

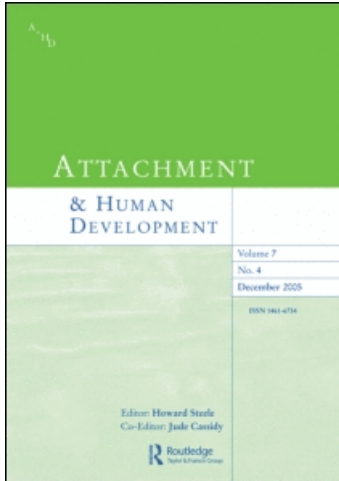
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Disorganized attachment, absorption, and new age spirituality: a mediational model

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Disorganized attachment, absorption, and new age spirituality: a mediational model

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In this paper, we present a theoretical model and an empirical review linking disorganized attachment with New Age spiritual beliefs and activities via a proposed mediator; the propensity to enter altered states of consciousness (absorption/dissociation). Utilizing a prospective longitudinal design ($N = 62$), an empirical test of the mediational model is also provided for illustrational purposes. More specifically, we tested if unresolved/disorganized (U/d) attachment scores, as identified via the Adult Attachment Interview at the first assessment point, predicted New Age spirituality 3 years later, and whether this link was mediated by absorption. Results supported the mediational model, although the bivariate relation between U/d attachment and New Age spirituality was of modest strength. The discussion focuses on the general implications, clinical as well as non-clinical, of the proposed model. Finally, we argue that time is now ripe for attachment researchers to address additional non-pathological sequelae of disorganized attachment and the related propensity to experience altered states of consciousness.

Keywords: disorganized attachment; Adult Attachment Interview; absorption; dissociation; New Age; spirituality; religion

Introduction

Could a failure to mentally resolve traumatic events be expressed in other life domains besides attachment, caregiving, and psychopathology? In this paper, we argue that unresolved/disorganized (U/d) attachment in adulthood is linked to New Age spiritual activities and beliefs via a proposed mediator: the propensity to enter altered states of consciousness (absorption/dissociation). Below, we define each of the somewhat complex constructs underlying the argument (i.e., disorganized attachment, New Age spirituality, and absorption/dissociation). This paper also includes a rather extensive review of the theoretical formulations and past research findings from which the mediational model was derived. Finally, for illustrational purposes, the theoretical model is empirically tested on prospective longitudinal data collected at our laboratory.

In the Introduction, we delineate the theoretical and empirical relations between the predictor (disorganized attachment) and the outcome (New Age spirituality). This is followed by a description of the relation between the proposed mediator

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(absorption/dissociation) and the New Age outcome. Finally, we present the phenotypic and empirical links that have been established between the disorganized attachment predictor and the absorption/dissociation mediator.

Disorganized attachment and New Age spirituality

Disorganized attachment is thought to represent a break-down in attachment-related patterning during stress (Main & Solomon, 1990), which may be present both in children (D) and adults (U/d). Using the strange situation (Ainsworth, Blehar, Waters, & Wall, 1978), D attachment in infants is identified in behavioural expressions, that are displayed in the presence of the caregiver, such as prolonged freezing with a trancelike facial expression, simultaneous displays of opposing behaviours, and direct indices of apprehension of the caregiver (see Main & Solomon, 1990, for a more complete list). Infants who display these behaviours in relation to their primary caregiver have also been found to run an increased risk of failing to mentally resolve traumatic events later in life (Main, Hesse, & Kaplan, 2005; Sroufe, Egeland, Carlson, & Collins, 2005).

The failure to mentally resolve traumatic events later in life is typically captured via unresolved/disorganized (U/d) speech surrounding loss and/or abuse in the Adult Attachment Interview system (AAI; Main, Goldwyn, & Hesse, 2003). Indices of U/d discourse are present in various forms of linguistic break-downs, for example, speech implying that a person lost through death would have input into the speaker's present day life (i.e., as though the dead person were in fact physically alive); by excessive details and invasion of the trauma into other (irrelevant) topics; by visual sensory intrusion of the traumatic event; and by psychologically confused statements implying that the traumatic event can be undone through manipulations of the mind (for more specific examples, see Hesse, 1999). These "linguistic trips" occur specifically in relation to the individual's trauma-related discussion; in other words, they are not a characteristic of the individual's discussion of other topics within the interview. Parental U/d status has repeatedly been found to predict infant D status (van IJzendoorn, 1995).

Regardless of the age period during which it is studied and the specific methodologies used to capture it, disorganized attachment is conceptually aligned with Bowlby's (1973, 1980) idea of segregated processes, which are believed to result from inescapable fear/trauma that overloads the individual's defence system. As described by Hesse and Main (2006), an important reason for why this might happen within the child's relationship with caregivers is because of the behavioural paradox in which children find themselves when their caregivers are simultaneously the *source* of alarm (e.g., due to being abusive, frightening, or dissociative) and the only possible *solution* to it (i.e., because the offspring is pre-programmed to turn to his/her stronger and wiser attachment figure to deal with potential danger). Thus, the more alarmed the child is, the more motivated he/she should be to turn to his/her attachment figure/the *solution* to alarm, but the closer the child gets to the attachment figure/the *source* of alarm, the more motivated he/she should be to flee from the attachment figure. Yet, increasing the distance to the attachment figure during high levels of attachment system activation is likely to activate the system at even higher levels, and thus the propensity again to return to the attachment figure. Hence, a positive feedback loop is created behaviourally, with inescapable fear (fear without solution) as a likely psychological outcome (e.g., Hesse & Main, 2006).

Segregated processes are also believed to underlie the examples of U/d speech given above (Hesse & Main, 2006).

Before turning to links between disorganized attachment and New Age spirituality, it is necessary to say a few words about the somewhat evasive “New Age” construct itself. Anyone tempted to define the New Age movement on the basis of necessary and sufficient conditions is likely to fail because it is such a heterogeneous social movement that it precludes such attempts. In any event, the term New Age spirituality refers to a wide range of beliefs and activities that typically combine esotericism/occultism, astrology, parapsychology, alternative medicine, outgrowths of humanist psychology, and Eastern thinking in a Western context (see Farias & Granqvist, 2007, for a more elaborate discussion). Whereas traditional Western religion has an attachment-like figure (i.e., a theistic God) at the doctrinal centre, the New Age movement typically does not. Instead, New Age spirituality has been thought to represent a “celebration of the self” (Heelas, 1996), where the individual supposedly possesses many of the attributes traditionally ascribed to the deity, and is free to pick any ingredient suitable to oneself from the diverse spiritual smorgasbord that characterizes the New Age movement. However, in other regards, New Age-related activities and beliefs are not typically opposites of traditional religion. For example, New Age-related beliefs and experiences (e.g., in relation to extra-theistic paranormal phenomena) are more or less orthogonal to the phenomena associated with traditional religious beliefs (e.g., Granqvist et al., 2005; Rice, 2003).

A questionnaire scale has been constructed to tap New Age spirituality, labelled the New Age Orientation Scale (NAOS; Granqvist & Hagekull, 2001). This scale has been evaluated in diverse populations, drawn from both New Age settings and the general population. Although serious attempts were made to tap the *theoretical* heterogeneity of New Age-related beliefs and activities, all studies conducted to date indicate that scale scores *empirically* form one homogenous factor that is highly internally consistent (Farias, Claridge, & Lalljee, 2005; Granqvist & Hagekull, 2001; Granqvist, Ivarsson, Broberg, & Hagekull, 2007; Granqvist et al., 2005). Hence, although New Agers often emphasize the importance of formulating one’s own philosophy of life, other New Agers come to form their own philosophies of life in essentially the same manner.

Past research has indicated a foundation to expect attachment disorganization to be associated with New Age spirituality. For example, Main, van IJzendoorn, and Hesse (1993) found that U/d attachment was linked to many of the central themes of New Age beliefs (e.g., belief in the paranormal, astrology, spiritualism, contact with the dead, ideas of possession; see also Main & Morgan, 1996). These results (subsequently replicated by Sagi-Schwartz, van IJzendoorn, Joels, & Scharf, 2002) were initially produced in a project which aimed at identifying U/d-status through the use of a questionnaire, one dimension of which was labelled “anomalous beliefs” (Main et al., 1993). However, the relations were not strong enough to demonstrate conceptual equivalence. Hence, anomalous beliefs, such as those present in the New Age movement, are likely to have multiple sources.

An additional empirical reason to expect an association between disorganized attachment and New Age spirituality was provided by George and Solomon (1996), who found that mothers classified as disorganized in a caregiving interview tended to attribute supernatural powers to their offspring (e.g., psychic power, special connection with the deceased). Moreover, as in the case of disorganized attachment,

a disproportionately high percentage of individuals who have had paranormal experiences or who hold affirmative beliefs about the paranormal also have experienced abuse as well as other forms of severe trauma (e.g., Irwin, 1992; Reinert & Smith, 1997; Sagi-Schwartz et al., 2003).

Finally, the only (that we are aware of) direct test of the disorganization-New Age connection supported the prediction. U/d attachment was indeed linked to higher New Age spirituality, as indicated via NAOS (Granqvist et al., 2007). In sum, although the direct evidence is currently limited to cross-sectional findings, on the basis of previous research we propose that disorganized attachment is a precursor of New Age spirituality.

Absorption/dissociation and New Age spirituality

What psychological process may then explain an empirical relation between disorganized attachment and New Age spirituality? Dissociative inclinations have recently been proposed as an explanatory candidate (Granqvist et al., 2007). Dissociation refers to a disruption in the usually integrated functions of consciousness, memory, identity, and perception (American Psychiatric Association, 2000). Dissociation is clearly a complex, multifaceted construct. Several scholars have suggested a distinction between dissociation as detachment and as compartmentalization (for a review, see Brown, 2006). In the former case, the individual experiences an altered state of consciousness characterized by a sense of separation/detachment from certain aspects of everyday experience, whether it be their body (e.g., an out-of-body experience), their sense of self (depersonalization), or the surrounding world (derealisation). Individuals experiencing detachment may report feeling “spaced out,” “unreal,” or as if they are “in a dream.” Compartmentalization, on the other hand, refers to a deficit in the ability to deliberately control normally controllable processes or actions, such as to bring normally accessible information to memory (i.e., selective amnesia). Dissociation in general, and perhaps compartmentalization in particular, is associated with deficits in selective attention, or more precisely with the inhibition of irrelevant information from ongoing mental processing (e.g., Cromer, Stevens, DePrince, & Pears, 2006). Curiously however, under conditions of high processing demand, such as during divided attention tasks or in lieu of intense stress, dissociation (and perhaps particularly detachment) may be advantageous in that it is linked with an increased capacity for inhibition (e.g., DePrince & Freyd, 1999), that is, the individual is able to detach from irrelevant information and remain absorbed by task central information.

Both detachment and compartmentalization usually denote processes that are associated with serious psychopathology, for example in the dissociative disorders, Posttraumatic Stress Disorder, and Borderline Personality Disorder. However, there is a low-level aspect of dissociation *qua* detachment, known as absorption, which is more normally distributed in the general population (Tellegen & Atkinson, 1974). To obtain adequate dissociation relevant response variation in samples drawn from non-clinical populations, absorption may therefore be the aspect of dissociation that is likely most worthwhile to study.

The term absorption was coined by Tellegen and Atkinson (1974) and refers, technically, to individual differences in “the disposition for having episodes of ‘total’ attention that fully engage one’s representational (i.e., perceptual, enactive,

imaginative, and ideational) resources” (p. 268). In other words, a high absorption disposition signifies that the individual is prone to having his/her attentional system fully absorbed by whatever mental process that is under execution at any given moment, whether it be his/her own imagination or some external stimulus. Such absorption is believed to be associated with an altered state of consciousness (Tellegen & Atkinson, 1974). In addition, when all (or most) processing resources are occupied, the usual meta-cognitive monitoring of one’s perceptions and thoughts is likely counteracted (Tellegen & Atkinson, 1974). Not surprisingly, then, absorption is one of the most reliable personality predictors of suggestibility in general and hypnotizability in particular (e.g., Roche & McConkey, 1990). As an illustration, individuals scoring high on the Tellegen and Atkinson (1974) absorption scale who had been primed with spiritual content from answering various spirituality-relevant questionnaires reported an elevated occurrence of mystical experiences and various anomalous somatosensory states (including the sensed presence of a sentient being) from simply sitting in a sensory deprivation chamber for 20 minutes, relative to individuals scoring low in absorption (Granqvist et al., 2005; Granqvist & Larsson, 2006).

Phenotypically, the New Age movement is replete with activities, experiences, and beliefs that would seem to suggest that propensities for dissociation in general and absorption in particular are disproportionately common. For example, one of the most common therapy practices within the movement is regression (aka reincarnation) therapy, in which the client is hypnotized to re-experience one of his/her previous incarnations, in whose life a traumatic experience may have occurred that allegedly explains the current difficulties experienced by the client. The popularity (Singer & Nievod, 2003) of this hypnosis-based practice suggests that many New Agers may be easily suggestible. Other examples of the role played by dissociative inclinations within New Age spirituality may be found in out-of-the-body experiences and trance states (e.g., in conjunction with shamanistic drum trips or liberating dance). These examples illustrate not only that many New Agers may be personally disposed to experience an unusual degree of dissociation, but also that such states are encouraged and subjected to affirmative metaphysical interpretations within the realm of many New Age practices (for a more extensive discussion, see Farias & Granqvist, 2007).¹

As for empirical findings, there are at least four sources of evidence to support this proposed link between dissociation and New Age spirituality. First, following an experimenters’ deceptive suggestion that there are hidden patterns in a visual display of truly randomly distributed dots, Farias and colleagues (2005) found that participants scoring high in New Age spirituality were more inclined than others to detect such patterns. Second, as noted above for absorption, New Age spirituality was also positively associated with mystical experiences and various somatosensory states in the spiritual priming and sensory deprivation study described above (Granqvist et al., 2005; Granqvist & Larsson, 2006). Both of these findings do indeed indicate an unusual degree of suggestibility among New Agers. Third, belief in the paranormal has been linked to a capacity for dissociation in general (Nadon & Kihlstrom, 1987). Finally, the most direct evidence comes from a study which showed that New Age spirituality was in fact positively and robustly correlated with absorption (Granqvist & Larsson, 2006). In sum, previous research and theorizing led us to expect a positive link between absorption (as an example of dissociation) and New Age spirituality.

Disorganized attachment and absorption/dissociation

The final bivariate link in a mediational model is between the predictor and the proposed mediator (Baron & Kenny, 1986), for present purposes between disorganized attachment and absorption/dissociation. In this case, that particular link may be the strongest one in the chain, on phenotypic as well as empirical grounds. Disorganized attachment has been viewed as inextricably linked with dissociation in general and with Bowlby's (1980) notion of segregated systems in particular (see Liotti, 1992; Main & Morgan, 1996). Prior to Bowlby's description of segregated systems, however, and dating back to Breuer and Freud's studies of hysteria (1893/1957), psychoanalysts have held that trauma-related fear may provoke dissociation, which is understood by them as a primitive defence mechanism. More recently, Liotti (1992) suggested specifically that infants, whose relationship with the attachment figure produces a behavioural paradox of the kind described above as characteristic for D children, are prone to later episodes of dissociation. Liotti (2006) noted that D infants may experience an altered consciousness which is akin to the trance state that develops from multiple representations of incompatible information in the confusion technique of hypnotic induction. Early D attachment would then comprise two aspects of dissociation: "an unusual quality of conscious experience (i.e., a trance-like state) and the simultaneous multiple representations of aspects of reality normally construed as unitary" (Liotti, 2006, p. 58).

Although the conceptual link between disorganized attachment and dissociation may seem abstract, many concrete D behaviours have been understood in terms of (proto-) dissociative states (see Main & Morgan, 1996), such as reflecting multiple, segregated executors (Hilgard, 1977/1986). For example, a child in the strange situation who approaches the attachment-figure on reunion with one part of the body (e.g., left arm) while moving away with another part (e.g., the right arm) acts as though the two body parts have different goals, or are directed by incompatible executors. Similarly, presuming age-appropriate motor control, a 12-month infant who smilingly swipes the attachment figure in the face is showing a motor behaviour indicative of anger but a facial expression that suggests contentment; thus, again, two dissociated expressions. Similarly, Main and colleagues (2003) have proposed that U/d speech (see page 386) results from the individual being absorbed by trauma-related memories to such an extent that it precludes the usual volitional monitoring of one's discourse.

Whether dissociation acts defensively or is a mere by-product of fear/trauma overload, Liotti's (1992) hypothesis has now been supported in two long-term longitudinal studies linking infant D status to a higher occurrence of dissociative states and behaviours throughout childhood and adolescence (Carlson, 1998; Lyons-Ruth, 2003; see also Ogawa, Sroufe, Weinfield, Carlson, & Egeland, 1997). The empirical link between disorganized attachment and dissociation is not limited to infant D status in relation to serious forms of pathology-related dissociation (i.e., detachment and compartmentalization). Other examples of disorganized attachment and its correlates have been found related also specifically to absorption. Even though absorption is multifactorially determined and includes a (moderate) role of genetic heritability (Finkel & McGue, 1997), environmental determinants such as familial loss within a period of ± 2 years of the individual's birth have been established for individuals who grow up to be absorption-prone (as well as for

individuals assigned U/d AAI status; Gribneau, 2006; Hesse & van IJzendoorn, 1998). Also, in reviews of pathways to high suggestibility (i.e., an indication of high absorption), experiences of trauma have been highlighted as an important background factor (Bruck & Melnyk, 2004; Eisen & Carlson, 1998). Finally, Hesse and van IJzendoorn (1999) found direct evidence that adults' U/d attachment status was indeed related to higher contemporaneous absorption scores (see Gribneau, 2006, for a successful replication). In sum, there is substantial theoretical and empirical evidence for a link between disorganized attachment and absorption (as well as other aspects of dissociation).

The present study: testing the mediational model

We are aware of no research that illuminates how both disorganized attachment and absorption express themselves in everyday life domains, such as in people's general beliefs and activities. As part of previous research and theorizing about attachment and aspects of religion, we have suggested that New Age spirituality may be one such domain (Farias & Granqvist, 2007; Granqvist et al., 2007; Granqvist & Hagekull, 2001; see also Granqvist & Kirkpatrick, 2008). More specifically, we suggest that disorganized attachment leads to a later propensity for absorption (as well as other aspects of dissociation), and that this propensity in turn makes some individuals receptive to many of the experiences, beliefs and activities that are associated with the New Age movement.

To the best of our knowledge, U/d attachment has, as yet, only been studied in relation to absorption and New Age spirituality in cross-sectional studies. Using a prospective longitudinal follow-up of Granqvist and colleagues' (2007) study, we asked (1) if U/d attachment at the first measurement occasion would predict absorption and New Age spirituality over a 3-year time-span, and (2) if absorption would act as a mediator for the presumed link between U/d attachment and New Age spirituality. Given the theoretical and empirical considerations above, we predicted that U/d attachment would be positively linked both to absorption and New Age spirituality, and that absorption would act as a mediator between U/d attachment and New Age spirituality.

Method

Participants and procedure

At the first measurement occasion (Time 1), the sample consisted of 84 participants interested in religion/spirituality in Uppsala, Sweden. Sweden is a highly secular country with barely 10% identified as active Christians (Stark, Hamberg, & Miller, 2005). A predominantly religious-spiritual sample was selected, rather than a general population sample, to obtain adequate variation on religiousness-spirituality. Participants were visited at and recruited from religion/spirituality-relevant group gatherings. As the study on which this paper is based was designed to investigate attachment and religion/spirituality in general (i.e., not exclusively New Age spirituality), participants were drawn from: theology classes; a Pentecostal Movement student gathering; a Pentecostal Movement prayer meeting for former drug and alcohol addicts; a Bible study group, held by the Swedish Lutheran Church; and a student seminar on the relation between therapy and pastoral care. Finally, to get participants who were not involved in organized religion but held an interest in

spirituality, participants were recruited via a news advertisement asking for participants to participate in a study about spirituality and human relationships; the same information was given to the other groups (see Granqvist et al., 2007, for more details about the sample). No further information about the purpose of the study was provided. At recruitment, confidentiality of participation was explained. Two weeks to 3 months later, participants were contacted by phone, and interview appointments were scheduled. Attachment interviews were individually administered at a university department by Pehr Granqvist, and participants received two cinema gift certificates each worth 70 SEK (\$10) (US\$) for participating. Eligible for inclusion were those aged 20–50 years who were fluent Swedish speakers. At Time 1, the mean age of the 62 individuals (74% of the original sample) who partook in the longitudinal follow-up (i.e., the present sample) was 29.33 years ($SD = 10.05$), range = 20–50; 35% of participants were male.

Three years later (at Time 2), the participants were contacted once again by phone and asked whether they were interested in participating in a follow-up study. Their contact information was saved from the first occasion. Information from The National tax board of Sweden (Skatteverket) was used when the saved contact information was no longer accurate. According to t tests and chi square tests, there were no differences on sex, age, U/d attachment, or New Age spirituality at Time 1 between participants who dropped out from the Time 2 assessments and those who remained in the study (all $ps > .10$).

Following the phone call, where confidentiality of participation was once again explained, a questionnaire including the absorption and New Age variables (see page 394) was sent to the remaining participants. They were instructed to fill out the questionnaire at least two days before a scheduled laboratory visit (including tasks not used in the present study). The participants were asked to bring the questionnaire to the visit; hence, no reminders were needed. Two cinema gift certificates each worth 80 SEK (approximately US\$11) was given to the participants.

Instruments and constructs

The attachment variable was obtained via a semi-structured interview (i.e., the AAI) at T1, whereas the information regarding absorption and New Age spirituality included in the analyses of the present paper was obtained via questionnaires at T2. All participants responded to all three instruments.

Unresolved/disorganized (U/d) attachment

The Adult Attachment Interview (AAI, Main et al., 2003; translated into Swedish by Broberg, Ivarsson, & Hinde, 1996) was used to assess U/d attachment. The AAI is a semi-structured interview containing 20 questions with specific guidelines for follow-up probes. The participants are asked to describe and evaluate their childhood through attachment-specific memories. The interview normally varies in length between 45 and 90 minutes. The interview is coded from a verbatim transcript. The most important questions ask participants to select adjectives to describe their childhood relationships with parents, which they are subsequently asked to support by recalling specific episodes; to describe what they did as a child when emotionally upset, ill, and in pain, as well as what their parents did; to recall feelings associated with physical separation from parents; to elaborate on experiences of rejection and

fear; and to speculate on the effects of childhood experiences on current personality. Another set of important questions concerns loss through death and experiences of abuse.

The AAIs were coded according to Main et al.'s (2003) scoring and classification system. The transcripts were coded on three types of scales: (a) probable experiences, (b) organized states of mind, and (c) U/d attachment. Individuals were then classified into one of five categories based on his or her state of mind and U/d scores. In the present study only the continuous U/d attachment scores were used. The continuous U/d scores, rather than discrete U/d classifications, were used in order to retain all scale variance, some of which would have been lost if classification comparisons had been made (for information regarding the other scales and categorical distribution, see Granqvist et al., 2007).

A high U/d score is assigned when at least one of the following discourse characteristics appear during the discussion of loss of important persons through death and/or sexual or physical abuse experiences: (1) lapses in the monitoring of reasoning (e.g., as implied in statements indicating that a dead person remains alive in the physical sense or via considerable spatial-temporal confusion surrounding the loss event); (2) lapses in the monitoring of discourse (e.g., visual-sensory images related to the trauma intrude discourse); and (3) extreme-lingering behavioural reactions to the traumatic event (e.g. the interviewee is suicidal or suffering from a seriously debilitating depression, and this is believed by the person to be due to the loss of a close loved one). Unresolved/disorganized attachment is scored on a 9-point scale for each incident of loss or abuse, and the highest score given is assigned to the transcript as a whole (in this sample, $M = 3.40$, $SD = 1.43$).

Interviews were coded by Pehr Granqvist, who was blind to all other data, except gender and age. Pehr Granqvist was trained at the University of Western Ontario by David Pederson in 1998 and achieved full reliability across 30 consecutive transcripts in 2000 with Mary Main and Erik Hesse at the University of California, Berkeley. Interviews were also coded by Tord Ivarsson, a certified AAI trainer.

The psychometric properties of the AAI in general and U/d considerations in particular are well-established (Hesse, 1999). Coding also has been shown to be relatively immune to potential halo biases resulting from having the same person as interviewer and coder (Sagi-Schwartz, van IJzendoorn, Scharf, Koren-Karie, Joels, & Mayseless, 1994). Nevertheless, to guard against this potential problem, we also had the interviews coded by a second coder. The interobserver reliability intraclass correlation on the U/d scale across 46 random cases was .53. As adequate validity theoretically requires adequate reliability, and the reliability obtained on the U/d scale was somewhat low, the coders discussed and resolved their disagreements in an active effort to obtain higher validity. Remaining disagreements were resolved by using a third coder (Anders G. Broberg), who is also a certified AAI trainer.

A likely reason for the relatively low reliability estimate was that this was the first AAI-based study conducted in a predominantly religious/spiritual sample. Although the AAI manual provides one note with general guidelines for how to deal with U/d scoring vis-à-vis metaphysical discourse surrounding death, given the high frequency and idiosyncrasies of metaphysical beliefs and expressions in this sample, U/d scoring was often a matter of (uncertain) extrapolation of these general guidelines. To prevent confounding the religious/spiritual outcomes (which are constituted in part by spiritual/religious beliefs about death) with the U/d attachment predictor, our agreement codings reflected a conservative decision to assign high U/d scores

only to expressions which clearly *show* (e.g., “my [dead] mother tells me...”) rather than ambiguously *state* (e.g., “I believe that my [dead] mother may still be there for me”) disorganized responses (see also Main et al., 2003).

New Age spirituality

The 22-item 6-point response instrument, the New Age Orientation Scale (NAOS; Granqvist & Hagekull, 2001), has been constructed to assess individual differences in the adoption of New Age-related beliefs, interests, and activities. Sample items include, “Compared to most religious and non-religious people, I am probably somewhat of a spiritual seeker with an unusually open mind,” “Spirituality to me is above all about realizing my true nature or becoming one with cosmos,” and “Tarot cards, horoscopes, or fortune telling can be good starting-points from which to develop oneself and one’s possibilities.” In spite of the theoretical heterogeneity of New Age phenomena, across three Swedish samples of adults in the New Age movement, adolescents from the general population, and undergraduate students, NAOS has been found empirically to be unidimensional in factor analyses (Granqvist et al., 2005; Granqvist & Hagekull, 2001). Also, across these samples and a British undergraduate sample (Farias et al., 2005), the scale has shown high internal consistency. Therefore, the mean score ($M = 2.32$; $SD = 1.21$) on the entire scale was used in the present study, where internal consistency was also found to be high ($\alpha = .97$). Moreover, in the present prospective study, NAOS scores showed high stability over the 3-year time-span ($r = .93$). Finally, the construct validity of NAOS has been supported in findings showing higher scale scores in participants drawn from New Age settings (e.g., alternative bookstores and medical centres) compared to religious adults and adolescents from the general population (Granqvist & Hagekull, 2001).

Absorption

Tellegen and Atkinson’s (1994) absorption scale was used to assess individual differences in the disposition for having episodes of “total” attention that fully engage the person’s representational resources, indicating a tendency to become absorbed in his/her thoughts, perceptions and associations during routine or other activities. This scale includes 34 items, scored on a 6-point response scale ($M = 3.47$; $SD = 0.82$). Sample items include, “Sometimes I feel as if my mind could envelop the whole world,” “At times I feel the presence of someone who is not physically there,” and “If I wish I can imagine (or daydream) some things so vividly that they hold my attention as a good movie or story does.” The psychometric properties of this instrument are well established. For example, as theoretically expected, scale scores have been found to predict suggestibility to hypnotic induction (e.g., Roche & McConkey, 1990; Tellegen & Atkinson, 1974). Also, internal consistency was high in the present study ($\alpha = .94$).

Results

Bivariate relations

Results from Pearson product moment correlations between each study variable supported the first set of study predictions and, thus, a test of the mediational model was warranted (Baron & Kenny, 1986). First, U/d attachment (the predictor) was positively but modestly associated with New Age spirituality (the outcome),

$r(60) = .23, p < .05$, one-tailed². Second, absorption (the presumed mediator) was positively and strongly related to New Age spirituality, $r(60) = .55, p < .001$, one-tailed. Finally, U/d attachment was also positively but modestly linked with absorption, $r(60) = .25, p < .05$, one-tailed.

These results replicate previous cross-sectional findings (e.g., Granqvist & Larsson, 2006; Granqvist et al., 2007; Hesse & van IJzendoorn, 1999). As the links between U/d attachment on the one hand and New Age spirituality and absorption on the other were prospective (over a full 3-year time-span) these findings also extend previous research. It is notable that although these latter findings were modest in strength, the prospective correlations were close to identical to the cross-sectional correlations previously reported (Granqvist et al., 2007; Hesse & van IJzendoorn, 1999). Also, as both absorption and New Age spirituality are complex and multifactorially determined, any single variable should not be expected to explain the lion's share of variance in these phenomena.

Tests of mediation

A full mediational model, such as the one expected here, is descriptively supported when the mediating variable explains virtually all shared variance between a predictor and an outcome (Baron & Kenny, 1986). However, in some cases, mediation is only partial (i.e., the mediating variable only explains part of the shared variance between predictor and outcome). Thus, in the absence of support for full mediation, partial mediation may still be supported. We relied on the rather conservative Sobel Z test to formally test mediation, where a significant Z value demonstrates at least partial mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

First, results from a multiple regression analysis descriptively supported the mediational model in that the bivariate relation between U/d attachment and New Age spirituality dropped to non-significance, $\beta = .10$, n.s., following the inclusion of absorption. The mediating absorption variable was in turn strongly related to New Age spirituality, $\beta = .52, p < .001$. Results for the full regression model were: $F(2, 59) = 13.36, p < .001, Adj R^2 = .29$. Second, the formal test of mediation yielded a significant result, Sobel $Z = 1.85, p < .05$, one-tailed. These findings are illustrated in Figure 1.

Control analyses

Measurement overlap sometimes passes as a demonstration of empirical relations. This risk is especially pronounced for relations obtained in studies utilizing cross-sectional designs and a single mode of measurement (e.g., self-report questionnaires). In the present study, absorption and New Age spirituality, which

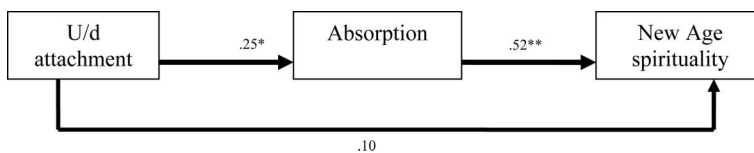


Figure 1. Mediational model linking unresolved/disorganized (U/d) attachment, absorption, and New Age spirituality. Sobel $Z = 1.85^*$. $*p < .05$; $**p < .01$; one-tailed.

were studied at the second assessment by means of self-reports, could be a case in point. Although absorption and New Age spirituality are clearly conceptually distinct, a few of the absorption items have some resemblance with items on NAOS. Therefore, we re-calculated the above correlations and regressions with those items excluded from the absorption scale³. Results remained virtually identical. First, absorption was still robustly and positively correlated with New Age spirituality, $r(59) = .50$, $p < .001$, one-tailed. Second, the mediational model was descriptively supported by the Baron and Kenny (1986) criteria in that the bivariate relation between U/d attachment and New Age spirituality dropped to non-significance, $\beta = .11$, n.s., following the inclusion of absorption, which was in turn strongly related to New Age spirituality, $\beta = .48$, $p < .001$. Results for the full regression model were: $F(2, 58) = 10.46$, $p < .001$, $Adj R^2 = .24$. Finally, the formal test of mediation yielded a significant result, Sobel $Z = 1.94$, $p < .05$, one-tailed.

Discussion

The results of this study supported the idea that absorption serves as an explanatory link for the association between U/d attachment and New Age spirituality. This conclusion held also after excluding items from the mediating absorption variable that had some resemblance to items on the New Age outcome variable. More generally, the study findings illustrate how a failed resolution of trauma and the related propensity to experience an altered consciousness may be expressed in other life domains besides psychopathology, specifically in the domain of people's spiritual beliefs and activities.

We did not expect disorganized attachment to be a strong predictor of New Age spirituality. In showing that only approximately 5% of the variance in New Age spirituality was explained by the disorganization measure utilized, our results are in line with a multiple pathway understanding of New Age spirituality. Moreover, many important pathways to New Age spirituality are likely to be orthogonal to attachment, as is suggested by the fact that the prototypical New Ager is a middle-class, middle-aged, fairly well-educated female (e.g., Kemp, 2007). This alone should effectively block any reductionist attempt to explain New Age spirituality as a whole on the sole basis of attachment theory. However, there are likely other attachment pathways besides the failed resolution of trauma. Our previous cross-sectional findings (Granqvist et al., 2007) suggest that preoccupied attachment as well as global breakdowns in attachment patterning (i.e., the "Cannot Classify" AAI category) are also positively linked with New Age spirituality. We did not include either of these two categories in the present longitudinal analyses because this paper focused on absorption/dissociation as a mediator, and previous findings have not shown participants assigned to the preoccupied or Cannot Classify categories to be absorption-prone, possibly due to the absence of traumatic loss and abuse in their lives (Hesse & van IJzendoorn, 1999). Nevertheless, presuming that these are additional attachment pathways to New Age spirituality, future researchers should pinpoint their more precise mediators. Regarding preoccupied attachment, we have previously suggested (Granqvist et al., 2007) that just as experiences from inconsistent and role-reversing parenting lead to the maximization of (mostly negative) attention to attachment, which is thought to underlie preoccupied attachment (e.g., Main, 1991), the New Age movement, with its plethora of material on dysfunctional families and toxic parenting, may attract preoccupied individuals by sanctioning and even encouraging their maximizing attachment strategy.

We realize that the theoretical model proposed and the supportive empirical findings obtained in this study, which demonstrate that New Age spirituality is linked with the most serious forms of current insecure attachment as well as with dissociative inclinations, are likely to seem discouraging to many individuals involved in the New Age movement. While by no means disclaiming the seriousness of these links nor their possible clinical implications, New Age spirituality may also have some psychologically adaptive correlates that should be noted and subjected to further research. To begin with, one of the more consistent findings in the attachment and religion literature is that individuals who have encountered reliably sensitive caregiving are more inclined to adopt the religious standards held by their attachment figures than are individuals less fortunate in their caregiving experiences (see Granqvist & Kirkpatrick, 2008, for a review). It is not inconceivable that for some individuals and in some contexts, such as in well-established New Age communities (e.g., Sedona, Glastonbury), New Age spirituality may similarly be socially based in the individual's relationship with a reliably sensitive caregiver who endorsed the beliefs and engaged in the activities associated with the New Age movement during the individual's upbringing. However, there are two important differences between traditional theistic religion and New Age spirituality which complicate this analogy, and which should be borne in mind by future investigators. First, unlike New Age spirituality, theistic religiousness tends to be more or less orthogonal to AAI-assessed attachment security (Granqvist et al., 2007); if anything, it is linked to higher security (Cassibba, Granqvist, Costantini, & Gatto, 2008). Second, presumably via the operation of generalizing working models, the spirituality/religiousness of secure individuals tends to have the perception of a transcendent yet personal, loving and caring attachment-like figure (i.e., God) at its centre (Granqvist & Kirkpatrick, 2008; Kirkpatrick, 2005), whereas New Age-related beliefs often negate such a perception in favour of a more immanent yet impersonal perception. By extrapolation from God to others, this might indicate that the working models of many New Agers signal distrust in others' availability, which is an indication of insecure attachment (e.g., Bowlby, 1973).

Whatever the case may be, there may be other psychologically advantageous correlates of New Age spirituality. As noted in the introduction, a high absorption disposition is not just an indicator of dissociative inclinations but it may also facilitate the inhibition of task-irrelevant information, at least under high processing demands such as during stress and when divided attention is called for. Perhaps for this reason, absorption may promote unusual forms of creativity that require full concentration on a given topic and successful inhibition of external stimuli. By virtue of the strong association established between absorption and New Age spirituality, the latter phenomenon may also be linked with higher creativity. We hasten to add that, though mostly studied and found related to maladaptive outcomes, even disorganized attachment in general and the failure to mentally resolve trauma in particular may similarly promote unusual forms of creativity in some individuals. Future attachment researchers who desire to make a non-conventional contribution to the literature on disorganized attachment are encouraged to explore this possibility.

The final potentially psychologically advantageous correlates of New Age spirituality to be noted concern the possible therapeutic effects associated with involvement in the New Age movement. First, even though there is a virtual absence of evidence-based New Age therapy practices (i.e., with documented clinical efficacy and efficiency; Singer & Nievod, 2003), many individuals in the New Age movement are likely

to be easily suggestible, implying that they may well profit from the placebo effects associated with all treatments, whether evidence-based or not (cf. Granqvist et al., 2005)⁴. Second, given that disorganized and preoccupied attachment tend to stem from adverse attachment histories and to be associated with maladaptive outcomes (including psychopathology; van IJzendoorn & Bakermans-Kranenburg, 1996), it is possible that active involvement in the New Age movement may at least have buffered some negative effects that might have resulted in the absence of such involvement (cf. Buxant, Saroglou, Casalfiore, & Christians, 2007). In the current study, for example, and in spite of its serious insecure attachment correlates, New Age spirituality was not significantly associated with scores on any of the adaptation outcomes included (i.e., trait anxiety, current depressive symptomatology, self-esteem), except for a modest positive correlation ($r = .29, p < .05$; two-tailed) with loneliness, as tapped by a revised version of the UCLA loneliness scale (Oshagan & Allen, 1992)⁵. Again, we encourage future researchers to further explore these possibilities, preferably in long-term longitudinal designs with multiple assessment points.

Methodological and conceptual considerations

There are several methodological and conceptual characteristics that should be borne in mind. To begin with, in the study described here we could not take full advantage of the longitudinal design employed so as to enable us to study change on the relevant parameters over time. There were several reasons for this. First, we did not include all study variables at both assessment points. The mediating absorption variable was not utilized at the first assessment, because it was only after the cross-sectional link between U/d attachment and New Age spirituality had been established (Granqvist et al., 2007), and we had gained familiarity with the link between U/d attachment and absorption (Hesse & van IJzendoorn, 1999), that we were struck by the possibility that absorption might act as a mediating variable. Resources were also too limited to allow for U/d assessments (which would require re-administering the AAI) at the second time-point. Second, the stability of New Age spirituality ($r = .93$) was remarkably and surprisingly strong. Although this is psychometrically promising for the New Age Orientation Scale, this degree of stability resulted in the problem that virtually all variance in New Age spirituality at T2 was explained by variance at T1 ($r^2 = .87$), leaving insufficient systematic variance for the other variables to explain. Finally and relatedly, we used a rather brief inter-assessment interval, implying that comparatively more true change in the parameters investigated is likely to have occurred after the second assessment point had been concluded. Nevertheless, this study demonstrated that failed mental resolution of trauma predicted New Age spirituality 3 years later, and that this link was explained by concurrent propensities for absorption.

Just like New Age philosophies, traditional religions contain paranormal beliefs and may include hypnotic-like procedures (e.g., in conjunction with glossolalia and healing during Pentecostal services), which might suggest that dissociative inclinations and disorganized attachment are present to a comparable extent among the traditionally religious as among New Agers. While we do not dismiss that possibility in relation to some branches of traditional religions (see page 399), the empirical evidence thus far suggests that, at least among mainline Christians, such is not the case (for a related review, see Farias & Granqvist, 2007; see also Cassibba et al., 2008; Granqvist & Larsson, 2006; Granqvist et al., 2007).

In addition, absorption is believed (and has been presented here) as a subtle indicator of dissociation (e.g., Waller, Putnam, & Carlson, 1996), but it differs in many ways from other kinds of dissociation; for example, absorption is not a strong marker of psychopathology (Waller, Putnam, & Carlson, 1996). Consequently, the results presented here cannot be generalized *a priori* to other dimensions of dissociation, whether it be in the form of detachment or compartmentalization. To study the generalizability of the proposed model, we encourage future researchers to test links between disorganized attachment and certain anomalous spiritual experiences (e.g., ideas of possession) and whether such presumed links are explained by other dimensions of dissociation, which may be profitably tapped by the Dissociative Experiences Scale (Bernstein & Putnam, 1986).

Given that variance in absorption is moderately genetically heritable (Finkel & McGue, 1997), the findings described in this paper are open to an alternative interpretation; that absorption is not the mediator but a third variable. In that case, absorption would not be intermediate between U/d attachment and New Age spirituality, but would be the underlying cause of variance in both U/d attachment and New Age spirituality. Although this alternative interpretation cannot be ruled out on the basis of the available data, to the best of our knowledge, no study has as of yet demonstrated that variance in U/d attachment or New Age spirituality is genetically heritable. Also, more than half of the variance in absorption is accounted for by environmental factors (and measurement error; Finkel & McGue, 1997). Therefore, the alternative interpretation requires more unsubstantiated inferences than the one proposed.

The empirical data used to test the model proposed here was part of a more general project about attachment and various aspects of religion. Therefore, participants were drawn mostly from traditional religious groups. As New Age-related beliefs and activities are more or less orthogonal to traditional religiousness, this is, in principle, not a serious problem. However, population inferences are made uncertain by the use of samples of convenience. Therefore, future studies should recruit participants from more precisely demarcated New Age contexts and compare them with matched participants not involved in the New Age movement (see Cassibba et al., 2008, for a corresponding study of religious participants).

In this paper, we only presented empirical analyses on disorganized attachment as identified via the AAI. It is an open question whether disorganized attachment as identified via other measures is also related to New Age spirituality. Finally, future studies aiming to test the proposed model should address the following questions: does disorganized attachment predict absorption/dissociation-related experiences in more traditional religious contexts (e.g., in relation to mystical experiences) and does it predict examples of counter-cultural expressions that are demonstrably not tied to absorption/dissociation (fundamentalist beliefs and political extremism are two counter-cultural candidates, at least in Western Europe)? In the former case, we make a risky prediction pertaining to the generalizability of the mediational model (i.e., "yes"); in the latter, we make a risky prediction pertaining to its specificity/discriminant validity (i.e., "no").

Conclusions

Notwithstanding the limitations raised above or the many research endeavours needed to further refine and consolidate the model proposed, in this paper we have

provided the first strand of theoretical and empirical evidence for the idea that disorganized attachment is a precursor to New Age spiritual beliefs and activities, and that this link is explained by a propensity to enter altered states of consciousness. These findings as well as the theoretical model proposed cut across many sub-disciplines in psychology and might therefore make a wide-ranging contribution to various areas, including the developmental literature on disorganized attachment, the personality and clinical literatures on absorption and dissociation, respectively, and the psychology of religion literature on alternative forms of spirituality.

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Notes

1. It is beyond the scope of this paper to disentangle the validity of New Age metaphysics. Labelling a spiritual experience as dissociative can, in other words, not be taken as a dismissal, let alone an affirmation, of any metaphysical interpretation of that experience. To do so would be to fall prey to a genetic fallacy (Cohen, 1934).
2. One-tailed tests were used to test the bivariate correlations as well as mediation, for three reasons. First, on theoretical grounds, we had made *a priori* predictions about the direction of associations. Second, previous research had supported each of the bivariate predictions. Third, there was no reason to expect strong relations between U/d attachment and the other phenomena. Using a limited sample size in conjunction with two-tailed tests would therefore risk producing statistical Type II errors (i.e., failing to detect modest but true relations).
3. The following four items were excluded from the absorption scale (resemblances with New Age spirituality are noted in parentheses): "I can often sense the presence of another person before I actually see or hear him/her" and "I often know what someone is going to say before he or she says it" (cf. precognition); "Things that seem meaningless to others often make sense to me" (cf. the belief in an underlying meaning behind every occurrence); and "At times I feel the presence of someone who is not physically there" (cf. spiritualism).
4. This is not to encourage readers to seek out non-efficacious treatments. Efficacious treatments are of course likely to produce even stronger effects for most people (i.e., inclusive of but not limited to the placebo effect). However, if the efficacious treatment is delivered to New Age clients by a practitioner whose world-view clashes with those of the clients', whereas the non-efficacious treatment is delivered by a New Age entrepreneur, it is currently an open question which of the two that is likely to be most helpful.
5. Incidentally, Weiss (1973) proposed that a core constituent of a certain form of loneliness ("emotional isolation") is the perceived absence of a satisfying emotional bond with an attachment figure in the individual's life. Hence, the positive link between New Age spirituality and loneliness may conform to the speculation that many people who endorse New Age spirituality tend to harbour negative models of others (e.g., as not satisfying).

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