

Unresolved/Unclassifiable responses to the Adult Attachment Interview:
Predictable from Unresolved States and Anomalous Beliefs in the Berkeley-
Leiden Adult Attachment Questionnaire

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RUNNING HEAD: Development and validation of the BLAAQ-U

Abstract

Unresolved/disorganized (U/d) states of mind are identified in the Adult Attachment Interview through lapses in the monitoring of reasoning or discourse during the discussion of traumatic events (LapseTr), and have been found to predict infant Disorganized/ disoriented responses to the parent in the Ainsworth Strange Situation. The Berkeley-Leiden Adult Attachment Questionnaire (BLAAQ-U)--a 58-item inventory intended to identify U/d subjects--is composed of two major scales: Unresolved States of Mind (USM, e.g., feelings of responsibility for a death) and Unusual Beliefs (UB, e.g., mental telepathy). Inventory construction took place across successive applications to one Dutch and two Berkeley student samples. Scales were reliable, and stable across both 3 weeks and 12 months. USM and UB scales were each correlated with LapseTr. Unclassifiable subjects resembled U/d subjects: Both discriminant analyses and cut-off scores discriminated the Unresolved/Unclassifiable subjects.

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As many workers in developmental psychology are aware, an Adult Attachment Interview and a corresponding system of analysis have been developed which permit the classification of an individual's "state of mind with respect to attachment" (George, Kaplan & Main, 1985; Main & Goldwyn, 1985-1991). The hour-long interview consists of a set series of 15 questions which call for both descriptions and evaluations of important attachment-related experiences and their effects upon the subjects' development. In essence, these questions present the subject with the task of simultaneously (1) producing and reflecting upon memories related to attachment while (2) maintaining coherent discourse with the interviewer.

Assessment of the verbatim transcripts of the Adult Attachment Interview permits categorization of subjects into one of five "states of mind with respect to attachment". Three of these "States of mind" are regarded as reflecting relatively consistent patternings of mental organization, and are termed Secure (F), Dismissing (Ds) and Preoccupied (E). Subjects who are unclassifiable in terms of these three categories due to failures in the maintenance of a consistent patterning of response are assigned to a fourth (rare) category, currently termed Cannot Classify.

Finally, a fifth category, Unresolved/ disorganized, is utilized with a substantial minority of subjects who show lapses in the monitoring of

reasoning or discourse when asked to describe or discuss potentially traumatic events--specifically, important deaths, and/or abuse experiences. Lapses in the monitoring of reasoning include, e.g., indications of disbelief that a person is dead, and ideas of being causal in a death where no material cause is present. Lapses in the monitoring of discourse are made manifest in, e.g., prolonged inappropriate silences, odd associations, extremely ill-formed sentences and failure to finish sentences.

The primary purpose of the present paper is to describe the development of a self-report inventory identifying Unresolved/disorganized states of mind as assessed in the Adult Attachment Interview. As many readers are aware, much of the import of the Unresolved/disorganized attachment category lies in its close theoretical and empirical ties to infant disorganized/disoriented (formerly "unclassifiable") responses to the parent in the Strange Situation (Main & Weston, 1981; Main & Solomon, 1986/1990). These infant behavioral responses are known to have unfavorable sequelae at six years of age and are hypothesized to result from frightened/frightening parental behaviors which are the products of unresolved traumatic experiences. The theoretical and empirical relations between the adult Unresolved/ disorganized and infant Disorganized/disoriented categories have been of central import to the development of the BLAAQ-U. It therefore seems essential to provide a brief history before describing the development and validation of the inventory.

Parental Unresolved/disorganized attachment: Predictive of infant
Disorganized/disoriented attachment status

The Ainsworth Strange Situation is a laboratory-based separation and reunion procedure used to assess the security of the infant-parent relationship. Ainsworth described three categories of infant response to the parent in this situation, each termed a "pattern of organization" (Ainsworth, Blehar, Waters & Wall, 1978). Twelve to 15 month old infants who actively seek proximity and contact upon reunion, then settle down and return to play are termed Secure. Infants who actively avoid and ignore the parent upon reunion are termed Insecure-avoidant, while those exhibiting an ambivalent, distressed focus upon the parent throughout the procedure are termed Insecure-ambivalent. These organizations of response to the parent have been found to reflect the parent's behavior toward the infant in the home environment (with "secure" responses being linked to sensitivity to infant signals), and to have important social and emotional sequelae for the child's later development (Ainsworth et al, 1978; see Bretherton, 1985 for review).

Working with a large sample of middle class parents and infants, Main and Weston (1981) found 13% of infants "unclassifiable" with respect to Ainsworth's original instructions. Later, Main and Solomon (1986, 1990) advised that infants who failed to fit to Ainsworth's three traditional categories should be designated to a fourth, "Unclassifiable/Cannot Classify" category. Their review also indicated, however, that what most "unclassifiable" infants shared in common was the exhibition of disorganized and/or disoriented behavior in the parent's presence, as, stereotypes,

anomalous movements, or freezing of all movement with a disoriented expression. Infants exhibiting substantially disorganized/disoriented behavior in the parent's presence are now assigned to a fifth, Disorganized/disoriented (D) attachment category. In practice, unclassifiable (CC) infants who are not also disorganized are rare, and are grouped with D infants for purposes of analyses.

While all infants exhibiting "insecure" behavioral responses to the parent in the Strange Situation are believed to be undergoing considerable stress, recent studies suggest that "D" infants may be especially distressed or frightened. In a low-risk, German middle-class sample, D infants exhibited an especially striking rise in cortisol output following the Strange Situation (Spangler & Grossmann, in press). In other normal samples, infant D attachment status has been found predictive of controlling or role-inverting responses to the parent on reunion at six years of age (Main & Cassidy, 1988; Wartner, Grossmann, Fremmer-Bombik & Suess, in press), and frightened or frightening ideation regarding parent-child separations (Main, Kaplan & Cassidy, 1985; see also Solomon & George, 1991). In high-stress, poverty samples infant D attachment status has been found associated specifically with parental maltreatment (Carlson, Cicchetti, Barnett & Braunwald, 1989); Lyons-Ruth, Repacholi, McLeod & Silva, 1991), and more predictive than other insecure attachment categories of disruptive, aggressive behavior in preschool (Lyons-Ruth et al, 1991; see Greenberg, Speltz, DeKlyen & Endriga, 1991 for comparable results in two clinic samples).

Parental AAI classifications have been found strongly linked to infant attachment classifications, with parents judged Secure in the AAI typically having Secure infants, Dismissing parents having Avoidant infants, and Preoccupied parents having Ambivalent infants (Benoit & Parker, 1993; Fonagy, Steele & Steele, 1991; Main, Kaplan & Cassidy, 1985; Ward & Carlson, in press; Zeanah, Benoit, Barton, Regan, Hirschberg, & Lipsitt, in press). Finally, Unresolved/ disorganized parents have been found to have Disorganized/disoriented infants (Main et al, 1985; Main & Hesse, 1990). The match between the parent's U/d AAI status and infant D attachment status has been replicated in four succeeding studies, including three in which Adult Attachment Interviews have been administered prior to the birth of the first child (Ainsworth & Eichberg, in press; Benoit & Parker, 1993; Radojevic, 1992; Ward & Carlson, in press).

The Adult Attachment Interview is a powerful instrument for the study of states of mind as reflected in discourse and narrative. Extensive training is required to classify interviews, however, and the time and expenses involved in the collection, transcription and analysis of the data are substantial. Additionally, expertise in the specific areas of interview analysis pertaining to Unresolved/ disorganized (as well as Unclassifiable) adult attachment status is particularly difficult to acquire. It seemed desirable, therefore, to develop an instrument capable of providing readier access to researchers hoping to engage in the selective study of Unresolved/ Unclassifiable adult (or infant) attachment categories, or to test hypotheses requiring larger sample sizes.

Methods

The Berkeley-Leiden Adult Attachment Questionnaire (BLAAQ), from which the BLAAQ-U is drawn, is a 200-item self-report inventory intended both to identify the major AAI attachment categories and to provide a preliminary test of hypotheses relating to specific category membership (Main, Hesse & Van IJzendoorn, 1993). The BLAAQ-U scales form a sub-set of that inventory. Here, we begin with a description of the construction of the specific items forming the initial BLAAQ-U scales.

Scale development

The BLAAQ consists of Likert-type items with a six-point scale ranging from strongly disagree (-3) to strongly agree (+3). The neutral midpoint is omitted in order to force subjects to take a directional stance.

An example of an item taken from the BLAAQ-U is:

Strongly Disagree	Slightly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
-3	-2	-1	+1	+2	+3
I sometimes feel that something I did could have played a part in causing the death of someone I loved.					
-3	-2	-1	+1	+2	+3

Preliminary versions of the BLAAQ were administered to six student samples (700 students). These runs permitted initial scale development

through iterative examination of alpha reliabilities, cluster analysis and relations among scales (Hesse & Van IJzendoorn, 1991). As conceived by the time of application to the three samples under consideration here, the BLAAQ-U consisted of three major scales--Unresolved State of Mind (USM), Unusual Beliefs (UB), and Trance (TRN). While reliable and stable in each sample, and substantially correlated with our validation criteria (below), the TRN scale was too highly correlated with the USM and UB scales to make an independent contribution to the identification of U/d attachment status. Here, we describe the development of the two remaining scales.

Development of the scale for identifying Unresolved State of Mind (USM). The USM scale is derived primarily from those portions of the AAI coding manual which assist judges in noting and assessing Unresolved/disorganized states of mind as observed during a subject's discussion of loss, or physical or sexual abuse (discussed above, Main & Goldwyn, 1992).¹ In addition, because unresolved trauma in certain cases may have a relation to post-traumatic disorders and to the dissociative disorders (Spiegel, 1989), some items indicating symptoms of these disorders were included.

The USM scale consisted of 27 items at the time of its initial application to the Berkeley Core Sample (winter, 1990). More items were added prior to the stability studies conducted with the Dutch High School and Berkeley Stability samples. At this time, the scale consists of 41 items dispersed through 11 subscales. The subscales are arranged for clarity of presentation as follows:

Subscales suggestive of lapses in the monitoring of reasoning:

Responsibility for tragedy, e.g., "If not for me someone probably would not have died"; Possession, e.g., "Sometimes I feel as though I am possessed by a person in my family who died and that this person is taking over my body, my voice or my actions." Subscales suggesting possible lapses in the monitoring of discourse: Confused/disoriented, e.g., "I kind of lose control over my ability to form my thoughts when I think about bad things that have happened" and Shame, e.g., "Some of the things which have happened to me have been so bad that I feel unable to tell anyone about them". Subscales suggestive of the trauma-related disorders: Memories Lost, e.g., "There is a long period of my life for which I have lost all memory due to trauma"; Uncontrollable Memories, e.g., "There are some terrible memories which I wish to forget but cannot prevent from entering my waking or sleeping state"; and Frightened Reactions, e.g., "I never know what will remind me of the things that frightened me in the past: sometimes something even remotely connected will make me feel frightened again."

Development of the Unusual Beliefs Scale. Lapses in the monitoring of reasoning during the Adult Attachment Interview often seem to express unusual ideation regarding space-time relations and/or causality, as, e.g., "He died that night because I forgot to pray for him". Ideas of this kind imply powers which lie beyond any normal means of control. Although we had originally expected a close link between unusual beliefs and Preoccupied attachment status (Hesse & Van IJzendoorn, 1991), a consideration of both the nature of lapses of reasoning observed in the AAI and recent literature

concerning individuals suffering from the more extreme of the dissociative disorders suggested that such ideation might well follow upon traumatic experiences (see Main & Hesse, 1992; Ross, 1989). Anomalous ideas about physical reality and the causal connections between events might therefore be linked to the lapses in monitoring observed in the AAI.

The scale for Unusual Beliefs originally consisted of a total of 27 items dispersed through 5 subscales. One subscale, Magical Thinking, did not prove reliable across our development samples and was eliminated. The remaining subscales focus on four topics involving unusual beliefs. The remaining 17 items underscore the subject's personal ascription to a guidance by these belief systems, rather than general open-mindedness. They include:

Astrology, e.g., "When I meet someone who might be a potential good friend or partner, I worry whether their astrological sign is right for me."

Spiritualism, e.g., "I don't doubt for a minute that some people have made direct contact with the dead." Precognition, e.g., "I have had accurate

premonitions about deaths which could not have been foretold by normal means." Mind-reading, e.g., "I am able to 'read' other people's minds even when they are far away from me."

Subjects

Two hundred and twenty-five subjects from three different samples were involved in the development and validation of the BLAAQ inventory, each student being administered the BLAAQ twice. The first sample consisted of 102 Dutch High School students in their 12th grade, preparing for University entrance. Their mean age was 17.6 years ($SD = .70$), and 55%

were female. Because Dutch freshmen specialize in a specific discipline immediately after their entering the university, they were not considered to be comparable to American college freshmen.

Both Berkeley samples consisted of undergraduate participants in a beginning-level general psychology course in which students received course credit for research participation. The Berkeley Stability sample consisted of 63 students whose mean age was 19.7 years ($SD = 2.4$), and 54% were female. The Berkeley Core Sample of 60 students were first contacted about a year before the subjects of the Dutch High School and Berkeley Stability samples. Their mean age was 19.5 years ($SD = .97$) and 52% were female. All subjects were native speakers, and their nationality was Dutch or American.

Procedures

The Dutch High School students and the Berkeley Stability students completed the BLAAQ twice, three weeks apart. In the third sample (the Berkeley Core Sample) subjects completed an earlier, shorter version of the BLAAQ at the first session (Time 1). About four months later they were contacted to participate in the Adult Attachment Interview (Time 2), and about eight months after the interview they were asked to complete the BLAAQ again (Time 3). At Time 3, the BLAAQ was in its final version as administered to the Dutch High School and Berkeley Stability subjects.

The BLAAQ-U contains written instructions for the subjects: Verbal instructions are not required. Students nevertheless completed the BLAAQ in their own classrooms, supervised by members of the research group. At

the first time of measurement, the subjects of all three samples were not informed about the content of the second or third session, to prevent memorization of answering patterns. Because of the large number of questions (including non-BLAAQ items, about 600), however, the effects of memorization may already be considered minimal. Additionally, the BLAAQ-U items were interspersed with many other items, and development of response biases therefore seems unlikely.

Fifteen Dutch High School students could not be contacted for the second time of measurement (15% nonresponse), whereas all students from the Berkeley Stability sample returned to take the BLAAQ for the second time. In the Berkeley Core sample, over 85% of subjects contacted participated in the first BLAAQ administration. Ten of these did not participate in the succeeding sessions, in most cases because the students had moved between semesters or could not be re-located. Total attrition rate for the three samples combined was 11%. All 50 students who participated in the AAI session participated in the final administration of the BLAAQ.

The Adult Attachment Interview

The semi-structured, hour-long Adult Attachment Interview has been described above. During this interview, adults are asked to provide attachment-related memories from childhood, and to evaluate these memories from their current perspective. The coding of verbatim AAI transcripts is based on the coherence with which the adult is able to discuss these experiences and their effects (Main & Goldwyn, 1985-1992). Designed originally for use with parents, the interview has been shown to be equally

reliable when applied to subjects in middle (Ward & Carlson, in press) and late (Kobak & Sceery, 1988) adolescence.

The AAI coding system provides guidelines for the classification of an adult's "state of mind with respect to attachment". Adults classified Secure/autonomous (F) describe attachment-related experiences coherently, whether these experiences were difficult (e.g., parental rejection or overinvolvement) or positive. The four insecure classifications (and relevant scales) are described as follows:

Dismissing (Ds). Dismissing adults tend to devalue the importance of attachment relationships, or else to idealize parents without being able to support positive evaluations with concrete memories. They often appeal to lack of memory for childhood experiences. These three characteristics are represented in three scoring systems: Derogation; Idealization; and Insistence on Inability to Remember.

Preoccupied (E). Preoccupied adults seem highly involved with their past attachment experiences but unable to describe them coherently. There are two major sub-groups, E2 and E1, each associated with its own rating scale: Angry Preoccupation (involved, preoccupied and angry recitations of parental failings) and Passive Discourse (speech seems to lose focus or trails off in irrelevant, incomplete statements). A third sub-group, E3, is rare in normal samples and involves a fearful preoccupation with traumatic events rather than with child-parent relationships.

Cannot Classify/ Unclassifiable (CC). Individuals are placed in the CC category when no single best-fitting Ds, E or F category can be assigned. This interview category is formally related to the infant "unclassifiable" category, from which infant "Disorganized/ disoriented" attachment status was later derived. Because CC attachment status is rare, and because infant D attachment evolved out of unclassified behavior patterns, in practice most investigators place CC adults within the U attachment category.

Unresolved/disorganized status with respect to loss or abuse (U/d). Unresolved status is identified from lapses in the monitoring of reasoning or discourse appearing during the discussion of (1) loss of important figures through death and/or (2) sexual or physical abuse experiences. The U/d classification is always super-imposed upon a second, best-fitting Ds, E, F or CC classification since it pertains to only a highly circumscribed portion of the record. Indices of Unresolved/disorganized states with respect to both loss and abuse are scored on 9-point scales, and the highest score obtained on either scale is assigned to the transcript as a whole. Scores over 5 lead to U/d category placement. The U/d category is assigned together with a second, best-fitting alternative, (e.g., U/Ds, U/F, U/CC).

The third author coded 42 of the 50 transcripts, and the first author coded 8 transcripts. Agreement between the first and third authors in the most recent reliability check ($N = 25$) was 88%, and difficult cases were conferenced. The distribution of adult attachment classifications across the sample was: Ds (9), F (19), E (9), CC (5) and U (8). Among E subjects, 7 were classified as E1/E2, and two as E3.

Sex, age and social desirability.

The BLAAQ-U scales (USM and UB) were examined in all three samples for possible relations to sex, age, and social desirability as assessed in the Marlowe-Crowne inventory. Only one of the 18 tests for UB proved significant (sex and UB in the Dutch High School sample, $r = .23$, $p < .05$). Four of the 18 tests for USM proved significant (sex and USM in the Dutch High School sample, $r = .22$, $p < .05$; age and USM in the Berkeley Core sample, $r = .30$, $p < .05$; and social desirability and USM at time 1 ($r = -.32$, $p < .05$), and time 3 ($r = -.45$, $p < .01$). Because AAI classifications were not significantly related to these variables and their impact was inconsistent across samples, their effects on the relation between AAI and BLAAQ-U can be considered negligible.

Statistical Analyses

The validation of the BLAAQ-U was divided into three phases: construction, testing and application. In the first phase, the Dutch High School sample was used to select stable items and to construct relatively homogeneous subscales and scales. Items with a test-retest stability lower than .30 were not considered for inclusion. Principal component analyses without rotation were performed on each a priori subscale and scale. The analyses were limited to the first and strongest component, and only items loading higher than .30 on this first component were included. Finally, alpha reliability was computed to evaluate the internal consistency of the remaining item-pool, and temporal stability of scales was established. Temporal stability was considered a more important criterion for the reliability of a

scale than its internal consistency. We did not artificially improve alpha reliabilities through including items similar in content, but tried to cover rich constructs with a diversity of items. Because items of the USM scales were skewed, the inverse of the item scores were used to compute subscales and the overall scale. The inversed scores were reflected so that higher scores continue to mean a more Unresolved state of mind.

Fifty-eight BLAAQ-U items of the original set of 74 items survived the reliability tests: Five items from the UB scale, and six items from the USM scale had to be deleted, and as noted earlier one UB subscale (Magical Thinking) was not reliable. In their final forms, USM consisted of 41 items, and the UB scale contained 17 items.

In the second phase, the reliability and stability of the resulting subscales and scales was tested on an independent sample, the Berkeley Stability sample. Again, principal component analyses were performed to check the homogeneity of item clusters, and alpha reliabilities as well as stabilities were computed to test whether the construction phase had led to artificially inflated figures.

In the third phase, the BLAAQ-U in its final form was applied to the subjects of the Berkeley Core sample who also participated in the AAI. After computing alpha reliabilities for this sample, long-term stability across a 12-months period was established for the subscales where possible. Because the earlier version of the BLAAQ-U contained fewer items (36 items, 29 of which survived the reliability tests), some scales and subscales for which long-term stability could be computed included fewer items compared

to the final version. The long-term stability in the Berkeley Core sample was computed on the basis of the same selection of items for both times of measurement.

The convergent validity of the BLAAQ-U with the AAI classifications was studied through one-way analyses of variance on the AAI classifications. The BLAAQ-U scales were correlated with AAI scales for identifying Unresolved/disorganized discussions of loss and/or abuse through lapses in the monitoring of reasoning and discourse as described in the Main and Goldwyn (1991) coding manual (LapseTr). The discriminant validity of the BLAAQ-U scales was determined by comparing scores on USM and UB with the three major scales identifying a Dismissing state of mind (Derogation, Idealization and Insistence on Inability to Remember) and the two scales identifying a Preoccupied state of mind (Angry Preoccupation and Passive Preoccupation).

In the final steps of our procedure, we compared each major AAI category to scores obtained on the USM and UB scales of the BLAAQ-U. As predicted, the 8 Unresolved/disorganized subjects were significantly elevated on these scales. Unclassifiable subjects (CC) were, however, equally elevated as were subjects categorized as "Fearfully preoccupied by traumatic events" (E3). E3 subjects differ from other E subjects in exhibiting a fearful preoccupation with traumatic events rather than an angry or passive preoccupation with attachment figures, and have therefore always been considered closely linked to U/d subjects (Main & Goldwyn, 1991). Furthermore, as noted earlier, in the parallel infant system, Disorganized/

disoriented attachment status has been found closely linked to CC attachment status, and CC subjects at both the infant and adult levels are in practice considered together with U/d subjects. For these reasons, U, CC and E3 subjects were thereafter considered together in a single group, termed Unresolved/Unclassifiable (15 subjects).

A multivariate discriminant function analysis was performed on the Unresolved/Unclassifiable (U/CC/E3) versus the other AAI categories (F/Ds/E1E2) for the Berkeley Core Sample, and classifications were "predicted" on the basis of the discriminant function, to establish the convergent validity of the BLAAQ-U from a multivariate perspective. Finally, cut-off scores for the USM and UB scales were used to determine classification assignment and to provide scoring rules for use of the BLAAQ-U as a screening instrument

Results

Reliability and Stability of the BLAAQ-U. Stability and alpha reliability figures for the two major BLAAQ-U scales were good (alpha's ranging from .79 to .89; test-retest reliabilities ranging from .74 to .92). Although some subscales showed marginal internal consistency (mean was .73, min = .48; max = .88), all subscales showed quite impressive test-retest reliabilities, even across the 12-months period. Mean test-retest reliability for the subscales was .76 (min = .58, max = .92) for the three-week period, and .64 (min = .56; max = .78) for the 12-months period. Alpha reliabilities for the complete subscales in the Berkeley Core sample (time 3) generally were somewhat higher than those in the other two samples, including the

original Dutch sample. Alpha reliabilities for the incomplete subscales (time 1) were considerably lower due to the small number of items in some of the subscales, especially Responsibility for Tragedy (3 items), and Confusion (3 items). Alpha reliabilities for Uncontrolled Memories (2 items) were also marginal.

In Table 1, alpha reliabilities and stability coefficients for the scales and subscales in the three samples are presented.

Insert Table 1 about here

To examine the internal structure of the BLAAQ-U more closely, Pearson product-moment correlation coefficients between the scales and subscales were computed. In Table 2, the correlations are presented. Because of missing items at time 1, not all correlations could be computed.

Insert Table 2 about here

From Table 2, it can be derived that the two major BLAAQ-U scales, USM and UB, correlated on average .49 for the two times of measurement. Correlations between subscales of the USM range from .06 to .78 (mean $r = .45$), and correlations between subscales of the UB scale range from .38 to .54 (mean $r = .49$).

Convergent validity of the BLAAQ-U. To examine the convergent validity of the BLAAQ-U, one-way analyses of variance with the two BLAAQ-U scales were performed. As Table 3 indicates, F, Ds, and E (E1E2) subjects were at (F) or below (Ds, E1E2) sample means at both times. Differences between the E3, CC, and U/d were, however insignificant. Mean values (and standard deviations) for USM at time 1 were .58 (.06), .49 (.14), and .48 (.09) for E3, CC, and U/d respectively. At time 3, these figures were .56 (.08), .52 (.09), and .55 (.09). Mean values (and standard deviations) for UB at time 1 were 3.5 (.24), 2.9 (1.65), and 3.5 (1.43) for E3, CC, and U/d respectively. At time 3, these figures were 2.4 (.17), 2.3 (1.35), and 2.9 (1.26). A new, Unresolved/Unclassifiable category was therefore developed, composed of the above three categories (U/d, CC, E3). The means and standard deviations of the BLAAQ-U scales and subscales for the four AAI classifications are presented in Table 3.

Insert Table 3 about here

For Unresolved State of Mind (USM), the contrast between Unresolved/Unclassifiable (U/CC/E3) and the other categories was significant: $T(46) = 4.72, p < .001$. All subscales showed also significant contrasts ($p < .01$) between U/CC/E3 and the other categories. At time 3, the contrast for USM was: $T(46) = 4.15, p < .001$. At time 3, the subscales again showed significant contrasts ($p < .01$), except for Shame, Uncontrolled

Memories, and Frightened Reactions. On the overall scale USM, only the Unresolved/Unclassifiable category scored clearly above the mean, while all other categories scored substantially lower, at both times of measurement. For Unusual Beliefs (UB), the a priori contrasts between Unresolved/Unclassifiable and the other categories were $T(46) = 4.33, p < .001$, and $T(46) = 3.57, p < .001$ for time 1 and time 3 respectively. Of the UB subscales only Astrology and Mind Reading showed significant contrasts ($p < .05$).

Because the AAI coding system contains several continuous scales to represent central dimensions of the subjects' state of mind with respect to attachment, the BLAAQ-U scales were correlated with the traditional AAI-scale for assessed U/d responses to trauma (LapseTr), with a new scale for trauma that weighed E3, CC, and U/d equally but assigned higher scores to those who were assigned to two or more of these three categories as alternates (ClassTr), and with the several scales indicative of other kinds of insecure response patterns. In Table 4, the Pearson product-moment correlation coefficients are presented.

Insert Table 4 about here

The BLAAQ-U scales were substantially correlated with both LapseTr and ClassTr ($r = .48$ to $.57$). Correlations with derogation, idealization, insistence on lack of recall, passivity, and anger² scales were

absent. The correlational pattern therefore confirmed the convergent as well as the discriminant validity of the BLAAQ-U. Moreover, this correlational pattern was replicated at time 3. The USM and UB scales explained about 25% of the variance in the AAI scale for unresolved loss and trauma, and between 16% and 32% of the variance in the ClassTr scale. With a few exceptions, this pattern of convergent and discriminant validity was replicated at the level of the subscales. Shame, Uncontrolled Memories, and Frightened Reactions showed the weakest correlations. The three significant correlations with scales identifying Dismissing and Preoccupied subjects constituted only 3% of all discriminant validity correlations.

To test the convergent validity of the BLAAQ-U multivariately, discriminant function analyses were performed using the two BLAAQ-U scales as predictors of membership in two AAI classification groups: Unresolved subjects versus Not Unresolved subjects. For time 1, a discriminant function was calculated with $\chi^2(2) = 23.92, p < .001$. The loading matrix of correlations between predictors and discriminant function suggested that both BLAAQ-U scales (USM: .86; UB: .69) contributed to distinguishing the unresolved subjects from the other subjects. The BLAAQ-U scale for Unresolved State of Mind appeared to be the most powerful predictor. The canonical correlation of .63 suggested considerable predicted variance (38%). For time 3, the results of time 1 could be replicated, albeit with somewhat less explained variation: The discriminant function showed a $\chi^2(2) = 14.20, p < .001$, and a canonical correlation of .51.

Classification with BLAAQ-U. On the basis of the discriminant functions subjects were classified into two groups: Not Unresolved/Unclassifiable subjects and Unresolved/Unclassifiable subjects, and these predicted classifications were compared to the actual classifications. At time 1 and time 3, the percentages of correctly classified subjects were 86% and 82% respectively ($\kappa = .59$ and $.51$, $p < .001$). The number of false positives is minimal. In Table 5, the classification results are presented.

Insert Table 5 about here

The use of the BLAAQ-U as a screening device requires scoring rules to determine whether a subject is Unresolved/Unclassifiable. At the same time, it requires knowledge of the nature of the misclassifications, especially the number of false positives. Using cut-off scores to predict Unresolved/Unclassifiable states, we were able to approach the results of discriminant function analysis. Scores $\geq .60$ on the USM scale and ≥ 4.0 on the UB scale were each considered sufficient for classifying subjects as Unresolved/Unclassifiable. This scoring rule led to 84% correctly classified subjects at time 1 and 82% at time 3 (see Table 5). From the perspective of screening it is important to note that the scoring rule produced no false positives at either time period.

Summary and Discussion

Unresolved/Unclassifiable Responses to the Adult Attachment Interview: Predicted from the BLAAQ-U

The hour-long, semi-structured Adult Attachment Interview focuses chiefly upon an adult's (or adolescent's) description and evaluation of relationships with parents during childhood. For two of the 15 questions, however, subjects are asked to recall and describe potentially traumatic experiences-- specifically, (1) loss of loved persons through death, and (2) threatening or frightening experiences such as physical and sexual abuse. In attempting to describe and evaluate such experiences, a substantial minority of individuals have been observed to suffer brief lapses in the monitoring of reasoning or discourse as, subtly indicating that a dead person is believed still alive in the physical sense, or shifting suddenly to a eulogistic speech register. When these lapses are marked, subjects are assigned to the Unresolved/disorganized (U/d) attachment category. In five independent infant-parent samples, U/d adult attachment status as assessed in the AAI has been found predictive of infant Disorganized/disoriented behavior in the Ainsworth Strange Situation (see Main & Hesse, 1990 for a discussion of the potentially frightened/frightening behavior of traumatized parents). Infant D attachment status has been found to have unfavorable sequelae, and may denote experiences of special stress.

With the above considerations in mind, we attempted to develop a self-report inventory (the BLAAQ-U) consisting of items which might be endorsed by individuals exhibiting these brief and varied lapses in monitoring

during the AAI. An a priori item set of scales and subscales was refined across three student samples (225 students). A first Dutch sample (102 subjects) was used to construct relatively homogeneous scales, and to eliminate items exhibiting low test-retest stability across a 3-week period. The reliability of the resulting subscales and scales was tested further in 2 Berkeley samples, where test-retest stability was assessed again, this time across both 3-week (63 subjects) and 1-year periods (60 subjects). The BLAAQ-U is presently composed of 2 major scales and 11 subscales. Unresolved States of Mind is composed of 7 subscales including feelings of confusion in discussing untoward experiences, feelings of responsibility for family tragedies, difficulties with (a) controlling or (b) accessing memories, fearful reactions, and ideas of possession. Unusual Beliefs is composed of 4 subscales, including astrology, precognition, spiritualism and telepathy. Reliability and stability are impressive for major scales, and satisfactory for subscales.

In the second Berkeley sample, the BLAAQ-U was administered 4 months prior to and 8 months succeeding the AAI (N = 50). Neither the USM nor the UB scales and subscales were related to any of five AAI scales indicating other kinds of insecurity with respect to attachment. As predicted, scores assigned to subjects for lapses in the monitoring of reasoning or discourse during the discussion of potentially traumatic events in the AAI (LapseTr) were substantially correlated with USM and UB at both time periods, and were significantly correlated with all available subscales at time 1, and with 8/11 subscales at time 3. Remarkably, ideas of possession--a

scale whose items include "Sometimes I feel as though I am possessed by a person in my family who died" and "I feel almost as though I am possessed by another power or force"--correlated .57 (time 1) and .58 (time 3) with LapseTr. Ideas of possession are historically related both to dissociative processes and trancelike states (as see Ellenberger, 1977 and Hilgard, 1986).

Our results relating lapses in the monitoring of reasoning and discourse to the USM and UB scales are notable not only because lapses observed during the AAI are brief, but also because they only infrequently make reference to anomalous ideation. As an example, one otherwise Secure student in the present study exhibited no anomalous ideation, and was assigned U/d attachment status solely on the basis of two lapses in the monitoring of discourse. These consisted in, first, a slip into the present tense during a long description of past events involving the loss of her grandmother in childhood:

"I looked up and saw the coffin, and it just freaked me out, I just went hysterical, I am too, and I just broke down and um, I didn't leave, I didn't move from where I was..."

Her second lapse occurred during a lengthy discussion of the death of a male friend, where the invading referent suddenly became female rather than male.

"Um, but I think still my impressions of death are still very much the same--that it is very hard to deal with death because she is not coming back".

On the BLAAQ-U, this student stood near the top of the sample for feelings of responsibility for tragedy, suffering intrusive memories of traumatic events, feelings of confusion in the discussion of such events, and ascription to unusual belief systems.

Classification as well as correlational procedures were used to examine the validity of the BLAAQ-U. Not only Unresolved/disorganized (8) but also Unclassifiable (5) and Fearfully Preoccupied (2) subjects were elevated on both the USM and UB scales, and were thereafter considered as a single group, termed Unresolved/Unclassifiable. Discriminant analyses successfully separated the 15 Unresolved/Unclassifiable subjects from others (82% to 86% of subjects correctly identified), as did cut-off scores (82% to 84% correct).

Unresolved/disorganized, Unclassifiable and Fearfully Preoccupied subjects:
Similarities and differences

While similarities between U/d, CC and E3 subjects as revealed by the BLAAQ-U were not predicted in advance, they are intriguing and as yet appear in no way contradictory to the original intentions of the instrument. Although the BLAAQ-U was developed with the specific aim of identifying the parents of Disorganized/disoriented infants, the reader will recall that formerly these infants were simply termed Unclassifiable (Main & Weston, 1981). Additionally, as noted earlier, CC adults and infants have traditionally been placed together with U/d and D subjects for purposes of analysis. The rationale for this approach has been based on the fact that individuals falling into either of these categories cannot be considered

members of the three central or "organized" infant or adult categories.

Bearing this in mind, it is our best estimate that as parents, CC adults will normally be found to have either Unclassifiable (CC) or Disorganized/disoriented (D) infants. While we lack information regarding the behavior of infants with parents classified E3, the central role of trauma in the transcripts of these individuals would make it seem plausible that they too might often have infants classified D or CC.³

Clearly, we do not yet understand categories CC and E3 at a level comparable to our current knowledge of the U/d category. While the above discussion suggests that we may expect to find similarities among the infants of U/d, CC and E3 subjects, distinctions within the adult categories remain an important concern. This given, it seems worthwhile to consider these three categories at the most abstract level, i.e., the level at which they are actually classified within the current AAI system.

What individuals in these three categories appear to share in common is an inability to maintain a consistent and organized strategy for focusing upon and discussing important relationships throughout the course of the interview. In U/d subjects (who are otherwise often classifiable), this may be understood as a localized inability to maintain organization in reasoning and discourse specifically during the discussion of traumatic events. In E3 subjects, on the other hand, it appears as a global or over-riding preoccupation with traumatic events. This preoccupation with trauma, rather than with relationships themselves, stands in contrast to individuals placed in the other (E1/E2) subgroups. Finally, the central feature of the transcripts

of CC subjects appears as a global inability to provide a consistent and non-contradictory strategy for discussing and organizing information about relationships.

This given, it would seem possible that in stability studies these three categories might become grouped together such that e.g., subjects judged CC in one interview are judged U/d or E3 in a second. This would suggest that E3 and CC subjects might in fact be individuals who are overwhelmed by traumatic events, but simply fail to exhibit a lapse in monitoring during one particular interview (E3) or perhaps fail to describe or fail to remember traumatic occurrences (CC).

If the above were in fact the case, distinctions between the three adult categories might ultimately appear to be relatively minor. Two very recent studies suggest, however, that E3 and CC are (a) distinct categories which (b) in all probability are linked to greater difficulties than those normally found in U/d subjects. In a study in which judges blind to clinical status evaluated AAI transcripts of borderline as compared to dysthymic patients, the E3 category was found strongly linked to borderline status (Patrick, Hobson, Castle, Howard & Maughn, 1993). In another recent study of violent versus non-violent men, a judge blind to violence status found 7 CC subjects (47%) among 15 men arrested for family violence (Holtzworth-Munroe, Hutchinson, & Stuart, 1993). These new studies suggest the advisability of preserving the distinctions between these three categories at the adult level, despite the important similarities uncovered by the BLAAQ-U.

Linking Unusual Beliefs to Unresolved/Unclassifiable States of Mind: Some potential implications of our findings

We have uncovered a significant relation between lapses in the monitoring of reasoning or discourse during the discussion of potentially traumatic events and anomalous ideation regarding causal connections and space-time relations (e.g., ascription to astrology, foreknowledge of events, and telepathy). It is notable, however, that we have only actually observed and utilized anomalous ideation in the classification of interview transcripts exhibiting lapses in the monitoring of reasoning.⁴

Importantly, the BLAAQ-U has revealed that certain individuals whose transcripts do not show lapses in the monitoring of reasoning--specifically, E3 subjects, CC subjects, and those U/d subjects whose transcripts manifest lapses in the monitoring of discourse only--are also elevated in ascription to astrology, telepathy and ideas of possession. It appears, in sum, that individuals whose interviews indicate (a) preoccupation with traumatic events rather than relationships, or (b) global, or (c) localized lapses in organization are vulnerable to uncertainties regarding the nature of causal relations and the nature of physical reality.

Our study is essentially correlational in nature and thus we cannot at present ascertain the direction of effects. One possibility is that ascription to unusual beliefs may lead to an increased vulnerability to becoming preoccupied with and/or disorganized by frightening (traumatic) experiences, should they occur. Another possibility is that overwhelmingly frightening experiences in themselves lead to the development of unusual

belief systems. This outcome could result in part from efforts to gain control over such experiences, i.e., attempts to render them predictable (foreknowledge and astrology) or comprehensible, albeit in somewhat anomalous terms (astrology, telepathy and ideas of possession). These possibilities are not mutually exclusive, and in many cases might actually be additive. The possibility that vulnerability to anomalous ideation may succeed traumatic experiences even in individuals not previously exposed to such belief systems seems to us especially important to consider, however, because it leads directly to the topic of dissociation.

Elsewhere, we have suggested that lapses in the monitoring of reasoning or discourse during the Adult Attachment Interview may be compatible with a dissociative model, and may in various ways represent either interference from normally dissociated memory systems or unusual absorptions involving memories triggered by the discussion of traumatic events (Main & Hesse, 1992).^{5,6} Dissociative processes have in fact traditionally been described as involving minor to more stable and severe difficulties in accessing, controlling and integrating memories (American Psychiatric Association, 1987). The more severe dissociative disorders have been linked to traumatic experiences, and, as noted earlier, Ross (1989) has found unusual belief systems relatively common among those suffering from these disorders. It is possible, then, that partially dissociated, frightening memories not only (a) interfere with, alter, or intrude upon language and reasoning processes during the Adult Attachment Interview, but also (2)

leave individuals open to ascription to these and other somewhat anomalous belief systems.

Limitations and Strengths of the BLAAQ-U

Sample size. Although our results are substantial, the BLAAQ-U has thus far only been validated against a modest sample of 50 subjects. Despite this limitation, we are nonetheless encouraged by the fact that use of cut-off scores led to the same proportion of correctly classified subjects as did discriminant analysis, and had the additional advantage of producing no false positives. Some further protection against inflated results due to modest sample size is provided by the fact that the AAI and BLAAQ-U were not administered concurrently. Rather, the AAI assessments were compared to BLAAQ-U administrations made 4 months previously and 8 months later.

Limited ethnic and socio-economic diversity of subjects. Both our validation sample and our construction samples consisted of white, relatively well-educated highschool and college students. We therefore remain cautious about the generalizability of our findings to individuals in different social settings, individuals with differing cultural/educational backgrounds and to individuals of different ages. Our specific concern lies in the fact that the wording of some of our items may be too difficult for less educated subjects. In addition, we originally expected that the Unusual Belief items might have special appeal to young students.

An initial application of the inventory to a pilot sample of 36 Dutch mothers who had been administered the AAI, and who had at least nine

years of schooling (still markedly less than the students in our remaining Dutch and USA samples) underscores the strengths of the instrument as well as some of the above concerns and limitations. As compared to the substantial correlations obtained in the Berkeley sample, most of the correlations between USM, UB, and the LapseTr and ClassTr scales were modest, although all were significant. Given our concern that only student samples might provide sufficient range for examining Unusual Beliefs, it was surprising that the strongest relation obtained was between Unusual Beliefs and ClassTr ($r = .58, p < .001$). Because the number of Unresolved subjects was small and because Cannot Classify was not utilized as a separate category, discriminant analysis procedures were not advised for this sample.

Restrictions in the ability of the inventory to capture the full range of subjects within the groups discriminated. Although a significant relation was found between the USM and UB scales and the Unresolved/Unclassifiable AAI categories, it warrants noting that many individuals in these categories were not successfully discriminated by the BLAAQ-U. This suggests that other important (if as yet unspecified) factors must often make a contribution to Unresolved/Unclassifiable states of mind. Investigators wishing to use the BLAAQ-U, both with larger samples and for purposes of selection, should therefore be aware that their samples will ordinarily only partially represent the full range of individuals falling within these categories. While the BLAAQ-U will no doubt facilitate us greatly in further understanding Unresolved/unclassifiable states of mind, it appears that a full consideration

of this subject will remain impossible without the painstaking study of the Adult Attachment Interview.

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Footnotes

¹The 9-point scale for identifying U/d responses is also based upon the judge's identification of lapses in the monitoring of behavior occurring in conjunction with loss or abuse as, suicide attempts. Cases of this kind have been rare in normal samples. We did not attempt to develop items on this basis.

²In a preliminary study involving self-report inventories only, we had found significant correlations between unusual beliefs and self-reported passive preoccupation ($r = .27$), and between unusual beliefs and angry preoccupation ($r = .27$). We had interpreted these results in the light of a heightened susceptibility to suggestion expected in Preoccupied subjects. In the current report, which used the AAI rather than self-report to assess preoccupation, no significant relationships were found. Further samples will continue examination of this hypothesis.

³E3 individuals are rare, and the CC category is relatively new. Consequently, insofar as we are aware, no Strange Situation studies have been conducted which treat these as separate categories.

⁴Although lapses in reasoning can appear in many forms, it is not uncommon that they involve unusual connections between events, such as a childhood wish that is thought to have killed an attachment figure (cf. telepathy) or that they violate our normal understanding of physical boundaries and space-time relations, as when an attachment figure is considered simultaneously dead and not-dead in the physical sense (cf. ideas of possession).

⁵Specifically, we have proposed that lapses in reasoning--e.g., indications that a speaker believes a deceased person is both dead and not dead--may indicate parallel, incompatible belief and memory systems regarding a traumatic event which have become dissociated. Lapses in the monitoring of discourse, such as sudden changes into eulogistic speech, suggest the possibility of "state shifts" in which the individual has entered into a peculiar, compartmentalized state of mind involving a particular traumatic experience. Lapses of both types may indicate difficulties with the control of working memory (Main & Hesse, 1992).

⁶See Liotti (in press) for an intriguing discussion of possible linkages between infant D attachment and increased vulnerability to dissociative processes.

Table 1

Stability and Reliability of BLAAQ-U Subscales and Scales

BLAAQ-U Scales	Dutch		Berkeley		Berkeley		
	<u>High School</u>		<u>Stability</u>		<u>Core</u>		
	α	$r_{1,2}$	α	$r_{1,2}$	α_1	α_2	$r_{1,3}$
<i>Unresolved State of Mind</i>	.87	.91	.83	.84	.89	.85	.82 ¹⁾
Responsibility f. Tragedy	.74	.73	.64	.67	.48	.80	.56 ¹⁾
Confusion	.74	.79	.83	.83	.60	.76	.58 ¹⁾
Shame	.54	.71	.67	.59	-	.71	- 2)
Lost Memories	.70	.78	.80	.81	.81	.72	.62 ¹⁾
Uncontrolled Memories	.53	.70	.76	.61	.74	.80	.68
Frightened Reactions	.73	.78	.63	.65	-	.67	- 2)
Possessed	.85	.82	.81	.72	.84	.88	.78 ¹⁾
<i>Unusual Beliefs</i>	.86	.92	.88	.86	.79	.89	.74 ¹⁾
Astrology	.75	.92	.71	.67	-	.82	- 2)
Spiritualism	.76	.83	.83	.86	-	.82	- 2)
Precognition	.68	.83	.71	.89	-	.73	- 2)
Mind Reading	.73	.71	.78	.89	-	.78	- 2)

Notes. 1) Long-term stability is computed on incomplete scales, because items were still missing at time 1.

2) Long-term stability could not be computed, because items were still missing at time 1.

Table 2

Person Correlations between BLAAQ-U Scales and Subscales (Time 1 upper part; Time 3 lower part)

BLAAQ-U	1	2	3	4	5	6	7	8	9	10	11	12	13
1. <i>Unresolved State of Mind</i>	=	.73	.77	-	.77	.72	-	.74	.44	-	-	-	-
2. <i>Responsibility f. Tragedy</i>	.84	=	.50	-	.52	.49	-	.48	.29	-	-	-	-
3. <i>Confusion</i>	.84	.78	=	-	.49	.51	-	.52	.25	-	-	-	-
4. <i>Shame</i>	.64	.42	.46	=	-	-	-	-	-	-	-	-	-
5. <i>Lost Memories</i>	.53	.37	.37	.19	=	.40	-	.57	.26	-	-	-	-
6. <i>Uncontrolled Memories</i>	.74	.57	.65	.46	.06	=	-	.30	.25	-	-	-	-
7. <i>Frightened Reactions</i>	.69	.49	.56	.37	.26	.61	=	-	-	-	-	-	-
8. <i>Possessed</i>	.72	.75	.57	.38	.41	.31	.40	=	.61	-	-	-	-
9. <i>Unusual Beliefs</i>	.54	.51	.40	.31	.36	.29	.34	.62	=	-	-	-	-
10. <i>Astrology</i>	.38	.36	.32	.13	.39	.18	.17	.39	.84	=	-	-	-
11. <i>Spiritualism</i>	.36	.30	.20	.27	.24	.19	.36	.49	.79	.54	=	-	-
12. <i>Precognition</i>	.45	.46	.37	.48	.09	.26	.19	.50	.70	.46	.38	=	-
13. <i>Mind Reading</i>	.55	.54	.39	.20	.36	.31	.40	.65	.80	.50	.58	.50	=

Table 3

Adult Attachment Classifications and BLAAQ-U Scales and Subscales (N=50)

BLAAQ-U Scales	Unresolved		Dismissing		Autonomous		Preoccupied		M	(SD)
	M	(SD)	M	(SD)	M	(SD)	M	(SD)		
<u>Time 1</u>										
Unresolved State***	.50	(.10)	.31	(.17)	.31	(.13)	.27	(.13)	.36	(.16)
Responsibility f. Tragedy**	.47	(.18)	.28	(.16)	.30	(.15)	.29	(.16)	.35	(.18)
Confusion***	.59	(.16)	.36	(.20)	.31	(.21)	.32	(.23)	.40	(.23)
Lost Memories**	.40	(.25)	.26	(.33)	.15	(.20)	.10	(.09)	.24	(.26)
Uncontrolled Memories**	.67	(.12)	.47	(.28)	.57	(.21)	.37	(.27)	.55	(.23)
Possessed***	.36	(.24)	.07	(.17)	.09	(.14)	.09	(.19)	.17	(.22)
Unusual Beliefs***	3.3	(1.38)	1.8	(.86)	2.4	(.86)	1.6	(.34)	2.4	(1.17)
<u>Time 3</u>										
Unresolved State***	.54	(.08)	.38	(.12)	.44	(.11)	.34	(.18)	.45	(.13)
Responsibility f. Tragedy***	.46	(.16)	.25	(.09)	.33	(.12)	.25	(.16)	.35	(.16)
Confusion**	.57	(.14)	.40	(.15)	.43	(.20)	.31	(.15)	.45	(.18)
Shame	.57	(.12)	.51	(.22)	.59	(.14)	.45	(.26)	.55	(.17)
Lost Memories***	.55	(.15)	.38	(.25)	.33	(.15)	.28	(.19)	.40	(.20)
Uncontrolled Memories	.64	(.16)	.51	(.26)	.62	(.22)	.47	(.34)	.58	(.23)
Frightened Reactions*	.59	(.14)	.44	(.22)	.56	(.12)	.49	(.27)	.54	(.18)
Possessed***	.40	(.20)	.18	(.15)	.23	(.15)	.17	(.14)	.27	(.19)
Unusual Beliefs**	2.6	(1.18)	1.8	(.34)	2.1	(.54)	1.4	(.29)	2.1	(.83)
Astrology*	2.7	(1.32)	1.9	(.74)	2.0	(.76)	1.3	(.31)	2.1	(1.02)
Spiritualism*	2.4	(1.32)	1.6	(.66)	2.1	(.92)	1.2	(.29)	2.0	(1.02)
Precognition	2.4	(1.42)	1.6	(.57)	2.5	(1.18)	1.5	(.60)	2.2	(1.17)
Mind Reading*	2.8	(1.38)	1.8	(.72)	1.9	(.73)	1.7	(.78)	2.1	(1.05)

Note. A priori contrast U/CC/E3 vs. rest: + $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4

Correlations of BLAAQ-U Scales for Unresolved State of Mind, and Unusual Beliefs with the AAI Scales

BLAAQ-U Scales	AAI Scales						
	<u>Lapse Tr</u>	<u>Class Tr</u>	<u>Derogation</u>	<u>Idealization</u>	<u>Lack of Recall</u>	<u>Passivity</u>	<u>Anger</u>
<u>Time 1</u>							
Unresolved State of Mind	.51***	.57***	.13	.04	.12	.16	.27
Responsibility f. Tragedy	.33**	.43***	.03	.05	.14	.15	.38***
Confusion	.65***	.56***	.10	.12	-.06	.14	.25
Lost Memories	.26*	.37**	.22	.30*	.21	.05	.01
Uncontrolled Memories	.35**	.31*	.19	-.23	.10	-.10	.27
Possessed	.57***	.63***	-.08	.00	-.02	.31*	.04
Unusual Beliefs	.48***	.51***	-.25	-.09	-.11	.05	.01
<u>Time 3</u>							
Unresolved State of Mind	.53***	.44***	.03	-.16	.14	-.01	.21
Responsibility f. Tragedy	.54***	.44***	-.09	-.16	.08	.07	.08
Confusion	.56***	.39**	.05	-.07	.10	.07	.08
Shame	.27*	.10	.17	-.13	-.07	-.07	.19
Lost Memories	.37**	.48***	.15	.26	.19	-.01	.05
Uncontrolled Memories	.23	.11	.00	-.29*	.11	-.08	.26
Frightened Reactions	.25*	.16	-.14	-.22	.28	-.01	.14
Possessed	.59***	.52***	-.17	-.11	-.03	.11	-.01
Unusual Beliefs	.48***	.40**	-.25	-.06	-.13	.02	-.14
Astrology	.42***	.41**	-.23	.03	-.20	.05	-.14
Spiritualism	.32*	.20	-.24	-.01	-.00	-.08	-.24
Precognition	.34**	.21	-.14	-.26	-.21	-.05	.05
Mind Reading	.42***	.39**	-.18	.00	.03	.12	-.07

*p < .05 **p < .01 ***p < .001 (one-tailed for Lapse Tr and Class Tr)

Table 5
Classification Results of Discriminant Function Analyses and the Cut-off Procedure

AAI Classifications	N	Classifications based on <u>Discriminant Function</u>		Classifications based on <u>Cut-off Scores</u>	
		Not		Not	
		Unresolved	Unresolved	Unresolved	Unresolved
<u>Time 1</u>					
Not Unresolved	35	34	1	35	0
Unresolved	15	6	9	8	7
Total	50	40	10	43	7
% correct		86%		84%	
kappa		.59***		.55***	
<u>Time 3</u>					
Not Unresolved	35	34	1	35	0
Unresolved	15	8	7	9	6
Total	50	42	8	44	6
% correct		82%		82%	
		.51***		.48***	

***p < .001