

# Holding a Mirror Up to Nature: Psychological Vulnerability in Actors

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For actors, the imaginative psychological process of realizing the life of a character is fundamental. Given this ability, we asked the question, do actors demonstrate increased psychological self–other awareness, including more resolution for past mourning, as compared with a control group? The Adult Attachment Interview (AAI) and three self-report instruments were used to determine emotional regulation, absorption/imagination, fantasy proneness, degree of resolution for past trauma and loss, and attachment classification. This study demonstrated that the actor group ( $n = 41$ ) had greater fantasy proneness and a greater distribution of psychological security (measured on the AAI) as compared with the nonartist control group ( $n = 41$ ). Despite no group differences in type and frequency of trauma and loss, the actor group had more unresolved mourning and elevated dissociation. Acting is an attempt “to hold, as ‘twere, the mirror up to nature” (Hamlet, Act III, Sc. I; Shakespeare, 1600/1987) and in this sample, the actors, although more psychologically aware, may be more vulnerable as they hold a mirror up to their own past trauma and loss-related experiences.

*Keywords:* actors, attachment, dissociation, imagination, unresolved mourning

“I like actors. I think they’re good, fine, intelligent, openhearted, generous souls, every last one of them . . . It’s courageous to try and become someone else” (Gregory Peck/Brown, 1999, p. 69).

A career as an actor includes instability and high psychological and physical demands, and yet it also offers a wealth of intrinsic rewards (Barker, Soklaridis, Waters, Herr, & Cassiday, 2009; Kogan, 2002; Prabhu, Sutton, & Sauser, 2008). According to leading practitioners in the field, most actors enjoy the challenges of creating a living portrayal of another human being who engages in conflict and discovers truth (Brook, 1987; Chekhov, 1953). Even though there are many different theories of acting (Hagen & Frankel, 1971; Hodge, 2000; Moore, 1962; Stanislavski, 1924/1963), most actors learn skills that include enhanced attention, memory, concentration, imagination, emotional expression, physical action, and intellectual analysis; skills that have been empir-

ically validated in this population (Hammond & Edelmann, 1991; Kogan, 2002). Furthermore, most actors simultaneously create a “me” and “not me,” an oscillation between self and other that takes place during rehearsal and performance. It is this distancing process that is at the core of the actor’s process (Kaplan, 2005), and many actors are able to monitor and regulate their vulnerability during the creative process in order to minimize potential “post-dramatic stress” (Seton, 2010).

Given this practice of monitoring and regulating, we speculated that many actors would cultivate a sense of autonomy, self–other awareness, and security within themselves in order for them to publicly reveal the truths inherent within the character. Furthermore, through the practice of portraying characters in conflict, we wondered if actors would indirectly gain more resolution for their own personal experiences of trauma and loss. In this study, we asked the question, do actors demonstrate increased psychological autonomy, including more resolution for past mourning? When we use the terms “autonomy” and “resolved mourning,” we are situating them within the attachment theoretical model, and in particular, the Adult Attachment Interview (AAI) assessment protocol (Main, Goldwyn, & Hesse, 2003). Autonomy signifies that a speaker’s mind is free to explore thoughts and feelings during an interview process. The speaker simultaneously remains aware of the relationship between the speaker and the interviewer while discussing attachment-related past experiences, including past trauma and loss events. The speaker is not blocking attachment-related memories, nor is the speaker’s mind invaded by entangled interactions with past and present individuals. Resolved and unresolved mourning are states of mind indicative of the speaker’s ability to manage painful past experiences. When a speaker has unresolved mourning, momentary incoherent monitoring lapses of reason or discourse are displayed when they discuss these experiences; their minds become disorganized during this phase of the interview (Main et al., 2003). Even though artists from other domains participate in self-exploration, we believed that the actors’ abilities to create characters would enhance their psycholog-

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ical self-other awareness, and that this capacity would be manifested in more coherent discourse, a hallmark of a resolved and autonomous/secure mind, as assessed in the AAI.

To date, it remains difficult to determine whether the actor's ability to give life to a character is an antecedent or a consequence of participation in the dramatic arts, or whether early socialization experiences influence their career choice (Kogan, 2002). To our knowledge, little research has examined attachment-related experiences in professional actors as compared with a control group. By including the AAI, we can determine current states of mind regarding attachment-related experiences. These states of mind, although subject to change, are frequently transmitted to subsequent generations (Bakermans-Kranenburg & van IJzendoorn, 2009). Robust research demonstrates that early attachment experiences are encoded into internal mental representations that continue to inform future relational behaviors and influence coping strategies during stressful events (Bowlby, 1988; Sroufe, Egeland, Carlson, & Collins, 2005). When early attachment experiences are optimal, the capacity to freely explore the world is enhanced (Bowlby, 1988), and greater trust is engendered (Corriveau et al., 2009); however, when children are anxiously attached to their caregivers, they are not able to freely investigate, nor are they competent to appraise and recognize emotional responses in others (Steele, Steele, & Croft, 2008). Through development, a history of secure attachment experiences generates a flexibility in attending to the needs of self and others (Main, 2000), enhances emotional regulation (Cloitre, Stovall-McClough, Zorbas, & Charuvastra, 2008; Creasey, 2002), and increases academic accomplishments (Sroufe et al., 2005). In several studies that assessed the relationship between exploration and attachment styles, unlike insecurely attached adults, the securely attached adults demonstrated greater curiosity (Johnston, 1999), better creative problem-solving (Mikulincer & Sheffi, 2000), better coping with training (Scharf, Maysel, & Kivenson-Baron, 2004), and approach-oriented motivational processes (Elliot & Reis, 2003). Insecure attachment compromises explorative interactions by increasing vigilance for threat stimuli (Maier et al., 2005), evoking avoidance-motivation strategies in achievement settings (Elliot & Reis, 2003), and engaging inflexible attentional processes when under attachment-related stress (Main, 2000). When early attachment mental representations are disorganizing and disorienting, individuals may traverse a developmental pathway that leads to the formation of a dissociative fragmented self (Carlson, 1998; Liotti, 2004; Ogawa, Sroufe, Weinfield, Carlson, & Egeland, 1997). This trajectory compromises cognitive processes of attention, working memory and cognitive efficiency (Webster, Hackett, & Joubert, 2009), and is strongly associated with an inability to coherently organize past experiences of trauma and loss (Hesse & Main, 2000; Hesse & Main, 2006; Hesse & van IJzendoorn, 1999).

Our hypothesis, that trained professional actors would have a greater distribution of secure/autonomous states of mind and resolution for past trauma and loss experiences was also informed by the positive results found in past research studies that investigated actors, testimonial theater-making, and psychodrama. In recent studies on actors, an enhanced ability to imagine the mental states of others was associated with engaging in role play and participating in acting classes (Goldstein & Winner, 2010–2011). Nettle (2006) suggested that actors have a strong empathic cognitive awareness, although Goldstein, Wu, and Winner (2009–2010) did

not find this result. The findings in other studies indicated that performing artists engage in intensive years of training to achieve expertise (Kogan, 2002; O'Quin, 2008), actors recalled greater engagement in imaginary worlds as children (Goldstein & Winner, 2009), and artistic training enhanced a capacity to form images (Pérez-Fabello & Campos, 2007). Second, the premise in testimonial theater-making is to create new theatrical works that draw from personal stories that are collectively gathered and collaboratively honed into new theatrical productions (Malpede, 1999). This process is done through a process of oscillating between empathy and distancing as the stories emerge. Ultimately, the process helps heal the performers and their audiences (Kaplan, 2005). Third, in psychodrama, the core processes include: (1) dramatic projection, (2) empathy and distancing, (3) role-playing and personification, (4) interactive audience and witnessing, (5) embodiment, (6) life-drama connection, (7) and transformation (Jones, 2008). Regardless of specific techniques, methods, or models, these core processes promote a reduction in posttraumatic stress symptoms and combat violent behavior (Dutton, 2001; Fong, 2006; Malpede, 1999).

Despite these positive findings, we are well aware that actors generally have minimal family support with few family members involved in the performing arts (Kogan & Kangas, 2006), and yet they elect to participate in careers in the performing arts despite parental discouragement (Goldstein & Winner, 2009). Furthermore, actors are vulnerable to increased dysregulation and self-de stabilization (Thomson & Jaque, 2011), boundary blurring (Burgoyne, Poulin, & Rearden, 1999; Nemiro, 1997), and that their self-perceived personality becomes more similar to the character during rehearsal and performance (Hannah, Domino, Hanson, & Hannah, 1994). In fact, although histories of trauma and conflict have been found to be no greater in performing artists than in control groups (Ayers, Beaton, & Hunt, 1999; Thomson & Jaque, 2011), emotional connections with the character may cause a trauma response in actors, a premise supported by research that suggests that increased attention to past trauma and loss may actually enhance posttraumatic stress symptoms (Berntsen & Rubin, 2006). These studies provide persuasive arguments that would suggest that actors are more vulnerable to psychological instability, a conclusion that runs counter to our hypothesis. By implementing the AAI, we are able to assess the actors' psychological processes regarding attachment-related experiences. We believed that a by-product of acting would include an integration of these experiences into a coherent self-narrative.

## Method

### Participants and Procedure

The nonclinical population of professional trained actors ( $n = 41$ ) was recruited from three major cities (Los Angeles, California, Toronto, Ontario, Canada, and Cape Town, South Africa). All the actors were considered to be "working" professionals with a training background that included at least 3 years of conservatory actor training and 6 months of testimonial theater-making. The mean age (years) was 26.00 (standard deviation [ $SD$ ] = 9.77), with 21 males (52.4%) and 20 females (47.6%). There were 36 Caucasian, three African American, and two Middle Eastern actors. The control group ( $n = 41$ ) was gathered from Toronto and Los Angeles, and none had undergone actor training or testimonial theater-making

processes. The control group consisted of 13 artists (four writers, seven dancers, one opera singer, one pianist), 11 athletes, and 17 individuals who expressed interest in the arts or athletics, but did not actively participate in these domains. The mean age (years) for the control group was 32.26 ( $SD = 12.02$ ), with 12 males (29.3%) and 27 females (65.9%) and two with missing gender data. There were 24 Caucasians, six African American, one Hispanic, three Asians, one Filipino, and three Middle Eastern participants in the control group (three with missing ethnicity data). Within both groups, a small number had received past psychotherapy, although none were in treatment during the study. All participants in the study were native English speaking and the study was conducted in English. The participants received no remuneration and all were recruited following a brief presentation that described the nature of the study. It was given in university classrooms and studios, local acting studios, and prior to rehearsals of professional theatrical productions.

Once signed informed consent was given for the Institutional Review Board-approved study, the AAI was administered. The AAI, a 20-question interview, was given in a small sound-proof office located in a university setting or near a rehearsal hall. The questions probed for past and present experiences with attachment figures (i.e., I'd like you to try to describe your relationship with your parents as a young child. If you could start from as far back as you can remember up until around 12 years of age. To which parent did you feel closest as a child and why? Why isn't there this feeling with the other parent?). Several questions probed for chronologically significant loss and trauma experiences (i.e., Were you ever threatened by your parents or others as a child—maybe for discipline, or even jokingly? Were you ever frightened or worried as a child? Sometimes some people remember their parents threatening to leave them or send them to an orphanage? Do you have memories of physical or sexual abuse that happened to you or in your family? Did you experience the loss of a parent or other close loved one while you were a young child? Were there any other losses that you experienced up until the present?). Some of the many traumatic events discussed by the participants included gang rape, sexual and physical abuse by a family member, and witnessing psychotic breaks in a caregiver who concurrently threatened the speaker. The interview, which takes between 60 – 90 min to complete, was audiotaped and later transcribed verbatim and coded by a reliable coder (Paula Thomson). Two other reliable coders (Melissa Mose and Joanne Seltzer) analyzed 54 of the interviews and kappa scores were derived. For the actor sample and a small group of other performing artists ( $n = 40$ ), the kappa score between Paula Thomson and Melissa Mose was considered excellent, with agreement on the four-way classification ( $k = .94, p < .01$ ). Between Paula Thomson and Joanne Seltzer there was a 100% agreement on 14 cases in the control sample for the four-way classification ( $k = 1.00, p < .01$ ). Consultation was sought between the coders for confirmation of threshold unresolved classifications. No coder had access to the self-report measures during the process of coding. All three coders are certified in AAI coding by Mary Main and Erik Hesse at the University of California, Berkeley. Paula Thomson was trained by Sonia Gojman de Milan and June Stroufe. The second coder, Melissa Mose, was trained by Sonia Gojman de Milan, and the third coder, Joanne Seltzer, was trained by Mary Main and Erik Hesse. All three coders received further training from Mary Main and Erik Hesse.

Following the interview, the participants were given three paper-and-pencil self-report measures: (1) Dissociative Experience Scale – II (DES-II); (2) Inventory of Childhood Memories and Imaginings (ICMI); and (3) Traumatic Events Questionnaire (TEQ). Once these self-report tests were completed, the participants were debriefed, and referrals for further psychological services were offered to individuals upon request. At the conclusion of the debriefing, the participants were free to leave the laboratory. The majority of participants expressed strong interest and appreciation for the opportunity to complete the AAI, with many stating that it helped them organize their past experiences.

## Measurements

**AAI.** The AAI, a semistructured interview, is considered to be the gold standard for assessing states of mind regarding past experiences of attachment, trauma, and loss. This fine-grained analysis yields measures about the participant's coherence (Hesse & Main, 2000; Main, 2000), and degree of self-regulation (Weinfeld, Whaley, & Egeland, 2004). It does not evaluate the veridical truth of an event but rather the degree of coherence contained within the mind of the speaker (Main et al., 2003). The AAI is assessed through an analysis of 19 nine-point continuous dimensional scales that include five inferred parental attachment experience scales and 14 state-of-mind scales. Based on the results of these separate scales, the transcript is then placed into one of three organized state-of-mind classifications: (1) secure–autonomous, (2) insecure–dismissing, or (3) insecure–preoccupied. A transcript can also be placed into a fourth classification, one that is considered disorganized. If an individual receives a score of 5.5 or greater for unresolved trauma and/or loss, or if the transcript is globally disorganized (cannot classify), then a disorganized state-of-mind classification is given, plus an alternate organized classification must be given (Bakermans–Kranenburg & van IJzendoorn, 2009; Hesse, 2008; Main et al., 2003). Once classified, four groupings can be created and a four-way analysis can be conducted on the study sample to determine distribution proportions. When doing a four-way analysis, a separate alternate classification analysis is included to determine the distribution pattern for those individuals who were placed into the disorganized unresolved mourning fourth grouping, in particular, those individuals classified as unresolved/secure–autonomous (U/Falt).

The four major classifications are summarized below (Main et al., 2003):

1) Organized secure/autonomous (group F): Speakers given this classification produce coherent and collaborative discourse that is marked by features of balance, humor, openness, forgiveness, compassion, regret, setting in context, differentiating between appearance and reality, and flexible shifts in perspective and attention. This classification demonstrates emotional regulation, self-reflection, and self–other awareness.

2) Organized insecure dismissing (group Ds): Dismissing speakers display significant contradictory statements that undermine coherence. These speakers demonstrate strong idealizing of parental figures, impoverished memories for attachment experiences, discourse patterns that endorse negative parental behavior, and minimize or normalize effects of past negative experiences. Some speakers may demonstrate strong, although brief, moments of derogation of attachment figures or attachment experiences.

3) Organized insecure preoccupied (group E): Discourse responses from speakers identified as preoccupied are marked by violations in collaboration. Preoccupied angry speakers shift from past to present, use unlicensed quotations from self and parental figures, frequently incorporate exaggerative speech, and resort to nonsensical language that is laced with psychological jargon. Passively preoccupied speakers present features indicative of an inchoate sense of self, especially an inability to maintain attentional focus on the discourse task. Fearful preoccupation manifests as intrusions of painful events throughout the discourse.

4) Disorganized/disoriented insecure unresolved (group U): Speakers in this group demonstrate marked lapses in monitoring of reason, discourse, or behavior during the discussions of past loss or trauma experiences. The lapses are evaluated on a dimensional scale with scores that range from 1 to 9 points. A score of 5.5 or greater places the individual into a primary U classification. The encapsulated lapses of monitoring suggest that the speaker is still unable to organize and articulate these experiences. In rare cases, the speaker may demonstrate a global pattern of disorganization that manifests as pervasive, incoherent, and contradictory discourse patterns that appear throughout the interview, hence it is difficult to place them into one of the groupings and so they are placed into a “cannot classify” grouping (Hesse, 1996).

The AAI is designed to gradually increase stress during the 20-question interview. For example, during the stressful questions that probe for loss and trauma experiences, if a speaker demonstrates significant psychological disorientation, including reports of extreme behavioral reactions, time-space confusion, unsuccessful failures to deny a traumatic or loss event, bizarre beliefs about the event, prolonged silences, recurrent intrusions, or avoiding the traumatic or loss events, then a primary classification of group U is given which implies that the speaker remains in a state of unresolved mourning.

Multiple studies conducted internationally have confirmed the psychometric properties of the AAI, including test-retest stability, interjudge agreement, and discriminant validity (Bakermans-Kranenburg & van IJzendoorn, 1993; Hesse, 2008; Bakermans-Kranenburg & van IJzendoorn, 2009). In a large meta-analytic study of empirical research (Bakermans-Kranenburg & van IJzendoorn, 2009), normative data were determined for a nonclinical population of mothers in a North American community. The AAI four-way distribution in this meta-analysis study included: group F (58%), group Ds (23%), group E (19%), and group U (18%). Only 2% were in the group U/F alternate (U/Falt) analysis (Bakermans-Kranenburg & van IJzendoorn, 2009).

**DES-II.** The DES-II (Bernstein & Putnam, 1986; Waller, Putnam, & Carlson, 1996), is a 28-item self-report measure that asks subjects to indicate the frequency of dissociative experiences, such as 1) “loss of memory for important periods in your life,” 2) “feeling that your body does not belong to you,” or 3) “becoming so absorbed in watching TV or a movie that you are unaware of what is happening around you.” Persons who are administered the DES-II are asked to endorse experiences that do not relate to situations when the subject was under the influence of alcohol or drugs. Each item is given a score between 0 (*never*) to 100 (*always*) and takes approximately 10 min to complete.

The DES-II has six scale scores, which are the mean of their items. The scales include: (1) total DES-II (28 items); (2) amnesic (eight items); (3) depersonalization/derealization (six items); (4)

DES-T taxon (eight items); (5) absorption/imagination (eight items); (6) absorption/changeability (10 items). The last two scales contain items that are considered normative variants of dissociation, whereas, the total scale contains both pathological and normative items. The DES-T is designed to discriminate pathological individuals (Waller & Ross, 1997) and the amnesic and depersonalization scales are considered to be features of dissociative pathology.

The DES-II and all of its subscales have very high internal consistency scores (Cronbach’s alpha), implying that they contain a fair amount of redundancy. A bivariate correlation matrix reveals moderate to high correlations between the scales (range: .77–0.99,  $p < .05$  for all correlations; van IJzendoorn, & Schuengel, 1996). In our study, the Cronbach’s alpha results included: (1) the total DES-II ( $\alpha = .95$ ), the three pathological scales; (2) amnesic scale ( $\alpha = .86$ ); (3) the depersonalization/derealization scale ( $\alpha = .86$ ); and (4) the discriminating taxon (DES-T) scale ( $\alpha = .86$ )—and the two nonpathological scales (5) absorption/imagination scale ( $\alpha = .90$ ); (6) the absorption/changeability scale ( $\alpha = .91$ ).

Despite the findings that suggest the DES-T is not a reliable discriminate measure (Merritt, & You, 2008), and that the pathological and normative dissociative scales are indistinguishable (Levin, & Spei, 2004), other studies have demonstrated that the DES-T, with its clinical mean cut-off score  $\geq 20$ , is considered reliable and valid (Bernstein & Putnam, 1986; Maaranen et al., 2005; Waller et al., 1996; Waller & Ross, 1997). Given this information, in our analysis we included only two scales that had no overlapping items, the normative dissociative scale of absorption/imagination and the pathological DES-T scale. In our sample, when dividing the two groups into pathological and nonpathological dissociation based on the clinical cut off score of  $\geq 20$  on the DES-T, 40% ( $n = 16$ ) should be further evaluated for a dissociative disorder in the actor group, as compared with only 2.7% ( $n = 1$ ) in the control group.

**ICMI.** The ICMI is a self-report instrument that was developed by Wilson and Barber (Lynn & Rhue, 1988; Wilson & Barber, 1983). It is a dichotomous, paper-and-pencil questionnaire consisting of 52-items that probe for experiences and memories from childhood and currently, such as, “when I was a child I enjoyed fairytales,” “at the present time I am very imaginative,” “when I was a child I lived in a make-believe world,” and “as an adult I still occasionally live in a make-believe world.” This instrument has adequate reliability and validity and discriminates among high fantasy-proneness (scores above 40), medium fantasy-proneness (scores between 11 and 39), and low fantasy-proneness (scores below 10). The scoring is a simple total of all items endorsed by the subject. In our study, the Cronbach’s alpha analysis resulted in an  $\alpha = .88$ .

**TEQ.** The TEQ, a self-report, 11-item, dichotomously scored instrument (Lauterbach & Vrana, 2001), assessed exposure to nine different traumatic events (accidents, natural disasters, crime, child abuse, rape, adult abusive experiences, witnessing death/mutilation of someone, being in a dangerous/life-threatening situation, and receiving news of an unexpected death of a loved one). The final two items probed for any other traumatic event not listed, and for traumatic event(s) that were too difficult to discuss with anyone. Because calculating the internal consistency of the TEQ was inappropriate, a test-retest reliability was calculated in an earlier study by this laboratory (Thomson, Keehn, & Gumpel, 2009). The TEQ was administered to 34 undergraduate dance students with 1

week elapsed between test administrations. The TEQ was found to be highly stable over this time span, with a correlation of .95 ( $p < .001$ ) between the two TEQ scores.

## Design and Analysis

A cross-sectional design was utilized, in which attachment classifications, dissociative experiences, fantasy, and trauma were measured. The PASW Statistics 18 is a statistical package produced by Statistical Package for the Social Sciences, Inc (SPSS). This software program was used for all statistical calculations. We evaluated the distribution groupings of the AAI four-way analysis, which means that we classified participants as either a member of group F, group Ds, group E, or group U. When a group U classification was given, a second classification of group F, group Ds, or group E was listed as an alternate. Since a classification of group U/Falt, rather than group U/Ds or group U/E, is regarded as more emotionally regulated and is predictive of parenting securely attached offspring (Schuengel, Bakermans-Kranenburg, & van IJzendoorn, 1999; Bakermans-Kranenburg & van IJzendoorn, 2009), we also included this as a separate group distribution analysis. Three self-report instruments were added to augment the findings derived from the AAI. The TEQ was included as a simple measure to evaluate type and frequency of past traumatic events. The ICMI determined whether fantasy was different in the two groups, especially since moderate levels of fantasy has been associated with enhancing health while high levels has been associated with pathology (Cuper & Lynch, 2008–2009; Rauschenberger & Lynn, 2002–2003; Merckelbach, Horselenberg, & Schmidt, 2002). Lastly, the DES-II scale of absorption/imagination was included as a second measure to determine frequency and intensity of imaginative cognitive processes, whereas, the DES-T was included to further evaluate emotional regulation (Maaranen et al., 2005; Oathes, & Ray, 2008) and to differentiate integrative from disintegrative states of consciousness (Hunt, Dougan, Grant & House, 2002). The DES-T also helps identify individuals who are unable to integrate memory, cognition, perception, and self-identity (American Psychiatric Association, 2000) to a degree that may compromise function (Spiegel, 2006).

Several statistical analyses were conducted. First, frequency and percentage distribution statistics were calculated. Then, a series of chi-square goodness of fit analyses were conducted to determine whether the trained professional actor and the control groups were similar in the (1) AAI four-way, (2) group U/Falt, and (3) pathological dissociation (DES-T) distributions. A second post hoc series of chi-square goodness of fit analyses were conducted on the control group to determine whether distributions for the AAI four-way, Group U/Falt, and DES-T were similar between the artists (nonactors) and nonartists. A third post hoc series of chi-square goodness of fit analyses were conducted comparing the control group's artists to the actors to determine whether there were group differences in the above distributions. A multivariate analysis of covariance (MANCOVA) analysis, with gender as a covariate, was conducted to determine whether there were significant mean group differences between the actor and control groups. When conducting the MANCOVA analysis, we used the AAI unresolved scales for trauma, loss, other (nonfamily related trauma), and overall (highest overall score for either trauma or

loss), since these scales are continuously scored, whereas, the group U classification is considered categorical.

## Results

In a series of chi-square goodness of fit analyses, the distribution of the actor group significantly deviated from the control group: (1) AAI four-way [ $\chi^2(3) = 10015.30, p = .000$ ], (2) U/Falt grouping [ $\chi^2(1) = 4.76, p = .03$ ], and (3) pathological dissociation group [ $\chi^2(1) = 21.45, p = .000$ ]. A greater proportion within the actor group were classified with unresolved mourning, less insecure-organized attachment classifications, an alternate classification of secure-autonomous state of mind, and more members were placed in the taxon grouping for potential dissociative disorders.

Further, within the control group, when divided into artists and healthy active nonartists, in a second series of chi square analyses, the artists deviated significantly from the nonartist grouping: (1) AAI four-way [ $\chi^2(3) = 116200.96, p = .000$ ], (2) U/Falt [ $\chi^2(1) = 17.29, p = .000$ ], and (3) pathological dissociation group [ $\chi^2(1) = 5414.75, p = .000$ ]. In this analysis, the nonartists had more unresolved mourning, fewer with an alternate secure-autonomous state of mind, and more placed in the taxon group for a potential pathological dissociation. The control group artists demonstrated better emotional regulation as compared with the nonartists in the control group.

In a third chi square analysis, when we compared the distribution between the actor group and the artists in the control group, there were significant differences between both groups in all three analysis. The artist control group had a greater proportion of secure-autonomous states of mind and fewer individuals with unresolved mourning in the AAI four-way analysis [ $\chi^2(2) = 3177.56, p = .000$ ], more with a secure-autonomous state of mind as an alternate classification U/Falt [ $\chi^2(1) = 16.10, p = .000$ ], and fewer placed in the taxon grouping for potential pathological dissociation, [ $\chi^2(1) = 83180.80, p = .000$ ]. In this third series of distribution analyses, the artists in the control group demonstrated better emotional regulation than the actor group.

Our hypothesis, that trained actors would have more secure-autonomous (Group F) states of mind regarding past attachment experiences, proved to be accurate only when we included the group U/Falt individuals. However, the actor group had a greater distribution of disorganized states of mind regarding trauma and loss experiences (group U), a finding that contradicted the hypothesis that actor training and professional experience would inoculate actors from the psychological distress of unresolved mourning. See Table 1 for attachment classification distribution, and dissociative taxon distribution results.

The next statistical analysis we conducted was a MANCOVA, with gender as the covariate (Wilks's lambda .599). This analysis compared the mean scores of the actor and the control groups. We found significant mean differences for the dissociative scales (DES imagination/absorption scale:  $F(1, 69) = 28.30, p = .000$ ; DES taxon scale:  $F(1, 69) = 23.46, p = .000$ ; and fantasy proneness: ICMI,  $F(1, 69) = 22.06, p = .000$ ; with actors scoring significantly higher. No significant differences were found when comparing the mean scores for total trauma and the AAI unresolved scales ( $p > .05$ ). See Table 2 for mean scores and MANCOVA results.

Table 1  
*Frequency and Percentage Distribution Statistics: Adult Attachment Interview Classifications and Dissociative Taxon Groups*

	Actor group (n = 41)	Ct. group full (n = 41)	Ct. group artist (n = 13)	Ct. group non-artist (n = 28)
Gender				
Female	20 (47.6%)	27 (65.9%)	9 (69.2%)	19 (67.9%)
Male	21 (52.4)	12 (29.3%)	4 (30.8%)	9 (32.1%)
AAI 4-way				
Dismissing	1 (2.4%)	5 (12.2%)	0 (0%)	5 (17.9%)
Preoccupied	0 (0%)	1 (2.4%)	0 (0%)	1 (3.6%)
Autonomous	27 (65.9%)	26 (63.4%)	11 (84.6%)	15 (53.6%)
Unresolved overall	13 (31.7%)	9 (22.0%)	2 (15.4%)	7 (25.0%)
U/F	10 (24.4%)	4 (9.8%)	1 (16.7%)	3 (10.7%)
DES-T $\geq$ 20	16 (40.0%)	1 (2.7%)	0 (0%)	1 (4.2%)

*Note.* Ct = control group; U/F = unresolved classification with an alternate classification of secure autonomous; DES-T = pathological dissociation (taxon) group. Gender: 2 missing in control group. In chi-square goodness of fit analyses, significant group differences were found between the actor group and the control group, between artists and non-artists within the control group, and between artists in the control group and the actor group on the AAI 4-way, U/F, and DES-T  $\geq$  20.

## Discussion

To our knowledge, this is the first study to administer the AAI on a professional actor sample. The AAI is a powerful instrument that transforms experiences of attachment, trauma, and loss into language (Appleman, 2000), thus it provides a valuable glimpse into the minds of actors as compared with a control group. With the AAI, we were able to evaluate the degree of narrative coherence during the complex task of remaining in a collaborative relationship with the interviewer. Of note, this relational capacity occurring between the interviewer and the interviewee during the AAI is an excellent predictor for present and future attachment relationships between caregiver and infant (Hesse, 2008). When classifying individuals with an AAI analysis, individuals who demonstrate secure–autonomous states of mind are able to participate in the interview process with attentional and emotional strategies that are regarded as open, balanced, flexible, and fundamentally coherent and organized. When individuals are classified as insecure, they demonstrate psychological strategies that dismissively move attention away from attachment-related memories or they are preoccupied and unable to shift away from these memories (Main et al., 2003). Since the AAI is the only measure

that can assess degree of psychological resolution for past loss and trauma, we were also able to place individuals into an unresolved mourning grouping (group U).

The chi-square goodness of fit analysis of the AAI four-way groupings demonstrated a significant difference between the actor group and the control group. What was different was found in the insecure dismissing and preoccupied classifications, with a higher proportion of control group individuals receiving these classifications. This suggests that a greater proportion of actors were able to remain engaged, regulated, and coherent during the interview process. However, contrary to our hypothesis, during discussions about past trauma and loss experiences, the actor group had a higher proportion of disorganized–unresolved classification as compared with the control group. Even though the participants in both groups experienced similar traumatic/loss events (as assessed by the TEQ and the AAI), the actor group had greater lapses of monitoring of reason and discourse during discussions of these events. The lapses within their narrative discourse included psychological disorientation of space and time, feelings of being possessed by an abusive figure, and beliefs that the deceased figure remained alive; all markers of narrative disorganization (Currier &

Table 2  
*Descriptive Mean (Standard Deviation) Statistics, MANCOVA, Effect Size*

	Actor group (n = 39)	Control group (n = 33)	F	p	$\eta^2$
DES Imag**	36.89 (22.98)	13.30 (10.32)	28.30	.000	.29
DES-T**	19.36 (16.65)	4.66 (4.92)	23.46	.000	.25
TEQ total	2.55 (1.80)	2.87 (1.79)	.83	.366	.01
ICMI total**	31.49 (6.72)	22.36 (9.05)	22.06	.000	.24
U loss	3.30 (1.64)	3.26 (1.34)	.00	.983	.000
U trauma	1.53 (2.42)	1.58 (2.48)	.00	.989	.000
U other	1.96 (2.52)	1.55 (2.14)	.75	.833	.01
U overall	3.82 (1.87)	3.83 (1.62)	.05	.389	.001

*Note.* DES Imag = DES-II Absorption/Imagination; DES-T = DES-II taxon; TEQ total = Traumatic Events Questionnaire total; ICMI total = total fantasy proneness; U loss = unresolved loss; U trauma = unresolved trauma; U other = unresolved other traumas; U overall = unresolved overall scale. In MANCOVA with gender as the covariate (Wilks' Lambda), significant group differences in the mean scores were found between actor and control groups: \*\* ( $p < .01$ ). Degree of freedom was 1,69. In the actor group, two participants had missing data, and in the control group, eight had missing data.

Neimeyer, 2006) and dissociative cognitive processes (Hesse & Main, 2006). Despite an uneven sample size, this distribution pattern persisted when the nonactor artists in the control group were compared with the actor group. Although the design of this study was not predictive, perhaps the specific demands of creating and portraying a character may have increased unresolved mourning in the actor group. This finding raises concerns for the psychological well-being of actors and adds support to the theory that enhanced engagement of traumatic memories into a personal narrative may be indicative of greater posttraumatic stress symptoms (Berntsen & Rubin, 2006).

In order to further address the proportion of secure–autonomous classifications, when we combined the two secure groups, those that were given (1) a primary classification as secure–autonomous (group F) with those that were given (2) a primary classification of unresolved mourning and an alternate classification of secure–autonomous (group U/ Falt), the actor group had a high proportion of secure–autonomous individuals. In general, during the interview process, they were able to maintain mental coherence, an indicator of identity development (Angere, 2008; Kraus, 2006). Since attachment behaviors and states of mind tend to persist throughout development (Bakermans–Kranenburg & van IJzendoorn, 2009; Corriveau et al., 2009; Weinfield et al., 2004), perhaps these actors received early secure attachment experiences that encouraged the formation of a resilient self (Sroufe et al., 2005), a finding that lends support to research that demonstrates a relationship between family acceptance and higher levels of creativity (Lim & Smith, 2008). Literature suggests that both forms of secure–autonomous classifications are related to providing secure attachment experiences to offspring (Bouchard et al., 2008; Schuengel, Bakermans–Kranenburg, & van IJzendoorn, 1999), and that low levels of psychopathology are associated with high levels of mindfulness and secure–autonomous classifications (Bernstein, Tanay, & Vujanovic, 2011). This suggests that the actor group, despite more unresolved mourning, may be able to maintain sufficient self-regulation to manage the psychological demands of acting.

Further, our findings indicated that the actor group had higher frequency and intensity of fantasy proneness, absorption and imagination as compared with the control group. Although not predictive, actors may have enhanced their imagination through the practice of acting, or they may have entered a career that supports their heightened predisposition for fantasy (Goldstein & Winner, 2009). In this study, the actor group also had significantly higher scores on the DES-T, a taxonic measure suggestive of pathological dissociation. What is concerning is that 40% ( $n = 16$ ) of the actor group had scores that indicate further screening for a potential dissociative disorder, as compared with only 2.7% ( $n = 1$ ) in the control group. This finding may lend further support to the theory that trained professional actors may employ dissociative processes to alter self-perception and blur boundaries between “me” and “not me” when they create characters. A lack of psychological integration in the actor group may also be related to the increased proportion of disorganized states of mind that were demonstrated during discourse regarding painful memories (Hesse & Main, 2006).

The limitations of this study include the inherent subjectivity of self-report instruments. The sample size was considered modest; however, this limitation is offset with the fine-grained analysis provided by the AAI. The creation of a meaningful control group was challenging. We gathered a control group that had a distribu-

tion of nonactor artists, athletes, and members of the general population. The configuration of this control group may explain why our control group did not deviate in the direction that we had hypothesized. The effects of past psychotherapy cannot be determined since several individuals in each group had received treatment, but none were in treatment at the time of the interview. Future recommendations include assessing other mediating factors that may contribute to unresolved mourning and dissociation in actors.

In this study, our hypothesis that actors would demonstrate increased psychological autonomy including more resolution for past mourning was not fully supported. Although more actors were classified as secure–autonomous when we included the alternate classification, the actor group had a greater distribution of unresolved mourning and placement in the taxon group for potential dissociative disorders as compared to the control group. These findings raise many questions. Even though there was no difference between the two groups for past traumatic events, more actors were unable to maintain narrative coherence when discussing memories of past trauma and loss. When combining the results derived from the AAI, and the self-report instruments that assessed fantasy proneness, dissociation, and traumatic events, the actor group may have a greater vulnerability for psychological distress.

As audiences, we benefit that these actors are willing to endure a career of instability to provide a wealth of enjoyment and cultural enrichment for us (Kogan, 2002; Nettle, 2006). Our study adds to the body of research that suggests that there is a psychological cost for participants engaged in the creative arts (Frantom & Sherman, 1999); Loggia, Mogli, & Bushnell, 2008). Acting is an attempt “to hold, as ‘twere, the mirror up to nature” (Hamlet, Act III, Sc. I; Shakespeare, 1600/1987) and in this sample, the actors, although more psychologically self–other aware, may be more vulnerable as they hold a mirror up to their own past trauma and loss-related experiences.

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See page 360 for a correction to this article.

### **Correction to Thomson and Jaque (2012)**

In the article, "Holding a Mirror Up to Nature: Psychological Vulnerability in Actors," by Paula Thomson and S. Victoria Jaque (*Psychology of Aesthetics, Creativity, and the Arts*, Advanced Online Publication, July 9, 2012, doi:10.1037/a0028911), incorrect data from the chi-square analysis of the four-way comparisons were inadvertently inserted into the Results section of the article, which do not affect the findings of the investigation. For the comparisons between the actor group and the control group, the results should read,  $\chi^2(2) = 5.98, p = .05$ . When the artists and nonartists in the control group were compared, the results are,  $\chi^2(2) = 9.47, p = .007$ , and for the comparisons of the actors and the artists, the  $\chi^2(2) = 6.649, p = .036$ . For these analyses, the dismissing and preoccupied groups were collapsed into one insecure group. Two additional incorrect results were inserted for the pathological dissociation chi-square comparisons, for the control group, where the comparison between artists and nonartists should read as follows:  $\chi^2(1) = 1.037, p = .308$ . For the actor versus artist comparison,  $\chi^2(1) = 26.24, p = .000$ . The online version of this article has been corrected.

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