated with unresolved trauma ($r = .20$, $p = .05$) but not unresolved loss ($r = -.08$, $p = .43$; Roisman et al., 2007). Taken together, these findings must serve as a caution to those seeking a quick self-report alternative to the AAI, yet it may be assumed that, when self-report attachment measures are used in a pre–posttreatment design, a self-reported reduction in anxiety may reflect a move toward resolution (of past trauma), and a reduction in avoidance scores may suggest an acceptance of the limitations of reliance on defensive idealization.

A Close Look at the AAI

To understand the developmental roots of adults' reliance on idealization or other defensive strategies and the sources of ongoing anxiety, fear, and confusion in their lives, the AAI is recommended. The interview protocol (George et al., 1996)[1] and standardized coding system (Main et al., 2008)[2] are closely aligned with Bowlby's (1949, 1988) firm belief that actual childhood experiences shape the representations we form of self and others and thus the direction we are likely to take as older children, adolescents, and adults regarding mental health. Important to the rationale behind the development of the AAI questions and coding system are Bowlby's observations concerning loss and trauma. For Bowlby, such experiences are both inevitable and normatively disorienting and disorganizing (Bowlby, 1980). They require grief work, or mourning, so that the disruptive influence of a loss or trauma is not an ongoing disorienting presence in the life of the individual. Notably, the AAI coding system reliably detects when such grief work is incomplete or not yet resolved (Main et al., 2008). This phenomenon of unresolved mourning, evident in lapses in monitoring speech or reason surrounding personally significant loss or trauma events, has been observed in more than 40% of clinical samples in published studies. The samples studied include patients representative of both genders and from a wide variety of cultural backgrounds with a range of *Diagnostic and Statistical Manual of Mental Disorders* Axis I and Axis II diagnoses ($N = 685$) in a recent AAI meta-analytic report (van IJzendoorn & Bakermans-Kranenburg, 2008). This same meta-analytic report observed the unresolved AAI response in only 15% of community samples ($N = 889$). Notably, the clinical group shown to have the highest reported levels of unresolved mourning concerning past loss or trauma comprises adults with borderline personality disorder (BPD; see Dozier, Stovall-McClough, & Albus, 2008). In the three empirical reports on this topic, the unresolved response has been observed in 50% (Barone, 2003), 75% (Patrick, Hobson, Castle, Howard, & Maughan, 1994), and 89% (Fonagy et al., 1996) of adults with BPD. This underscores the high probability that significant childhood experiences of abuse or loss that have ongoing disorienting and disorganizing influences are at the core of difficulties experienced by adults with BPD, including impulsivity and aggression.

The AAI questions (George, Kaplan, & Main, 1984) were developed in the context of a longitudinal study of infant patterns of attachment that has been extended into early adulthood (Main, Hesse, & Kaplan, 2005). The sample was small ($\sim$40 families) but its influence has been great. This is because of much further work with the AAI beyond the lab in which it was introduced establishing the interview as a reliable and valid tool of investigation within developmental and clinical psychology (see Hesse, 1999, 2008; Steele & Steele, 2008). Of direct relevance to psychotherapy, the AAI literature has made psychodynamic concepts (e.g., intergenerational patterns in relationships, defensive idealization, unresolved grief) open to empirical investigation in novel ways.

The AAI consists of 18 primary questions and follow-up probes that have remained unchanged through revisions of the protocol aimed at more fully framing the rationale and updating the evidence base for the interview (George et al., 1984, 1985, 1996). The questions were developed to explore experiential and representational domains concerning attachment, goals that are achieved by focusing closely both on what respondents say and how they say it. Early in the interview, the focus is on past attachment experiences, as respondents are asked to provide five adjectives that describe one's childhood relationship with each parent, reaching back to as far as one can remember through the age of 12. Immediately after the presentation of adjectives, respondents are asked to think of memories or episodes that illustrate and support each adjective provided. Questions that follow concern what happened when, as a child, one was upset, physically hurt, ill, or separated from parents. In addition, there are questions and probes about abuse and loss experiences. When such experiences have occurred, respondents are probed to report on their feelings and behavior at the time of and the time since the trauma, concluding with a query about whether they feel the trauma has had any long-term influence on them. Toward the end of the interview, questions directly focus on respondents' inner representational world (e.g., whether they think their childhood

experiences influenced their adult personality and why they think their parents behaved as they did during their childhood).

Throughout the AAI, there is a dual focus on what happened and what meaning or sense has been derived from experience. Interviews are audio recorded and transcribed verbatim. These transcriptions are read by raters trained to high levels of reliability in applying the conventional rating and classification system (Main et al., 2008). Interviews are rated on 9-point scales, with every second point anchored, pertaining to (1) probable past experiences with attachment figures (five scales) and (2) current state of mind with respect to attachment (eight scales). Finally, an overall four-way major classification is assigned to each interview. Interviews are assigned as (1) secure, (2) insecure-dismissing, (3) insecure-preoccupied, or (4) unresolved with respect to past loss or trauma. In the case of the latter assignment, raters also note the best fitting alternative secure or insecure classification. In community samples, a majority of respondents ($>60\%$) are secure, whereas in clinical samples a majority of respondents ($>60\%$) are typically unresolved and insecure (either dismissing or preoccupied). As the AAI has come to be applied to clinical samples, it has become evident that often a single category assignment cannot easily be given because highly disparate or conflicting representations of experience (e.g., downregulating dismissive strategies and upregulating preoccupied strategies) are evident. The conventional proposal has been to designate all relevant classifications for such interviews (e.g., unresolved/insecure-dismissing/insecure-preoccupied) and collapse interviews that cannot be singly classified with the unresolved group in statistical analyses (see Main et al., 2008; Hesse, 1996; van IJzendoorn & Bakermans-Kranenburg, 2008).

Interrater reliability reports, typically based on average intraclass coefficients, of the 9-point scales, applied by trained raters, are consistently greater than $r=.75$, and estimates of agreement on the category assignments commonly exceed 90%. Training to code the specialized interview requires attendance at a 2-week AAI institute and then passing the subsequent 30-interview interrater reliability test.

Validity evidence is strong for conceiving of AAI security/insecurity as being linked not to one's genetic makeup but to shared (and nonshared or relationship-specific) environmental influences (Caspers, Yucuis, Troutman, Arndt, & Langbehn, 2007; Steele, Steele, & Fonagy, 1996). Powerful associations across generations between AAI responses of parents and infant patterns of attachment have attracted much attention, from Main et al.'s (1985) report through and beyond the first meta-analytic report on 854 parent–child relationships studied (van IJzendoorn, 1995) showing a large effect size (Cohen's $d=1.06$) for AAI security/insecurity predicting infant–parent security/insecurity. Attention to this result is warranted because much prior work, across independent labs in various countries, reported on how insecurity/security in infant patterns of attachment, particularly maternal, was linked backward in time to variations in maternal insensitivity/sensitivity and forward in time to variations in peer relations, adaptation to the school setting, and diverse mental health outcomes (Grossmann et al., 2005). These cross-national findings have been summarized in careful longitudinal work stemming from Bowlby's initial hypotheses about the immediate and long-term benefits to children's mental health that follow from maternal interactions early in life typified by prompt and effective parental attention to infant distress, consistency, and joy (Ainsworth et al., 1978; Grossmann et al., 2005; Sroufe, 2005; Sroufe, Egeland, Carlson, & Collins, 2005).

The Appeal of the AAI to Clinicians

Early work with the AAI demonstrating its psychometric properties, including interrater reliability, test–retest reliability, and discriminant and predictive validity and involving hundreds of adults (see Hesse, 1999, 2008; van IJzendoorn, 1995), was primarily derived from studies of community samples. Yet by the mid-1990s the AAI came to be appreciated and applied in clinical research pursued in diverse cultural contexts, with a dramatic rise in clinical samples (>60) being studied in the last 10 years (see van IJzendorn & Bakermans-Kranenburg, 2008). This meta-analytic work points to how internalizing disorders are typically linked to insecure-preoccupation (hyperactivation of attachment linked to passivity and an underdeveloped sense of self), while externalizing disorders are commonly linked to insecure-dismissal (an explicit or implicit deactivation and devaluing of attachment linked to impoverished recall, an idealized view of self or others, and often a derogatory attitude toward attachments). This same meta-analytic report confirms, as suggested previously, that adults with BPD are, in the majority of cases, likely to appear in the context of the AAI as having unresolved mourning (absorption, guilt, and confusion) concerning past loss or trauma. Knowledge of these probable links between AAI responses and diagnostic status may be used by clinicians to guide therapeutic work, as suggested by Slade (1999). Specifically, Slade (1999) highlighted the way preoccupied individuals need structure to help them organize their feelings,

while dismissing individuals need an atmosphere that opens them up to the experience of feelings and the expression of affects. Notably, in the clinical context especially, patients may be both dismissing (with respect to certain relationships) and preoccupied (with respect to others).

The clinical usefulness of the interview format is immediately evident from the impact the questions have on the respondent. That is, the questions themselves serve to alert the interviewee (e.g., patient or client) as concerns the relevance of one's attachment history to the task of making sense of current circumstances and modes of coping. This is so because as soon as the interview begins, participants are called on to recall where they were born, into what type of family constellation, who cared for them over the childhood years, what happened over that time, and how they think and feel about their upbringing now.

The AAI offers to the psychiatric literature a perspective and investigative tool that go beyond available screening devices for establishing in adults their consciously perceived experiences in their family of origin (e.g., as elicited by the very widely used Parent Bonding Instrument [PBI] developed by Parker, Tupling, & Brown, 1979). The AAI reaches beyond the assessment of perceived experiences to the representational level of perceived meaning arrived at by individuals with respect to their childhood attachment experiences, including loss and abuse. The PBI and related instruments relying on checklists are reliable and valid indices of adults who have suffered adverse childhood experiences, with profound long-term significant effects on both psychological and physical health (see Felitti et al., 1998). Yet many adults show exceptional resilience such that the negative consequences of adverse childhood experiences are overcome or averted. In addition, until the AAI emerged in the developmental psychological literature, with its focus on the internal world and the meaning adults attribute to their attachment history, there was no reliable and valid way of identifying who has, and who lacks, resilience in the face of adverse childhood experiences, including loss or trauma.

Thus, psychotherapists and researchers with an interest in the internal world, defensive processes, and object relationships perceive a natural affinity to the AAI questions and scoring system owing to the concentrated attention they give to an individual's current state of mind regarding attachment relationships and the associated implications for measuring psychotherapeutic process and change (e.g., Fonagy et al., 2006; Levy et al., 2006; Toth, Rogosch, & Cicchetti, 2008). Importantly, the AAI is to be seen as an adjunct to clinical work and is, therefore, not wedded to any single therapeutic modality. Yet it may be that the AAI is most relevant to diagnostic conditions with comorbid issues concerning the debilitating consequences of adverse childhood experiences, including loss or trauma. For example, the AAI has been shown to be a valid indicator of successful responsiveness to cognitive–behavioral therapy for posttraumatic stress disorder (PTSD; e.g., Stovall-McClough & Cloitre, 2003).

Links between an attachment perspective stemming from the AAI literature and the clinical process have gained prominence (e.g., Bowlby, 1988; Fonagy, Gergely, Jurist, & Target, 2002; Wallin, 2007). Wallin shows how even a rudimentary understanding of the AAI can be a rich source of information for the psychotherapist seeking a fuller picture of patients' inner representational world. Familiarity with the AAI literature may enhance therapists' understanding of how patients' probable attachment history has shaped their emotion-regulation strategies and accompanying mental representations. In this respect, therapists may benefit from the AAI literature without ever administering the AAI questions or acquiring formal training in the AAI rating and classification system. However, for therapists interested in undertaking research-based work, a deeper familiarity with the AAI clinical research literature is desirable and available (Steele & Steele, 2008).

The Special Case of Unresolved Mourning: A Frequent Feature of Clinical Work

Patients with unresolved mourning in the context of the AAI show identifiable disturbances in cognition and emotion surrounding their loss or trauma, including absorption, guilt, and dissociation. This is typically revealed in an AAI by lapses in the monitoring of speech or reason (e.g., when a speaker does not correct a contradiction in the dating of a trauma or refers to a deceased person as though he or she was alive; Main et al, 2003, 2008). In an AAI in which multiple losses or abuse experiences are described, it is highly informative to observe which experiences are spoken of in a coherent and organized way and which lead the patient into disorganized speech indicative of unresolved mourning.

The criteria for identifying and scoring unresolved mourning in an AAI (Hesse, 1999, 2008; Main et al., 2003, 2008) include subtle and discrete markers of the ways that loss and trauma experiences may lead to persisting irrational beliefs, deep fears, and pronounced disturbances of behavior. Interestingly, absorption in the context of the AAI has been linked to independent measures of this construct (see Hesse & van IJzendoorn, 1999). Adults with AAIs

classified as "unresolved" have been shown to be especially prone to having infants who are disorganized/disoriented based on the Ainsworth strange situation assessment (Main & Solomon, 1990), with one probable mechanism of influence being frightened or frightening behavior by the caregiver toward the child (Main & Hesse, 1990; Schuengel, van IJzendoorn, Bakermans-Kranenburg, & Bloom, 1999). Disorganized status in an infant–mother relationship is a risk factor for later psychopathology, especially dissociative PTSD symptoms in later childhood (MacDonald et al., 2008) and the teenage years (Carlson, 1998; Sroufe et al., 2005). Thus, it is clinically important to identify parents with unresolved mourning and help them toward resolution so that they, and their offspring, can be protected against recurring dissociative symptoms.

Coherence of Transcript: A Focus for Clinical Work?

One of the most revealing of the 9-point interval scales applied to AAI transcripts is coherence of transcript. This rating encompasses features of discourse analysis, including the ideas of Grice (1975, 1989), the philosopher of language, who postulated four maxims of coherent collaborative conversation: truth, economy, relation, and manner. In the AAI context, the match between the overarching semantic descriptors (the adjectives provided to describe childhood relations with each parent) is contrasted with the individual's ability to provide memories or incidents as evidence for these global representations. Truth and relation are satisfied when a clear fit or match is observed between specific sensory experiences and evaluations (adjectives provided). Economy is satisfied when the patient appears to say neither too much nor too little. Manner is satisfied when the participant is conventionally polite and contained. One clinical research team has reported on how a focus on the extent of coherence in patient language used in therapy across sessions, when studied in terms of the AAI criteria for rating coherence, can reflect increased organization and improved functioning over the course of a psychotherapeutic treatment (see Ammaniti, Dazzi, & Muscetta, 2008).

RF: A Target for Clinical Work?

Although all the questions in the AAI can be seen to permit evaluation of the nature of mind, emotion, self, and relationships, two AAI questions in particular appear to demand that individuals show the depth of their understanding of human motivation and relationships: "Why do you think your parents behaved as they did during your childhood?" and "How do you think your childhood experiences have influenced your adult personality?" These two questions, in distinct but related ways, demand a capacity for RF (i.e., the ability to put themselves in their parents' shoes and to think about the thoughts, feelings, and intentions that may have guided their parents' behavior toward them during the childhood years). The concept was first reported by Fonagy, Steele, Steele, Moran, and Higgitt (1991), who sought to increase understanding of the mechanisms underlying intergenerational transmission of attachment patterns. A full account of the origins of the RF concept and its many correlates in parents and children has been provided elsewhere (see Steele & Steele, 2008). The concept has been taken up by clinicians, and it has been suggested that "individuals with increased reflective functioning make better choices in work, social and love relations and are able to achieve not only stability but also fulfillment in their lives" (Yeomans, Clarkin, Diamond, & Levy, 2008, p. 170).

The concept of RF arose out of an infrequently observed phenomenon in some AAIs: the state of mind scale known as metacognition, defined as monitoring and correcting one's own speech and thoughts (Main et al., 2003). In the 200 AAIs that began our longitudinal study of attachment (Steele & Steele, 2005), we found it useful to add a 9-point rating (which later became an 11-point rating) of the extent to which participants showed monitoring not only of one's own speech but also of others' speech, thoughts, and emotions. Over time, this came to be called reflective functioning and has been broadly defined as (1) awareness of the nature of mental states in the self and others, (2) the mutual influences at work between mental states and behavior, (3) the necessity of a developmental perspective, and (4) the need to be sensitive to the current conversational context (Fonagy et al., 1998; Steele & Steele, 2008). Notably, RF is similar to other concepts in the clinical literature that have been advanced over the decades, including intraception, insight, the self-observing capacities of the ego, psychological mindedness, and more recently mindfulness. Further research may reveal the extent of overlap, which is expected to be high.

With respect to attachment, RF rose to prominence on account of the reliable way it has been applied in clinical and developmental research with valid results. We found that individual differences in RF were linked to individual differences in infant–parent attachment (Fonagy et al., 1991). We also found that this was particularly true for parents who experienced significant adversity during childhood and showed high RF in their AAIs. RF was a marker

of resilience in these parents (Fonagy, Steele, Steele, Higgitt, & Target, 1994).

RF, as mentioned previously, expresses itself in response to AAI questions that demand reflection by asking "why" questions. Individuals who are fervently interested in why people behave the way they do are likely to find psychotherapy attractive but may need occasional help to structure their thoughts and feelings lest they be stuck in a low mode of RF termed "hyperactive," akin to the notion of insecure-preoccupation. Participants with a hyperactive RF style have many questions and reflections but lack organization and balance. Other patients find little of interest or value in the "why" questions and are likely to absent themselves of responsibility for knowing, as when they are asked "Why did your parents behave as they did during your childhood?" A common reply from the respondent with markedly low RF is "How should I know? Ask them." These patients present a unique set of challenges to the therapist, who must aim to cultivate inhibited reflective processes lest the patient be stuck in an RF mode termed "disavowal" or, lower yet, "hostile." These mental and emotional responses are most typical of individuals guided by the overall pattern of AAI response known as insecure-dismissal.

Mentalization-based treatments, advocated by Fonagy and Bateman and practiced by a growing number of psychodynamic therapists, take as the core aim of clinical work igniting or taming the natural capacity for RF in people with deep, profound inhibitions to contemplate the nature of mind in the self and others (Bateman & Fonagy, 2004, 2006; Fonagy et al., 2002). Such inhibitions are rooted, it is assumed, in early social learning in one's family of origin. Specifically, it is thought that adults with these inhibitions, most commonly those with BPD, learned very early in life that being curious about the mind of the other was a dangerous activity. That is, the frightening or frightened parent would have been threatening and incomprehensible so that the child (reasonably) reacted by assuming malevolence in the mind of the other.

One can easily see how this (realistically) restricted way of thinking about mind may quickly be generalized to new relationships. Such a child may be understandably rushed to conclude hostile motives behind others' (benign or well-intentioned) behavior. As well, such a child (and later adult) may be prevented from recognizing the evidence that runs counter to their limited belief system. It is easy to see how a cycle of dissatisfying interactions and abruptly impermanent relationships may follow for such a fearful individual governed by the belief that trusting no one is the safest strategy. Providing a secure base from which exploration of the inner and outer world may proceed and kindling the inhibited reflective capacity of such individuals must be among the chief aims of psychotherapy.

The developmental roots to skewed or untrusting interpersonal beliefs may be charted when studying an AAI from a new patient. More importantly, possible avenues for intervention may be identified. These are important islands of experience that do not confirm the overall interpersonal beliefs maintained by the individual. Jones (2008) highlights how an AAI administered to an angry man with a violent history and a hostile RF stance revealed a brief but positive childhood experience with a grandmother who, alone among the adults of this man's childhood, was a loving and secure base. This information, unknown to suspecting forensic services, could then be used clinically as a wedge to broaden this man's set of intrapersonal understanding and interpersonal beliefs. Thus, in Jones' detailed account informed by the AAI, the patient was restored to a more consistently trusting and hopeful path of relating, only briefly known to him before. Thus, attending in therapy to the flow of a patient's narrative, noticing when skills of coherence and RF are disrupted and when they are enabled, holds great promise for identifying developmental strengths to be promoted and weaknesses to be overcome.

Assessing Therapeutic Outcome: Recent Empirical Demonstrations Using the AAI

Several recent empirical therapy outcome studies have relied on repeat administrations of the AAI: at baseline and at completion of therapy. Toth et al. (2008) reported on a study that relied on repeat administrations of the AAI, at baseline and 1 year later, to measure the impact of child–parent psychotherapy (Lieberman & Van Horn, 2005) for major depressive disorder in mothers of young children. The randomized controlled trial included two comparison groups: a depressed control (waitlist) group and a nondepressed control group (Toth, Rogosch, Manly, & Cicchetti, 2006). Impressively, there were more than 60 women in each of these three groups, and only the depressed intervention group showed a significant increase in RF in the AAI after 1 year of treatment, with independent significant positive effects on the child–mother relationship.

Notably, in Toth et al. (2008), the AAIs obtained from the women with a history of depression revealed significantly lower levels of supportive experiences during childhood, relative to the nondepressed comparison group, and this profile did not shift over time. This confirms long-standing assumptions about the impoverished childhoods of adults

prone to major depressive disorder and also highlights how the AAI can reliably detect which adults are organized and reflective with respect to adverse childhood experiences and which adults are still deeply troubled by the past. Among the depressed group of women who had received treatment, after 1 year 80% provided interviews judged at the high end for RF, twice the number who were in this group before treatment began.

Levy et al. (2006) have reported on how RF and attachment security can be increased in adults with BPD, particularly in response to Kernberg's transference-focused therapy. As the name suggests, this therapy focuses on understanding links between relationships in the past and present. Levy et al. conducted a randomized clinical trial in 90 outpatients with BPD randomly assigned to either transference-focused psychotherapy (TFP), a modified psychodynamic supportive psychotherapy, or dialectical behavior therapy. Treatment was delivered by therapists trained to high levels of competence in these manualized approaches, and each received weekly supervision from acknowledged experts in each approach. AAIs were administered before pretreatment and 1 year into treatment by independent assessors (not the therapist). Over the year of treatment, AAI coherence increased significantly, as did RF, and the frequency of secure AAI classifications increased significantly but only for the patients being treated by TFP. Reading how these authors phrase the goal of TFP, one can easily imagine AAI security, coherence, or high RF being described: "The patient develops the capacity to think more coherently and reflectively, with more realistic, complex, and differentiated appraisals of the thoughts, feelings, intentions, and desires of self and others" (Levy et al., 2006, p. 1037). By contrast, the focus—and mechanisms of change operating in— dialectical behavior therapy and supportive psychotherapy appear somewhat tangential to the AAI and hence less effective in terms of assisting a patient to acquire secure autonomy, at least from this one study. Interestingly, nearly one-third of the BPD patients in the Levy et al. (2006) study had AAIs initially judged unresolved with respect to past loss or trauma, and none of the three modalities of treatment moved patients out of this "unresolved" position at one-year follow-up.

Stovall-McClough and Cloitre (2003) conducted an important pilot study demonstrating the effectiveness of the AAI as an index of the efficacy of behavioral exposure therapy among women with PTSD and a history of childhood sexual abuse. According to the well-established behavioral understanding of trauma, most people undergo a process of associative (extinction) learning after a trauma, such that via exposure to trauma-related cues in benign conditions, the absorbing grip of the trauma is gradually released. This permits an integration of the original traumatic (previously overwhelming) memory into the long-term self-memory or autobiographical memory store, thereby allocating the traumatic event (so long a persistent part of the present) to the past. From this place of integration and ordered perspective on events, the traumatic event can be safely accessed as needed to retell the troubling events and draw out the meaning or meaninglessness of it without self-recrimination or debilitating fear, anger, or despair. For women with PTSD and unresolved (AAI) attachment status concerning childhood trauma, Stovall-McClough and Cloitre (2006) showed that unresolved AAI status was most strongly associated with PTSD avoidant symptoms rather than dissociation per se. This prompted them to undertake a pilot study ($N = 18$) investigating the efficacy of imaginal exposure therapy (to address the avoidant symptoms) as opposed to emotion regulation and interpersonal skills training. They observed a 62% significant reduction in unresolved status and a loss of PTSD diagnosis for those women in the exposure therapy group, suggesting the relevance of the AAI as a measure of therapeutic improvement and exposure therapy as a relevant approach to the treatment of PTSD avoidant symptoms.

A slightly different use of the AAI is in its potential to assess the possible connection between therapist and client match in terms of each of their attachment states of mind and a possible link with therapeutic action and outcome. Zegers, Schuengel, van IJzendoorn, and Janssens (2006) compared AAIs from clinicians working with emotionally and behaviorally disturbed adolescents in an inpatient setting. They found that secure therapist attachment was predictive of an increase over time in the adolescents' perception of their mentors as psychologically available, someone who could be construed as an attachment figure. In contrast, for adolescents working with nonsecure clinicians, the mentor's perceived psychological availability decreased across the course of treatment. This intriguing area of research is in its early stages, but, given the pressure to deliver evidence-based treatment and to measure fidelity to models, it would seem a natural next step to assess clinicians with the AAI. Attachment profiles of clinicians should be studied so that (a) they could be matched to those providing a different modality of treatment therapy contributing to "cleaner" comparisons between different treatment models; and (b) they could be studied in relation to patient profiles and the effect of these profiles upon the therapeutic alliance and treatment progress.

Conclusion

The AAI arose in the context of longitudinal development research documenting a long-held clinical concept: that patterns of relating to others are not only identifiable but are passed on from one generation to the next (Main et al., 1985). Numerous independent laboratories have now confirmed the intergenerational nature of attachment patterns (see van IJzendoorn, 1995), and the AAI has come to be applied in more than 50 independent clinical studies (see van IJzendoorn & Bakermans-Kranenburg, 2008). A number of studies, both case studies and empirical investigations involving randomized controlled trials, suggest that the AAI is a useful clinical tool. This idea accords with John Bowlby's original intentions when he first formulated attachment theory "for use in the diagnosis and treatment of emotionally disturbed patients and families" (Bowlby, 1988, p. ix). That attachment theory has come to be regarded with respect and interest among a wide variety of psychotherapists is largely due to the development of the AAI.

In systematic clinical research, it is advised that the AAI be administered early in the treatment process by the helping professional, and only in cases of fragile and deeply wary patients should the interview be postponed until a therapeutic alliance is firmly in place. Where a measure of commitment to therapeutic work can be assumed, the AAI is likely to promote an alliance. Afterward, with the exception of one or two gentle questions about whether the interview experience left them with any questions or concerns, it should be considered the patient's right alone to raise, when they see fit, topics arising from the interview experience. The chief reason for this is that many aspects of the interview judged to be salient by the interviewer/therapist may not yet be part of the patient's conscious awareness. Over time, it is to be expected that content from the interview will filter through material covered in the course of therapy. Correspondingly, it is to be expected that the AAI may help the therapeutic process along as patients shift toward more adaptive, less symptomatic, behavior. Readministration of the AAI at intervals or at the end, or perhaps some months after the conclusion of therapy, may reveal how therapy has helped patients toward a more balanced, reflective, and coherent account of their attachment history. The case study literature suggests, as one would expect, that this process is far from linear, with many steps sideways and backward as well as forward. Yet the empirical literature shows significant results overall, with a move toward security, reflection, and valuing of relationships, even among adults with BPD, depression, or PTSD. Thus, the AAI may be both a useful motivator within therapy and a telling indicator of increases in organization and coherence in, and between, the internal and external worlds.

Notes

[1] The AAI questions, only to be used with training in administration of the interview, are available at http://www.psychology.sunysb.edu/attachment/measures/content/aai_interview.pdf.

[2] For details about AAI institutes (2-week trainings) on how to rate and classify interviews, see http://www.psychology.sunysb.edu/attachment/aai_training.htm.

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