

# Attachment in adolescence: A move to the level of emotion regulation

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ABSTRACT

The early adolescent's state of mind in the Adult Attachment Interview (AAI) is more closely linked to social interactions with peers, who are unlikely to serve as attachment figures, than it is to (i) qualities of the adolescent's interactions with parents, (ii) the AAI of the adolescent's mother, or (iii) the adolescent's prior Strange Situation behavior. This unexpected finding suggests the value of reconceptualizing AAI autonomy/security as a marker of the adolescent's capacity for emotion regulation in social interactions. Supporting this, we note that the AAI was originally validated not as a marker of attachment experiences or expectations with one's caregivers, but as a predictor of caregiving capacity sufficient to produce secure offspring. As such, the AAI may be fruitfully viewed as primarily assessing social emotion regulation capacities that support both strong caregiving skills and strong skills relating with peers.

KEY WORDS: adolescence • attachment • emotion regulation • peer relations

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Adolescence is unique in the human lifespan as the phase during which generalized states of mind regarding attachment can first be assessed using the Adult Attachment Interview (AAI) Scoring and Classification System (Main, Goldwyn, & Hesse, 2002). As adolescents gain formal operational thinking capacities, they also gain the ability to hold and reflect upon

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abstracted, generalized representations of attachment relationships. This “move to the level of representation,” as Mary Main has termed it (Main, Kaplan, & Cassidy, 1985), permits and indeed forces a new conceptualization of attachment, and opens up important avenues for assessing the attachment system beyond childhood.

However, just as the numerous transitions of adolescence may bring both advances and unsettling changes to the adolescent’s social world, so too our own research into adolescent states of mind regarding attachment has led to both advances and some dramatic changes in our thinking about the attachment system. It is the story of these advances and changes that we share in this article.

### **Continuities, expected and otherwise**

Our story begins with one of the most pervasive challenges for research in adolescent social development: given all of the change and disruption to established patterns of social behavior that occur during adolescence, how can we identify continuities between current adolescent development and markers of functioning both concurrently and at earlier and later stages? We began our search for continuities with the adolescent’s state of mind regarding attachment by trying to replicate a finding from infancy that is probably one of the most remarkable cross-person, cross-situation, cross-measurement continuities in all of psychology: the strikingly high correlations that have been reported between a mother’s AAI status and the Strange Situation behavior of her infant offspring (Fonagy, Steele, & Steele, 1991; Main et al., 1985; van IJzendoorn, 1992; Ward & Carlson, 1995). We were surprised, and even a bit disappointed, by the results. Even though we had an advantage over the infancy researchers, in that we could use an identical measure, the AAI, to assess both the adolescent’s and his or her mother’s attachment state of mind, we found that the correlation between the two (assessed using Kobak’s (1990) Q-sort approach to assessing security on a continuum) was only .21 (Allen et al., 2003).

At first we simply questioned our measurement approach: might the adolescent AAI not yield entirely reliable results, for example? Additional data suggested quite the opposite, however. For example, we found that the test–retest stability of the adolescent’s AAI, over a two-year period, was a reassuringly high .61, a figure in keeping with data from other labs (Allen, McElhaney, Kuperminc, & Jodl, 2004; Ammaniti, van IJzendoorn, Speranza, & Tambelli, 2000; Zimmermann & Becker-Stoll, 2002). Equally importantly, we *were* able to observe expected continuities between adolescent autonomy/security on the AAI and other highly relevant measures of social functioning, from depression to delinquency to social competence with peers (Allen, Porter, McFarland, McElhaney, & Marsh, 2007).

We then went further and sought to assess the relation of adolescent state of mind regarding attachment to other markers of the mother–adolescent relationship. When we assessed the qualities of mother–adolescent inter-

actions, as opposed to maternal AAI status, continuities with adolescent AAI status were greater. For example, a combination of variables measuring maternal attunement to teen's thinking, dyadic expressions of relatedness during disagreements, teen perceptions of maternal support, and teen lack of idealization of mothers explained substantial variance in teen attachment security as assessed with the AAI (Allen et al., 2003). We initially interpreted these findings as reflecting the mother's provision of a secure base for the teen.

Although this initial interpretation still seems apt, later examination and reflection suggests that even here our evidence of a purely *maternal* contribution to this secure base was only modest. Two of the four measures we used, adolescent perceptions of maternal warmth and adolescent deidealization of mother, were both obtained solely from the adolescent's perspective. A third measure, dyadic relatedness, reflects adolescent behavior as much as maternal behavior. Only one of our four indicators – maternal attunement to teen's self-perceptions – primarily relies upon a measure obtained from mothers, and even this measure depends on adolescent openness in communication as much as maternal attunement. So, although we had identified clear continuities between adolescent security and qualities of a critical attachment relationship, these were of a somewhat different sort than those found in infancy. In some ways they were stronger, as infant researchers have struggled to find strong relational correlates of observed infant attachment security (De Wolff & van IJzendoorn, 1997). Yet, in one critical respect, they were weaker, in that there was only very modest correspondence between maternal and adolescent AAI status.

We next examined the extent to which qualities of peer interaction could serve as functional markers of adolescent AAI status (by examining them as statistical predictors of AAI status). Now, peer relationships are arguably more likely to be somewhat distal *outcomes* of a secure state of mind than precursors of it. More importantly, although in later adolescence peer relationships can perhaps on occasion become full attachment relationships (e.g., in intense romantic relationships), in early adolescence peer relationships are typically more affiliative than attachment-focused in nature (Hazan & Zeifman, 1999; Markiewicz, Lawford, Doyle, & Haggart, 2006). Given the conceptual distance of early adolescent peer interactions from attachment processes, the links between the qualities of peer relationships and attachment states of mind would thus be expected to be rather modest (Crowell et al., 1996). Certainly these links would be expected to be less strong than the links between mother–adolescent interaction qualities and adolescent attachment status.

What we found, however, was a very strong relation between peer functioning and AAI status. We could account for a full 24% of the variance (a *Multiple R* of .49), in adolescent attachment status by examining a combination of teen popularity, teen calls for emotional support from peers, and teen lack of experience of peer pressure. We then went further and compared the relative strength of the links of parental and peer relationship qualities to adolescent AAI status. We examined models in which

previously identified maternal and paternal markers of adolescent states of mind were entered into the same equation with peer markers of functioning. In these models, the peer markers not only added additional unique variance linked to adolescent attachment status, they were *more strongly* linked overall to adolescent AAI status than were the parental factors. So given that in early to mid-adolescence, peer relationships are most likely *not* primarily attachment-focused in nature, just what does it mean that adolescent attachment states of mind in the AAI are as or more strongly related to behaviors with peers than to parent–adolescent interaction qualities, maternal AAI status, or early attachment status with parents?

### **Just what is a state of mind regarding attachment?**

To her immense credit, Mary Main was remarkably precise and careful in her initial language describing the information provided by the AAI Coding System (Main et al., 2002). Although she could have simply described the results as reflecting attachment relationships, or overall attachment security, instead she was careful to label what was coded as a “state of mind regarding attachment.” Although others (including members of our own lab) were later less careful and have used “security” as a shorthand description for this state, Main was careful to label the adult analog to infant security in the AAI as a state of being “autonomous, yet valuing of attachment.” The issue is not that Main and others were uninterested in finding a pure adult analog to infant security – “infant security grown up” – rather, Main’s terminology simply recognized that, powerful as the AAI findings were, the available data could not logically support labeling the results as the direct adult instantiation of infant security. Our findings suggest the long-term benefits of this early care in labeling. A close revisiting of just what is actually being assessed by the AAI suggests our findings are not as surprising as they first appear.

The easiest way to illustrate the view we have arrived at is to ask the reader to imagine that the AAI and its classification system were being examined by a psychologically astute lay person, unfamiliar with the research or theoretical base from which the AAI springs, and asked to literally describe what the coding system appears to capture. This novice would see a system focused on the extent to which the individual was able to coherently discuss emotionally intense experiences involving parents, largely though not exclusively, dating back to early childhood. This individual would also see an emphasis on coherence in the face of strong emotions, and would note the importance of perspective-taking, balance, clarity of communication, and lack of excessive, involved anger or avoidance of the topics raised in the interview. Viewed from outside the theoretical perspective of attachment theory, a novice would likely conclude that the AAI was in fact assessing some form of emotion regulation, particularly as it related to memories of intense childhood experiences with parents. The novice might reasonably expect that such regulation would bear some relation to

attachment security as assessed previously in infancy, but would not necessarily see the two constructs as directly analogous, nor would the relationship between the two be expected to necessarily be overwhelmingly strong. Interestingly, this naïve approach corresponds well with Hesse's (2008) description of the goal of the AAI as being "to bring into relief individual differences in what are presumed to be deeply internalized strategies for regulating emotion and attention when speakers are discussing attachment-related experiences."

This is simply a thought experiment, of course, but the tentative conclusions it suggests actually gain quite strong logical support from a close re-examination of the remarkable data that originally were used to validate the AAI. Mary Main first reported a remarkably high correspondence between maternal AAI autonomy and infant security in the Strange Situation, a finding which has since been well-replicated (Fonagy et al., 1991; Main et al., 1985; van IJzendoorn, 1992; Ward, & Carlson, 1995). This would at first seem to be the ironclad validation of the AAI as a measure of attachment – not to mention a remarkable finding in its own right. To conclude that this finding validates the AAI as a measure of attachment in adulthood, however, would be doing a disservice both to the construct and to Mary Main's initial precision in describing it. For the one subtlety that's been largely lost in our field's extended excitement over these initial findings is recognition of what they logically show.

The most natural, *yet incorrect*, interpretation is to view the AAI–Strange Situation concordance as evidence that the AAI is measuring parental attachment behavior. In fact, *these data show the remarkable value of the AAI as a measure, not of parental attachment behavior, but of parental care-giving behavior* (Allen & Manning, 2007; Mikulincer & Shaver, 2007). What we know about autonomous mothers is that they are able to provide care for their infants of sufficiently high quality and sensitivity that the infants are securely attached to them when observed in the Strange Situation. The AAI does not predict anything about the mother's security in her own attachment relationships nor about her expectations of those relationships (nor does it purport to); rather it predicts her ability to function as a parent able to provide sufficient care so as to produce a secure infant.

Although we might expect considerable overlap between the attachment and caregiving systems, the two are clearly not isomorphic (Allen & Manning, 2007). There is no logical reason why a construct that predicts ability to provide good caregiving to one's offspring is automatically a reflection of one's own past or present security with regard to attachment figures or attachment more generally. That there is a relation between qualities of the caregiving system and the attachment system seems highly likely, but the strength of this relationship is an open question to be addressed empirically. With just a moment's reflection, this of course makes great sense. We can find a near inexhaustible supply of biographies and memoirs describing individuals raised under dire circumstances, largely lacking sensitive caregiving and security in childhood, who were nevertheless able to provide good caregiving and a secure base to their children. Similarly, we can find

adults who lack for secure relationships with other adults or their parents, but who can nevertheless function well as caregivers.

Security with respect to one's own attachment relationships or models of attachment seems likely to be a highly useful quality in a good parent, but it seems neither logically necessary nor practically sufficient. So how then are we to properly and precisely think about what "states of mind regarding attachment" really reflect in the AAI? Or, said differently, *why* are these states of mind such good predictors, not only of caregiving behavior, but of many other important outcomes as well? Just what is the relation of AAI states of mind to childhood experience in attachment relationships?

### **Attachment and emotion regulation**

Understanding this association requires an appreciation for the profound shift that occurs in social and emotional functioning in adolescence – a shift that likely also brings accompanying shifts in the nature and functioning of the attachment system (Allen, 2008). Adolescence is noteworthy in part because of the extent to which a teenager will make a conscious and often forceful effort *not* to rely on attachment figures when stressed, but rather to attempt to regulate emotion independently of them. Of course, adolescents at times rely on their parents for help in regulating emotion, but they are also rapidly developing alternative methods ranging from relying on peers to using internal cognitive strategies. This striving for emotional self-sufficiency and autonomy is a hallmark of the period (Hill & Holmbeck, 1986).

Even when teens do turn to parents, the degree of activation of the attachment system under stress is often likely to be only a pale echo of the intense activation seen in infancy. As we learn more about the multiple, interlocking neural mechanisms by which the attachment system functions (Coan, 2008), it seems increasingly obvious that stressors in adolescence and adulthood, even when substantial, are going to be unlikely to fully arouse all of the neural components of the attachment system to the same extent as the intense distress, anxiety, and dysregulation experienced with some regularity by an infant. Like many other aspects of development, attachment in adolescence will never be the same as it was in early childhood.

Although adolescents are likely engaging with attachment behavior with parents only on occasion, challenges of emotion regulation, in contrast, are ubiquitous. Peer relationships are also growing in importance and depth and are likely to create significant emotional challenges. Although these relationships may be beginning to take on attachment functions (Hazan & Zeifman, 1999), almost invariably they too will lack the intensity of early childhood attachment relationships (Markiewicz et al., 2006). In short, as the attachment system takes a less prominent role in the daily life of the adolescent, challenges to emotion regulation across numerous contexts remain paramount. Humans are no doubt wired to learn and enact much of this regulation via social interactions, but by adulthood, the guiding force

is very much internal to the individual. Is emotion regulation then simply “attachment grown up”?

We have argued that what is being measured with the AAI is emotion regulation in the context of discussions about attachment relationships, and that these relationships no doubt serve as one influence on developing emotion regulation capacities (Allen & Manning, 2007). Almost certainly, adaptive emotion regulation capacities grow and develop most effectively in the context of secure attachment relationships in childhood. At the same time, it also seems likely that numerous other factors – from experience with manageable stressors, to temperament, to the development of a sense of self-efficacy outside of the family, to qualities of peer relationships – will all also influence the development of emotion regulation capacities. An individual’s attachment history may be one important stream flowing into a much larger river.

This perspective that views the attachment “state of mind” as a primary marker of developed social emotion regulation capacities works well in explaining many of the findings with the AAI in adolescence. It can explain, for example, why the strongest correlations of the AAI in adolescence are with peer behavior. Peers are likely to be quite selective and critical (even more so than parents) in seeking out friendships with adolescents who can manage their own frustrations, impulses, and fears adequately. Peer relationships might also particularly benefit from the attentional flexibility and attentiveness to the needs of the other person in dyadic interactions that are considered central to the scoring of the AAI (Hesse, 2008), and that also represent important facets of emotion regulation in social interactions. By adolescence, the peer context is also, for most teens, the primary arena in which emotional stress and challenge occur. This view can also explain why researchers have obtained only modest correlations between adolescent attachment states of mind from prior Strange Situation behavior in infancy (Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Weinfield, Sroufe, & Egeland, 2000). If early attachment experience is but one source of future emotion regulation competence, these modest linkages are not surprising. Similarly, the concurrent AAI status of a teen’s mother would be another modest, indirect contributor to the teen’s emotion regulation abilities, hence the only modest association between the two. Interactions with mothers, in contrast, will often call directly upon adolescent emotion regulation capacities, and not surprisingly qualities of these interactions are more strongly related to teen AAI states of mind.

One major question remains given this perspective: if the AAI is not directly assessing internal working models of attachment, but rather a broader emotion regulation capacity, what then becomes of internal working models of attachment? Several research traditions have been actively engaged in developing assessments of the content (e.g., the expectations, scripts, and emotional reactions) associated with internal working models of attachment beyond childhood. These traditions include the highly successful assessments of models of current attachment relationships via self-report questionnaires such as the Experiences in Close Relationships

scale (Brennan, Clark, & Shaver, 1998) and the Relationship Questionnaire (Bartholomew & Horowitz, 1991), which have yielded only modest correlations with the AAI, but significant unique relations with other theoretically significant markers of the functioning of the attachment system ranging from current relationship qualities to evidence of non-conscious processing biases (Maysseless & Scharf, 2007 ; Shaver & Mikulincer, 2002a, 2002b). Similarly, assessments of secure-base scripts in childhood and adolescence appear capable of capturing variance related to both AAI status and functional relationships (Dykas, Woodhouse, Cassidy, & Waters, 2006; Steiner, Rafferty, & Waters, 2008). These traditions, rather than conflicting with the AAI, may nicely complement it with a focus on the *content* of internal working models of attachment relationships as held by adolescents and adults.

In sum, our experience studying adolescents has persuaded us that as the attachment system changes significantly as individuals move into adolescence, our conceptualization of this system must change along with it. Mary Main began this process by recognizing that as the adolescent moves from reliance upon one or two attachment figures to developing broader models of attachment relationships, our assessment of attachment must also broaden. Equally importantly, in our view, as the adolescent moves toward managing emotion regulation challenges even without direct reference to attachment figures, so too our field would benefit from recognizing emotion capacities as a natural outgrowth of attachment processes that can often extend beyond them. In many respects, we believe the field has been implicitly making this move already in much of the research using the AAI; here, we simply seek to make this “move to the level of emotion regulation” in understanding what the AAI assesses far more explicit.

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