

RESEARCH

Religious Conversion and Perceived Childhood Attachment: A Meta-Analysis

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In this article we review previous work on religious conversions, relate this work to attachment system dynamics, and present a meta-analysis of results from 11 cross-national questionnaire studies ($N = 1465$) that have investigated links between religious conversions and perceived childhood attachment history with parents. Two general hypotheses derived from attachment theory were tested. Based on the compensation hypothesis, it was predicted that sudden religious conversions would be associated on average with insecure, rather than secure, attachment histories. Based on the 2-level correspondence hypothesis, it was predicted that nonsudden conversions and gradual religious changes would be associated with a secure attachment history. Both predictions were supported in the meta-analyses, with small to medium effect sizes. It was concluded that attachment theory is a valuable framework for integrating previous findings and guiding future research on religious conversions, but that several methodological improvements should be made in future research.

This article examines previous work on sudden religious conversions by relating it to attachment system dynamics, and by meta-analyzing results from 11 previous studies that included assessments of sudden religious conversions and perceived childhood attachment to parents. An additional purpose was to test hypothesized

functions and individual origins of the religiousness of sudden converts and nonsudden converts.

BRIEF OUTLINE OF ATTACHMENT THEORY

To explain the mammalian offspring-caregiver affectional bond, John Bowlby (1969, 1973, 1980) proposed that the offspring possesses an *attachment behavioral system*, which is designed by natural selection and manifested in infants' signal behaviors (e.g., crying, smiling, and following). These attachment behaviors are activated particularly during situations that are externally or internally threatening to the offspring. In conjunction with the caregiver's (or attachment figure's) complementary *caregiving system*, the predictable outcome of these signaling behaviors is physical proximity between the offspring and the caregiver, which in turn leads to an increased likelihood of offspring protection and survival to reproductive age. Particularly salient aspects of attachment system functioning are evident in infants turning towards their attachment figures during situations of distress (i.e., *safe haven* behaviors) and occasionally monitoring their attachment figures' responses during exploration of the environment (i.e., *secure base* behaviors), thereby achieving increased confidence for continued exploration. Bowlby also argued that the caregiver's responses to the child in attachment activating situations determine the nature of the child's *internal working models* (i.e., cognitive representations of self and others). Presuming contextual stability, such working models are held to be responsible for the continuity observed in attachment related functioning.

Particularly with respect to individual differences (Ainsworth, Blehar, Waters, & Wall, 1978) in infant-caregiver attachment organization (i.e., insecure/avoidant, secure, and insecure/ambivalent), attachment theory has been useful for understanding the socioemotional development of the human child (see Cassidy & Shaver, 1999). During the last 15 years, attachment research has also been directed at understanding attachment processes in adulthood. In this area of study, attention has been given to the concept of "felt security" (e.g., Kobak & Sceery, 1988; Sroufe & Waters, 1977), rather than solely physical proximity, as a viable predictable outcome of the attachment behavioral system in older individuals.

ATTACHMENT THEORY AND RELIGION

During the last decade, several studies have been published on the links between perceived attachment history with parents and individual differences in adults' and adolescents' religiosity (Granqvist, 1998, 2002; Granqvist & Hagekull, 1999, 2001, 2003; Kirkpatrick & Shaver, 1990). These studies were originally spurred by Kirkpatrick's (1999; Kirkpatrick & Shaver, 1990) attempt to achieve a theoretical integration of attachment theory with the psychology of religion—an approach designed in part to provide a scientifically updated account of the presumed links be-

tween child-parent relations and the individual's subsequent religiousness, which previously had long been of interest mainly to scholars with a psychoanalytic approach (see Granqvist, in press-b, and Kirkpatrick, 1995).

Two general hypotheses concerning the relationship between attachment experience and religiosity have been derived from attachment theory (Kirkpatrick, 1992). The *compensation hypothesis* assumes that individuals who have experienced insecure, as opposed to secure, childhood attachment relationships with their primary attachment figures are in greater need to establish compensatory attachment relationships to regulate distress and obtain felt security. In the context of religion, God was suggested to function as such a surrogate attachment figure (cf. Ainsworth, 1985). The *correspondence hypothesis*, as revised by Granqvist (2002; Granqvist & Hagekull, 1999), suggests that individuals who have experienced secure, as opposed to insecure, childhood attachments (a) have established the foundations upon which a corresponding relationship with God could be built (*IWM correspondence*; see Granqvist 2002; Kirkpatrick, 1992), and (b) are successfully socialized to adopt the attachment figure's religious or nonreligious standards (*socialized correspondence*; Granqvist & Hagekull, 1999). The former part of this hypothesis was based on Bowlby's (e.g., 1969) discussion of working models of attachment as being responsible for continuity in attachment functioning. The socialized- correspondence part of the hypothesis was based on findings showing that securely, as compared to insecurely, attached offspring are more well-socialized with respect to parental standards (e.g., Ainsworth, Bell, & Stayton, 1974; Londerville & Main, 1981; Richters & Waters, 1991).

Empirical studies examining the relationship between (retrospective reports of) childhood attachment and subsequent adult religiosity have, with respect to most religion variables, generally yielded a particular pattern of interaction with reported religiosity of respondents' parents: People reporting insecure histories have been found to be more religious if their parents displayed low levels of religiosity (Granqvist, 1998, in press-a; Kirkpatrick & Shaver, 1990), whereas participants reporting secure histories have been found to be more religious at high levels of parental religiosity (Granqvist, 1998; Kirkpatrick & Shaver, 1990). Beyond these interaction effects, statistical main effects of attachment have generally been weak or nonexistent—but with one important exception: the experience of sudden religious conversions.

ATTACHMENT AND SUDDEN RELIGIOUS CONVERSIONS: THEORETICAL CONSIDERATIONS

Before turning to the empirical links observed between sudden religious conversions and perceived attachment history, a discussion is in order on the nature of the conversion process itself. This process is examined in relation to normative attach-

ment system dynamics and the differential ways in which this system is active for individuals differing in attachment organization.

The Conversion Process in Relation to Attachment System Functioning

Ever since the pioneering days of the psychology of religion, scholars have highlighted the intense emotional experiences that precede, characterize, and accompany some religious conversion experiences, defined in this context as a profound increase in importance of religious beliefs in conjunction with a personal experience of having directly encountered the divine. A host of investigators (e.g., Deutsch, 1975; Galanter, 1979; Granqvist, 1998; James, 1902; Kirkpatrick & Shaver, 1990; Lofland, 1977; Meadow & Kahoe, 1984; Pargament, 1997; Pratt, 1946; Starbuck, 1899; Ullman, 1982; Zinnbauer & Pargament, 1998), working within diverse theoretical frameworks, have documented that many (approximately 80%, according to Ullman, 1982) converts experience a preconversion phase of emotional distress. Such a precipitating period of distress could be taken to highlight the safe-haven aspect of God in the conversion process, and the need for assistance with the attenuation of feelings of distress with which it is associated. Furthermore, the antecedent phase of crisis has been shown to be commonly embedded in a context of attachment related life themes such as divorce, bereavement, and relationship problems (Granqvist, 1998; Kirkpatrick & Shaver, 1990; Loveland, 1968; Parkes, 1972).

Equally emotionally intense as the preceding phase is generally the religious experience itself, which has been suggested to represent the solution to the preceding unease, sometimes occurring during “complete self-surrender” (James, 1902). Rather than representing a change of ideologies—that is, the provision of cognitive/existential meaning for those in quest of it, which has been proposed by some researchers as the source and engine in the process (cf. Batson, Schoenrade, & Ventis, 1993; Heirich, 1977)—the conversion experience seems instead to stem primarily from emotionally and relationally based needs, and bears striking phenomenological resemblance to the experience of falling in love (e.g., James, 1902; Thouless, 1923; Ullman, 1982). Moreover, religious conversions are disproportionately common during adolescence (e.g., Argyle & Beit-Hallahmi, 1975; Hood, Spilka, Hunsberger, & Gorsuch, 1996), which represents a developmental period where transition between attachment figures often takes place (e.g., Hazan & Shaver 1994; Fraley & Davis, 1997; Friedlmeier & Granqvist, 2001; Weiss, 1982).

A renewed confidence in the world, including increased self-esteem, an intense experience of elation, and a significant decrease in feelings of distress, generally accompany the conversion experience (e.g., Batson et al., 1993; Bergin, 1983; Nicholi,

1974; Paloutzian, 1981; Wilson, 1972). This could be interpreted as highlighting the secure-base function of God and the outcome of felt security in the process. This accompanying phase is frequently portrayed euphorically in religious scriptures as well as by converts themselves. To take one example of the latter (James 1902): "I experienced my heart opening and felt previously inexperienced waves of ever more consuming love" (p. 322). To underline the impact on subjective well-being of such experiences, Marks (1978) suggested that conversions resemble atomic power, whereas the analogue to successful psychotherapy is dynamite.

The Conversion Process and Individual Differences in Attachment

The brief overview above was intended to highlight how sudden religious conversions can be described in terms of normative attachment system dynamics. However, an equally important task is to place this process in theoretical relation to individual differences in attachment. The compensation hypothesis predicts that individuals with insecure attachment characteristics will be more likely to experience sudden religious conversions than their secure counterparts. In this context, the new (or renewed) relationship with God would function as a surrogate attachment relationship, assisting the individual in regulating states of distress, and thereby promoting felt security. Insofar as insecurity is overrepresented in the population of sudden converts, sudden converts should also have a religiosity that is based more on regulation of distress than that of nonsudden converts.

In principle, it could be argued by invoking IWM correspondence, that just as the secure child is able to trust and depend on his/her sensitive and responsive attachment figure to be available in times of need, the same individual will, in adolescence and adulthood, be able to trust and depend on God in such situations, and hence perhaps to be more likely to experience sudden religious conversions. However, there are two qualifiers that jointly deem this scenario unlikely. First, unless confronted with religious socialization, these individuals should not seek out God (socialized correspondence). Second, the religiosity of individuals with secure characteristics is typically not characterized by such regulation of distress that is present in the sudden religious conversion process. Therefore, the correspondence hypothesis predicts that individuals with secure attachment histories will be overrepresented in the population of nonsudden converts. If they have experienced religious changes, these are likely to have been gradual (i.e., reflecting gradual adoption of significant others' religious standards) rather than sudden (i.e., reflecting distress-regulation strategies). Insofar as security is overrepresented among nonsudden converts, another implication of the correspondence hypothesis is that the religiosity of nonsudden converts should be based more on socialization of parental religious standards than that of sudden converts.

ATTACHMENT AND SUDDEN RELIGIOUS CONVERSIONS: EMPIRICAL RESEARCH

As mentioned previously, statistical main effects of perceived attachment history on religiosity have been found consistently only in the case of sudden religious conversions, in two studies (Granqvist & Hagekull, 1999; Kirkpatrick & Shaver, 1990). The operational definition of sudden religious conversions in both of these studies was (a) a period during which the individual's religious beliefs became much more important and (b) this change was characterized by an intense and sudden personal experience. In both studies, people perceiving an insecure history were statistically overrepresented in the population of sudden converts. However, the sudden-convert cell sizes in these studies were small, comprising only 8 and 19 individuals, respectively.¹ These small sample sizes precluded the possibility of running more focused statistical tests, such as to examine sex differences and differences between sudden converts and people who had experienced a more gradual religious change. Also, these studies yielded contradictory conclusions concerning the role of attachment history with father, as compared to that of mother. Finally, the two studies with reported associations between attachment and conversion did not investigate why these associations exist; that is, they failed to specify the presumed differential functions and origins of the religiosity of sudden converts and nonsudden converts. Hence, the conclusions drawn in the studies still need to be corroborated. Besides these two studies, nine studies with unpublished associations between attachment history and religious conversions have now been performed (Birgegard & Granqvist, in press [two studies]; Bjornsen, 2002; Granqvist, 1998, 2002, in press-a; Granqvist & Hagekull, 2001, 2002; Kirkpatrick & Deaton, 1992).

This meta-analysis is designed to answer the unresolved issues noted by combining the results from all 11 of these studies, which together have included more than 1450 participants. The primary hypothesis to be tested was that sudden religious converts would have experienced more insecure attachment histories than nonsudden converts, including participants who had experienced a gradual religious change. A second hypothesis to be tested was that the religiosity of sudden religious converts, as compared to nonsudden converts, is based more on distress-regulation strategies (compensation) than that of nonsudden converts, and, conversely, the religiosity of nonsudden converts is based more on socialization of parents' religious standards (socialized correspondence) than that of sudden converts. Finally, tests

¹According to the Kirkpatrick and Shaver (1990) article, the sudden-convert group comprised a higher number of participants than 19. However, that number was based on a more liberal definition of conversion—(a) positive religious change, plus (b) sudden and intense personal experience—which was erroneously described as the more conservative definition. Granqvist (1998) reported associations only between attachment history and “major religious change” (i.e., maximal increase in importance of religious change, regardless of suddenness and intensity of the change), as the low number of sudden converts ($n = 7$) precluded chi-square tests to be run in relation to categorically assessed attachment history.

were conducted to examine the possibility of sex differences in these hypothesized relationships. Although attachment theory makes no clear predictions concerning sex differences—and we therefore make no such predictions here—other influential theories do (e.g., psychoanalysis and some variants of object relations theories), and such can only be excluded after they have been fairly tested.

METHOD

Selection of Studies, Procedure, and Participants

The criteria for the selection of studies to be included in the meta-analysis were that (a) patterns of perceived childhood attachment to parents had been classified or rated, and (b) measures of sudden religious conversions, as characterized by a major increase in importance of religious beliefs in conjunction with a sudden and intense personal experience, had been included. Published studies and dissertations were screened on PSYCLIT, and unpublished studies through professional contacts. Eleven questionnaire studies met these criteria. Table 1 summarizes study and sample characteristics.

Measurement, procedure and sample characteristics of those studies published prior to this writing have been described in detail elsewhere (Granqvist, 1998, 2002; Granqvist & Hagekull, 1999, 2001; Kirkpatrick & Shaver, 1990; note that only two of these five studies reported direct associations between attachment history and sudden conversion). The remaining six studies, like those mentioned, were performed either in the U.S. (two studies) or Sweden (four studies).

The Kirkpatrick and Deaton (1992) study used students enrolled in a variety of psychology classes at the University of South Carolina, who completed the attachment and conversion measures as part of a larger study. Another unpublished U.S. study (Bjornsen, 2002) was performed in a rural area, in a small town in the southeastern part of the country. This study was part of a cross-national (U.S., Swedish, and German) collaboration on attachment processes in adolescence. Questionnaires were sent to volunteers in the area.

The first unpublished Swedish study (Granqvist & Hagekull, 2002) used a sample 84 participants drawn from different religion-related groups in the mid-sized city Uppsala, including two theology classes ($n = 46$), (mostly student) members of the Pentecostal Movement ($n = 22$); members of a Bible study group held by the Swedish Lutheran Church and participants at a student seminar on the relation between therapy and pastoral care held at the Department of Psychology ($n = 9$). Finally, nine participants were recruited via a newspaper advertisement asking for participants to a study about “spirituality and human relationships.” Questionnaires were mailed home to the participants, who received a cinema check worth US\$5 for completion.

TABLE 1
Study and Sample Characteristics

Study	Sample Size	Sample	Age		Attachment Measure	% Females	% Sudden Converts
			M	SD			
1. Kirkpatrick & Shaver (1990)	213	Denver Post newspaper readers	40	11.2	H&S (86) – forced choice	85	9.0
2. Kirkpatrick & Deaton (1992)	179	South Carolina college students	23	1.7	H&S (86) – forced choice	69	3.4
3. Granqvist (1998)	203	Swedish university students	26	6.7	H&S (86) – forced choice	62	3.5
4. Granqvist & Hagekull (1999)	156	Swedish university students	25	5.7	H&S (86) – sec. dimensions	60	5.1
5. Granqvist & Hagekull (2001)	50	Swedish new agers	35	13.1	H (90) – forced choice+sec. dimensions	76	8.0
6. Granqvist (2002a)	198	Swedish high school students	16	1.2	H&S (86) – averaged sec. scales	63	6.1
7. Granqvist (in press-a)	197	Diverse Swedish adult sample	38	14.3	H (90) – forced choice+sec. dimensions	78	7.1
8. Birgegard & Granqvist / (in pres)	29	Theist Swedish students	24	5.0	H (90) – forced choice+sec. dimensions	66	13.8
9. Birgegard & Granqvist II (2002)	54	Theist Swedish students	26	7.0	H (90) – forced choice+sec. dimensions	63	5.6
10. Granqvist & Hagekull (2002)	84	Diverse Swedish adult sample	29	9.4	H (90) – forced choice+sec. dimensions	60	9.5
11. Bjornsen (2002)	102	Virginia high school students	16	1.4	H&S (86) – averaged sec scales	63	13.7
Total	1465	—	28	6.9	—	69	7.2

Notes. H&S (86) = Hazan & Shaver (1986); H (90) = Hazan (1990).

Granqvist (in press-a) used a sample of 197 adults from the central parts of Sweden, living in the capital Stockholm ($n = 91$), the mid-sized town Gävle ($n = 58$), or the small town Sandviken ($n = 48$). As in the other Swedish studies, part of the sample was drawn from a religious population, including people visiting the Lutheran Church of Sweden ($n = 28$), the Baptist church ($n = 10$), the Methodist church ($n = 7$), the Pentecostal Movement ($n = 24$), and the Covenant church (Lutheran; $n = 7$). The remaining part of the sample were adult students attending a class that yielded an upper secondary school grade in psychology ($n = 25$); undergraduate students attending a teacher (social sciences) education program ($n = 87$); and students at a Jungian Institute ($n = 9$). The data collections were made at lectures or church gatherings.

The first study in Birgegard and Granqvist (in press) recruited student participants from the Theological Department and from a Christian student society in Uppsala for an experiment on attachment and religion. In Birgegard and Granqvist's second study, 54 people volunteered from the Theological Department, from a theological college, from a local church student union, and from a church choir—all located in Uppsala—for another experiment on attachment and religion. In both studies, participants were compensated with a cinema voucher worth US\$5. Eligible for inclusion were only participants who reported theistic beliefs.

Measurement

Attachment history. Like the published studies, the six (heretofore) unpublished studies utilized attachment measures based on Hazan and Shaver's (1986) original or Hazan's (1990) revised attachment-history paragraphs, aiming to tap the characteristic features of the attachment figure's behavior in either three or four attachment patterns, respectively, as described by Ainsworth et al. (1978) and Main and Hesse (1990). Like Granqvist (1998) and Kirkpatrick and Shaver (1990), Kirkpatrick and Deaton (1992) used the original Hazan and Shaver (1986) forced-choice method, in which participants were asked to choose one of the following paragraphs that was most descriptive of their childhood relationship with mother (corresponding paragraphs were utilized to assess perceived attachment to father):

1. She was fairly cold, distant, and rejecting, and not very responsive; I often felt that her concerns were elsewhere; I frequently had the feeling that she just as soon would not have had me (*Insecure/Avoidant*).
2. She was generally warm and responsive; she was good at knowing when to be supportive and when to let me operate on my own; our relationship was almost always comfortable, and I have no major reservations or complaints about it (*Secure*).
3. She was noticeably inconsistent in her reactions to me, sometimes warm and sometimes not; she had her own needs and agendas which sometimes

got in the way of her receptiveness and responsiveness to my needs; she definitely loved me but didn't always show it in the best way (*Insecure/Ambivalent*).

One of the published Swedish studies (Granqvist & Hagekull, 1999) utilized continuous ratings of each of the three Hazan and Shaver (1986) paragraphs, yielding *avoidance*, *security*, and *ambivalence* dimensions for each participant, and with respect to each parent. These data were treated in two ways. First, respondents were classified in the attachment pattern for which their highest value was assigned. Respondents who had the same value on two (or more) dimensions were dropped from the analyses that used the categorical data (also true for the studies to be described in the following). Second, the original dimensional ratings of security were utilized in separate analyses.

Granqvist (2002) and Bjornsen (2002) split the original Hazan and Shaver (1986) paragraphs into 13 separate items (six for avoidance, four for security, and three for ambivalence), which participants were asked to rate on continuous scales. Averaged scales were then constructed for each of the three patterns, and with respect to both parents. These data were treated like those previously reported: Respondents were assigned to the pattern with which their highest scale rating was associated, yielding categorical attachment data, and the dimensional averaged scale ratings of secure history ($\alpha_s > .70$) were utilized in separate analyses.

The remaining studies used Hazan's (1990) revised paragraphs, which read as follows:

1. She was generally loving and understanding. She was good at knowing when to be helpful and when to let me do things on my own (*Secure*).
2. She was generally fine but not very affectionate. She taught me at an early age to be independent and self-sufficient (*Insecure/Avoidant*).
3. She was generally loving but not as understanding as I would have liked. She loved me, but didn't always show it in the best way (*Insecure/Ambivalent*).
4. She was generally unpredictable and sometimes even hurtful. She had her own problems and they sometimes got in the way of her ability to take care of me (*Insecure/Disorganized*).

In all studies, participants indicated their agreement with each paragraph on continuous scales, yielding avoidance, security, ambivalence, and disorganization dimensions for each participant, and with respect to each parent. As in the studies described, only the security ratings were used in subsequent analyses. Participants were also asked to make a forced-choice mark of the one paragraph that was most characteristic of their history with each parent.

Besides economy of subsequent analyses, the reasons why only the security dimensions, and not also the avoidance, ambivalence, and disorganization dimen-

sions, were used, were: (a) the security items and paragraphs, unlike some of the insecurity items and paragraphs, match closely across the Hazan and Shaver (1986) and Hazan (1990) methods (i.e., it would make less sense to add, for instance, the avoidance paragraphs and items across methods), and (b) using the original insecurity items and paragraphs separately (i.e., by each method, would reduce cell sizes). It can also be added that low security ratings generally imply, and were certainly related as expected to, high insecurity ratings (Median $r = -.55$; $M r = -.49$), meaning that the low security scores can be taken to represent insecurity.

Sudden religious conversions. Like the published studies, the unpublished U.S. and Swedish studies utilized a similar operational definition of sudden religious conversions, originally created by Kirkpatrick and Shaver (1990), and consisting in all cases of two items. The first item was either a question (the U.S. study) or a statement (the Swedish studies) inquiring into the experience of a change in importance of religious beliefs, which participants were asked to answer on a 5-step (the U.S. study) or 6-step (the Swedish studies) response scale (1 = *much less important* in the U.S. study, and *SD [strongly disagree]* in the Swedish study; 5 = *much more important* in the U.S. study, and 6 = *SA [strongly agree]* in the Swedish study). The second item was identical across all the studies and asked about which of the following alternatives that best described the religious change: (a) “A slow, gradual change over a long period of time,” (b) “A slow, gradual change with one or more relatively intense experiences and changes,” and (c) “An intense and sudden personal experience.”

Participants who indicated both the highest response alternative on the former item and option (c) on the latter item were considered to be *sudden religious converts*, whereas those who failed to meet these criteria were considered *nonsudden converts*. Those nonsudden converts who indicated that they had experienced an increase in importance of religious beliefs, without meeting the criteria for sudden religious conversions, were also classified as having experienced a *gradual religious change*.

Emotionally based religiosity (EBRS). This scale was constructed by Granqvist and Hagekull (1999) to tap the distress-regulating functions of the individual’s relationship with God. More specifically, the defining features of attachment relationships (e.g., Ainsworth, 1985; Bowlby, 1969; Hazan & Shaver, 1994)—such as proximity maintenance (e.g., “I strive to maintain closeness to God”), separation distress (e.g., “I would experience grief if I knew that I could never get in touch with God again”), the secure base (e.g., “When I feel lost I find support in my religious faith”), and safe haven (e.g., “I turn to God when I am in pain”)—were operationalized with reference to the individual’s relationship with God. The scale was included in seven of the 11 studies, including two of the published Swedish studies (Granqvist, 2002; Granqvist & Hagekull, 1999), and in all

of the unpublished Swedish and U.S. studies (except Kirkpatrick & Deaton, 1992). It was based on a 6-step response scale format (1 = *SD*; 6 = *SA*) and included ten items—except in Bjornsen (2002), who used only the seven items with the highest item-total correlations obtained in Granqvist (2002) and Granqvist and Hagekull (1999). In addition, the two Birgegard and Granqvist (in press) studies only used five items in the pretest assessment (the remaining five items were used following experimental attachment activation, and were therefore not included). Cronbach's correlation analyses showed that the scale had satisfactory internal consistency in all included studies (range of α s = .75–.97).

Socialization-based religiosity (SBRS). This scale was created to tap the degree to which transmission and adoption of religious standards from parent to offspring had taken place (Granqvist & Hagekull, 1999). More specifically, the following aspects of shared religious standards between parent and offspring were operationalized: religious behaviors (e.g., "My mother and I are equally religiously active"), belief aspects of religiousness (e.g., "My religious beliefs correspond with my father's religious beliefs"), religious values (e.g., "My mother and I do not at all share the same values regarding religious issues" [reverse-score]), religious commitment (e.g., "Religion is equally important/unimportant to me as it was to my father during my childhood"), and transmission of religious standards to the next generation (often hypothetical for the respondents; e.g., "I will probably speak/I speak to my children about religious issues in a similar way as my mother did to me during my childhood"). This scale was included in the same studies as the EBRS, with items formatted using the same 6-step response scale. The scale originally consisted of 10 items with respect to each parent, and was used in this way in all studies except in Bjornsen (2002), who included only the four items per parent that displayed the highest item-total correlations in Granqvist (2002) and Granqvist and Hagekull (1999). The scale had satisfactory internal consistency in all studies (range of α s = .75–.99, for the maternal and paternal items, separately). For our purposes, the maternal and paternal items were aggregated, based on their high intercorrelation ($r = .80$), into a single SBRS scale.

Statistical Analyses

Although meta-analysis commonly involves specialized techniques for reconstructing previous research findings from summary statistics, we were able to use more conventional data-analysis procedures because we had access to the raw data from all 11 studies, which were combined into one large sample ($N = 1465$). Two-way (attachment \times sex) log-linear analyses were utilized to test if attachment history category was related to sudden religious conversions, and if sex had an impact on those relations. Odds ratio (OR) computations were used to describe the

strength of the relations. To achieve sufficient cell sizes, the insecure groups were aggregated in these analyses.

It is arguably somewhat crude to rely solely on self-categorizations of attachment (see Fraley & Waller, 1998). Therefore, in those samples that utilized continuous attachment measures, supplementary two-way (conversion status \times sex) ANOVAs were utilized to examine mean differences between sudden religious converts and nonsudden converts, and between men and women, with respect to attachment-history security. Parallel analyses were also run to test for differences in attachment-history security between sudden converts and participants who had experienced a more gradual religious change. Finally, two-way (conversion status \times sex) ANOVAs were used to test if sudden converts had a more emotionally based religiosity, and nonsudden converts a more socialization-based religiosity. Hedges' (1981) effect size (g) formula, based on pooled standard deviations, was used to describe the strength of differences between means. Because different response-scale formats for attachment scales were utilized across studies, data were standardized prior to the aggregation of the data sets.

All significance tests reported in the following section are nondirectional (i.e., two-tailed) tests.

RESULTS

Attachment and Sudden Religious Conversions

Attachment history with mother. The distribution of sudden religious converts in each maternal attachment-history group, by sample, is shown in the left panel of Table 2. A two-way (attachment \times sex) log-linear analysis, with sudden religious conversion versus nonconversion as dependent variable, was performed. This analysis was based on data from all 11 samples, utilizing more than 1400 participants. Neither the main effect of sex, nor the interaction of sex and attachment, was significant, $\chi^2_{(N=1417)} < 0.25, ps > .60$. However, the main effect of attachment was significant, $\chi^2_{(N=1417)} = 5.93, p < .025$. Respondents classified as insecure in the maternal relationship were significantly more likely to have experienced a sudden religious conversion (9.3%) than participants classified as secure (5.7%), at an OR level of 1.69. These findings supported the predictions.

A second strategy for testing if attachment history with mother, sex, and sudden conversions were associated entailed performing a two-way (conversion status \times sex) ANOVA on continuous measures of maternal attachment history. Data relevant for such analyses were available from 8 of the 11 samples, with complete data available for approximately 850 cases. The standardized attachment means for sudden versus nonsudden converts in each study are shown in the right panel of Table 2, along with aggregated means for all samples. (Note that means are scaled

TABLE 2
 Frequencies and Percentages of Sudden Religious Converts by Maternal Attachment History Category; Means and Standard Deviations for Sudden Converts and Nonsudden Converts on the Maternal Attachment-History Dimension

Study	Attachment Category With Mother				Attachment Security With Mother			
	Insecure		Secure		Sudden Converts		Nonsudden Converts	
	<i>f/n</i>	%	<i>f/n</i>	%	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Kirkpatrick & Shaver (1990)	12/104	11.5	7/107	6.5	—	—	—	—
2. Kirkpatrick & Deaton (1992)	0/47	0	6/130	4.6	—	—	—	—
3. Granqvist (1998)	2/46	4.3	5/154	3.2	—	—	—	—
4. Granqvist & Hagekull (1999)	4/22	18.2	3/117	2.6	-1.01	1.26	.06	.96
5. Granqvist & Hagekull (2001)	3/21	14.3	0/29	0	-.20	1.04	.02	1.01
6. Granqvist (2002)	3/13	23	9/185	4.9	-.61	1.45	.04	.96
7. Granqvist (in press-a)	6/73	8.2	8/108	7.4	-.04	1.20	.00	.99
8. Birgegard & Granqvist I (in press)	1/13	7.7	2/13	15.4	-.27	1.46	.04	.94
9. Birgegard & Granqvist II (in press)	3/26	11.5	0/28	0	-.83	.84	.05	.99
10. Granqvist & Hagekull (2002)	3/33	9.1	5/46	10.9	.09	1.20	.01	.97
11. Bjornsen (2002)	1/9	11.1	13/93	14.0	.05	.98	-.01	1.01
Total	38/407	9.3	58/1010	5.7	-.28	1.21	.03	.97

in Z-score terms because scores were standardized within samples before aggregation; therefore negative means are below average, positive means above average, etc.) Results from the ANOVA (based on the totals) revealed that neither the main effect of sex, nor the interaction of sex and conversion status, was significant, $F_{S(1, 844)} < 1.60$, $p_s > .20$. However, the main effect of conversion status was significant, $F_{(1, 844)} = 3.96$, $p < .05$, at a small effect size level, $g = .31$ (Kirk, 1996). Sudden converts reported less secure histories with mother than did nonsudden converts. Although the effect was modest in strength, this finding also supported predictions.

Attachment history with father. The distribution of sudden religious converts, by paternal attachment-history group, by sample, is shown in the left panel of Table 3. A two-way (attachment \times sex) log-linear analysis, corresponding to that

described with respect to attachment history with mother, was performed. This analysis was also based on data from all 11 studies. Again, neither the main effect of sex, nor the interaction of sex and attachment, was significant, $\chi^2_{S(N=1370)} < 0.25, ps > .60$. However, as in the maternal analysis, the main effect of attachment was significant, $\chi^2_{(N=1370)} = 7.94, p < .005$. Respondents classified as insecure in the paternal relationship were significantly more likely to have experienced a sudden religious conversion (8.5%) than participants classified as secure (4.8%), at an OR level of 1.9. As with the maternal findings, these results supported our predictions.

The standardized paternal attachment-history means for sudden converts and nonsudden converts are shown in the right panel of Table 3. An ANOVA parallel to that described for maternal attachment history again yielded a nonsignificant main effect of sex and nonsignificant sex \times conversion interac-

TABLE 3
Frequencies and Percentages of Sudden Religious Converts by Paternal Attachment History Category; Means and Standard Deviations for Sudden Converts and Nonsudden Converts on the Paternal Attachment-History Dimension

Study	Attachment Category With Father				Attachment Security With Father			
	Insecure		Secure		Sudden Converts		Nonsudden Converts	
	f/n	%	f/n	%	M	SD	M	SD
1. Kirkpatrick & Shaver (1990)	14/136	10.3	4/68	5.9	—	—	—	—
2. Kirkpatrick & Deaton (1992)	5/88	5.7	1/87	1.1	—	—	—	—
3. Granqvist (1998)	2/77	2.6	4/124	3.2	—	—	—	—
4. Granqvist & Hagekull (1999)	5/41	12.3	0/89	0	-1.32	1.13	.02	.90
5. Granqvist & Hagekull (2001)	3/29	10.3	0/18	0	-.54	.78	.05	1.01
6. Granqvist (2002a)	4/48	8.3	8/140	5.7	-.26	.93	-.02	.96
7. Granqvist (in press-a)	9/106	8.5	4/70	5.7	-.20	1.27	.00	.97
8. Birgegard & Granqvist I (in press)	0/13	0	2/10	20	-.13	1.69	.02	.93
9. Birgegard & Granqvist II (in press)	2/29	6.9	0/23	0	-.71	.92	.04	1.00
10. Granqvist & Hagekull (2002)	6/40	15.0	2/34	5.9	-.52	.95	.07	.98
11. Bjornsen (2002)	4/27	14.8	10/73	13.7	-.01	.89	.00	1.02
Total	54/634	8.5	35/736	4.8	-.37	1.07	.01	.96

tion, $F_{S(1, 811)} < 0.40$, $ps > .50$. However, the main effect of conversion status was again significant, $F_{(1, 811)} = 8.47$, $p < .005$, at a small to medium effect size level, $g = .39$ (Kirk, 1996). As predicted, sudden converts reported less secure histories also with father than did nonsudden converts, paralleling the findings with respect to mothers.

Attachment, Sudden Religious Conversion, and Gradual Religious Change

Two-way (type of religious change \times sex) ANOVAs were also performed to test the predictions of sudden converts differing on attachment history, to both parents, specifically from the group of respondents who had experienced a more gradual religious change. The eight studies that used continuous attachment data were included in these analyses. With respect to maternal attachment, the main effect of sex, as well as the interaction of sex and type of change, were nonsignificant, $F_{S(1, 504)} < 1.70$, $ps > .19$. The main effect of type of change was marginally significant, $F_{(1, 504)} = 2.96$, $p < .09$, at a small effect size level, $g = .25$. The gradual religious-change group displayed a marginally higher maternal-attachment security mean ($-.05$) than sudden converts ($-.28$). (Again, note that means are scaled as Z-scores.) Although weak and not fully significant by a two-tailed test, these results pointed in the direction of supporting the compensation hypothesis.

Concerning the paternal analysis, the main effect of sex and the interaction of sex and type of change were again nonsignificant, $F_{S(1, 504)} < .02$, $ps > .90$, whereas the main effect of type of change was significant, $F_{(1, 504)} = 8.60$, $p < .005$, at a small to medium effect size level, $g = .37$. In line with the compensation hypothesis, sudden converts reported more insecure histories ($-.37$) than those who had experienced a more gradual religious change ($-.01$).

Conversions, Emotionally Based and Socialization-Based Religiosity

To test the compensation prediction that the religiosity of sudden converts is related more to attachment relevant regulation of distress than that of nonsudden converts, a two-way (conversion status \times sex) ANOVA, with EBRS as the dependent variable, was performed. Data pertinent to these analyses were included in 7 of the 11 samples, comprising more than 800 cases. The EBRS and SBRS means from these studies are shown in Table 4, along with aggregated means for all samples (the ANOVA was based on totals). Whereas no significant main effects of sex or interaction of sex and conversion status were ob-

TABLE 4
Means and Standard Deviations for Sudden Religious Converts and Nonsudden Converts
on Emotionally Based Religiosity and Socialization-Based Religiosity

Study	EBRS				SBRS			
	Sudden Converts		Nonsudden Converts		Sudden Converts		Nonsudden Converts	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Granqvist & Hagekull (1999)	4.36	1.35	3.33	1.65	2.08	.88	3.64	1.23
2. Granqvist (2002a)	3.16	1.27	2.29	1.40	3.31	1.20	3.81	.99
3. Granqvist (in press-a)	4.44	1.35	2.94	1.67	3.01	1.59	3.15	1.36
4. Granqvist & Hagekull (2002)	4.02	1.23	4.16	1.24	3.57	1.09	4.02	1.37
5. Birgegard & Granqvist I (in press)	4.80	.59	4.83	.61	2.34	1.23	3.12	1.41
6. Birgegard & Granqvist II (in press)	4.27	.76	4.62	.80	2.73	1.18	3.24	1.46
7. Bjornsen (2002)	5.01	.76	4.37	1.19	3.88	1.01	4.24	1.14
Total	4.28	1.27	3.34	1.66	3.21	1.25	3.75	1.28

Notes. EBRS = Emotionally based religiosity scale; SBRS = Socialization-based religiosity scale.

tained on EBRS, $F_{S(1, 782)} < 0.21$, $ps > .60$, the main effect of conversion status was significant, $F_{(1, 782)} = 17.46$, $p < .0001$, at a medium effect size level, $g = .57$. As predicted, sudden converts scored higher on emotionally based religiosity than nonsudden converts.²

To test the correspondence prediction that the religiosity of nonsudden converts is related more to a socialization-based acquisition of parental religiousness than that of sudden converts, a corresponding two-way ANOVA with SBRS as the dependent variable was performed. Again, neither the main effect of sex, nor the in-

²It could be argued that this difference is not surprising, simply due to sudden converts being likely to be more religious than nonsudden converts in the first place, and that the difference merely reflects a difference in strength of general religiousness. As a proxy for strength of general religiousness, questions about religious beliefs were included in all of the studies that also included EBRS. Some of the studies used a forced-choice single-item measure of religious beliefs, describing theistic, deistic, pantheistic, agnostic, and atheistic beliefs (see Granqvist, 1998). Responses to these alternatives were dummy-coded for the present purpose (1 = *theism*; 0 = *not theism*). Remaining studies utilized 6-step scale dimensional ratings of each belief alternative. Respondents who indicated agreement (i.e., > 3) with the description of theistic beliefs were coded as 1; others were coded as 0. To control for the potentially confounding effect of theistic beliefs, a one-way (conversion status) ANCOVA, with the dummy-coded theistic beliefs as covariate and EBRS as dependent variable, was performed. Sudden converts still had higher EBRS means ($M = 4.28$) than nonsudden converts ($M = 3.35$), $F_{(1, 775)} = 6.13$, $p < .025$, at a medium effect size level, $g = .56$. Hence, the link between conversion status and emotionally based religiosity remained when the potential confound of theistic beliefs was controlled.

teraction of conversion status and sex, was significant, $F_{S(1, 755)} < 2.00$, $ps > .15$, whereas the main effect of conversion status was significant, $F_{(1, 755)} = 7.38$, $p < .01$, at a small to medium effect size level, $g = .37$. As predicted, nonsudden converts scored higher on socialization-based religiosity than sudden converts.

DISCUSSION

This study tested the validity of two general attachment hypotheses concerning links between conversions and individual differences in perceived attachment history with parents. Both hypotheses were supported by findings showing nonsudden conversions to be related to a secure history and socialization-based religiosity (the correspondence hypothesis), and sudden conversions to be linked to an insecure history and emotionally based religiosity (the compensation hypothesis). These findings were small to medium in size.

Theoretical Considerations, Previous Research, and Conclusions

Unlike other psychodynamic perspectives, which are typically concerned with sex differences claimed to stem from Oedipal issues and differential identification objects depending on sex of the child, attachment theory and research do not predict, nor generally find, differences pertaining to sex of the offspring (see Cassidy & Shaver, 1999). In line with this absence of sex differences in attachment research, this meta-analysis failed to find sex of the convert to be related to the links observed between attachment history and sudden religious conversions. In addition, there were no marked differences in results emerging in relation to attachment history with mothers versus fathers, although the effect sizes tended to be somewhat larger in the latter case. Some degree of similarity across parents is to be expected, insofar as both have functioned as attachment figures and agents of socialization.

By showing that sudden converts and nonsudden converts differ, not only on perceived attachment history with parents, but also with respect to the functions and individual origins of their religiosity, the results of this study seem to suggest that sudden converts and nonsudden converts represent two relatively distinct religious profiles. These findings correspond well to previous research and theorizing (e.g., James, 1902; Shaver, Lenauer, & Sadd, 1980). For instance, by drawing on James's (1902) concept of "healthy-minded" (or "once-born") religion, Shaver et al. found that healthy-mindedness characterized the religiosity of the majority of their randomly selected sample of 2500 female respondents. These women reported having experienced a relatively happy and religious childhood, and were religious as adults without having gone through any dramatic change in the

importance of their religious beliefs. In contrast, sudden converts reported having had a relatively unhappy and nonreligious childhood, as well as a period of crisis that their conversions appeared to resolve. In James's (1902) terminology, the ("twice-born") religiosity of the latter profile represents the religion of the "sick souled." Interesting as such descriptive findings are, there has long been a need for a coherent scientific account of why these differential religious profiles exist in the first place. We believe that this study demonstrates well the ability of attachment theory to meet this need.

In one of the studies included in this meta-analysis (Granqvist & Hagekull, 1999), we found two distinct clusters (derived by means of cluster analysis) among participants who had experienced a period in life during which their religious beliefs became more important. These two clusters corresponded well to James's (1902) proposed profiles and the results of Shaver et al. (1980). More specifically, the first cluster had experienced sudden and intense religious changes that occurred during stressful life situations, whereas the second cluster had experienced relatively gradual religious changes during life situations that pointed to the importance of relationships with (religious) significant others. When compared on external attachment history variables, the clusters were differentiated in such a way that Cluster 1 had much lower, and hence Cluster 2 higher, means on security of attachment history with both parents. These findings suggest that individual differences in attachment history may be important determinants of the once- and twice-born profiles.

By showing that attachment history is differentially related to sudden conversions as compared to more gradual religious changes, this study may also shed light on the chasm between the classic/psychological versus contemporary/sociological conversion paradigms (see Hood et al., 1996; Richardson, 1985). The former is said to speak of converts as "passive," and of conversions as sudden and radical self-transformations following a period of crisis for individuals predisposed to react in such a way, whereas the latter portrays converts as "active" and conversions as gradual and rational search processes, with partial situational (rather than predispositional) determinants to be found in religious socialization. Not only have these paradigms probably studied different forms of religious changes (Zinnbauer & Pargament, 1998), but by doing so they may also have focused on two different populations of religious individuals: the classic paradigm more on those with a relatively insecure attachment history, whose religiosity is based more on regulation of distress, and the contemporary paradigm on those with a relatively secure attachment history, whose religiosity is based more on socialization processes (for a more detailed elaboration, see Granqvist, 2003). Seen in the light of the findings presented here and by Granqvist and Hagekull (1999) with respect to the differentiation of sudden and gradual religious changes, it is not surprising that the two conversion paradigms have seen different things, nor that the contemporary account has de-emphasized the drama of

the process. Needless to say, future studies purporting to paint a complete picture of religious conversions should make an attempt to include both of these religious profiles, or else acknowledge that their picture is incomplete. Another implication of this study is that the contemporary account's rejection of predispositional factors in relation to gradual religious conversions may be questionable; instead, the most crucial factor may be the socialization of religious standards from sensitive and responsive caregivers.

The results of this meta-analysis that suggest that sudden converts have a religiosity characterized by regulation of distress, directed at God as an attachment surrogate, are also in line with James's (1902) and Ullman's (1982) claims and findings regarding the importance of relationally and emotionally based "needs" of sudden religious converts. Note, however, that the same explanation is probably not accurate for those whose religious changes have been more gradual.

Although no specific comparisons were made, due to cell size considerations, the perception of having experienced either distant/rejecting, inconsistent, or threatening and unpredictable caregiving from parents could, on the basis of our findings, be interpreted as promoting the development of sudden religious conversions, in that the aggregated insecure groups, containing participants reporting avoidant, ambivalent, and disorganized attachment history, evinced the highest rate of sudden conversions. This interpretation is in line with Ullman's (1982) findings, showing converts, as compared to nonsudden converts, to have perceived parents as more withdrawn and rejecting (i.e., corresponding to caregiving in avoidant dyads; e.g., Ainsworth et al., 1978), more overprotective/intrusive (an additional marker—besides inconsistency—for the ambivalent pattern; e.g., Cassidy & Berlin, 1994; George, Kaplan, & Main, 1996), and more hostile and unstable (corresponding to parenting in disorganized dyads; Main & Hesse, 1990). However, Ullman (1982) failed to find a more well-elaborated framework for explaining her findings than to note that they strongly supported "psychodynamic hypotheses" (p.190). We suggest that for individuals with the major types of insecure histories, religiosity functions to regulate attachment-related distress. The sudden conversion experience itself is a nominee for representing the most salient indicator of this function.

Limitations and Future Directions

A limitation of the results was that, although the differences between groups were generally consistent across study samples, this was not always the case. Particularly noteworthy in this regard is Bjornsen's (2002) rural adolescent sample, drawn from the "Bible belt" of the U.S., for which associations between conversion status and attachment were non-existent. This lack of association could be due to a combi-

nation of uniformly high parental religiousness and young age of the participants. Recall from the Introduction that our previous studies showed compensation effects for most religion variables to be particularly pronounced at low parental religiousness (Granqvist, 1998, *in press-a*; Kirkpatrick & Shaver, 1990) and that the religious changes of people reporting a relatively insecure history have been found to occur at a relatively older age than for people reporting a secure history (Granqvist & Hagekull, 1999, 2002).³

Besides the problem of occasional inconsistencies in results across samples, the effect sizes of the associations between attachment and conversion status were typically rather modest, both in terms of odds ratios and Hedges' *g*s. This may be partly because people with an insecure history can, and do, use other strategies (i.e., alcohol, drugs, loitering around) to regulate distress than those occurring in the context of religious conversions, perhaps particularly when their parents have been religious. In addition, when parents have been religious and their religion has been more of a Pentecostal or charismatic kind (as in Bjornsen, 2002, and parts of Granqvist & Hagekull, 2002), there may actually be a socialization pressure to have the kind of religious experiences that are typically embedded in religious conversions (cf. Holm, 1976), implying—consistent with our correspondence hypothesis, it should be noted—that in these circumstances, people with a secure history may be more likely to indicate the experience of a sudden religious conversion.

Another problem concerning the samples is that it is somewhat difficult to know what population they represent, due to the uncontrolled sample-of-convenience strategy employed in virtually all of the studies. This is a double-edged sword, though, in that a high degree of generalizability is made possible by the use of participants drawn from two different nations, rural as well as urban areas, differing age groups (including mid-adolescents and middle-aged adults), and a diversity of religious communions, ranging from Scandinavian new age seekers to Southern Baptists.

The remaining two most important methodological limitations of the studies included in the meta-analysis pertain to the retrospective correlational design and questionnaire methodology, which were employed in all studies. The implication of the former limitation is, of course, that causal inferences cannot be drawn with confidence. Although it is theoretically assumed that attachment precedes and helps explain the conversion experience, the opposite case could also be made, namely that

³ We ran supplemental ANCOVAs, with age and participant ratings of parental religiousness (see Granqvist, 1998, for the operationalization) as covariates, to check whether results remained when controlling for these variables. Such analyses were run on the samples that included continuous attachment data or the EBRS and SBRS, encompassing approximately 800–850 cases. As would be expected, results remained and were somewhat strengthened when age and parental religiousness were controlled. More detailed information about these analyses will be provided from the first author upon request.

following the conversion experience, the individual reevaluates his or her past attachment experiences and cast them in a different light than he or she would have done prior to this event, perhaps due to the past being seen as in stark contrast to the current bliss (e.g., Beckford, 1978; Richardson, Stewart, & Simmonds, 1978). Although this study does not permit a foolproof argument against such a proposal, a number of credible arguments can be made. To begin with, the findings showing that sudden converts scored higher on the emotionally based religiosity scale than nonsudden converts, even after controlling for the effect of theistic beliefs, cannot be accounted for by such a proposal, whereas this makes sense on the basis of the underlying attachment-leading-to-conversion hypothesis that motivated this research. In addition, the post-conversion reevaluation account cannot explain why sudden converts perceive less secure and more insecure attachment relationships than those who have specifically experienced a more gradual religious change, whereas these findings again correspond to the underlying theoretical assumptions of our analysis. Moreover, the reevaluation hypothesis begs the question of why some individuals, rather than others, are suddenly converted in the first place. Finally, it would be equally credible to formulate the opposite explanation to that offered by the post-conversion reevaluation account, namely that following a sudden conversion, and given the current joy and bliss that the individual experiences, he or she may view everything (including past relationships) in a more favorable, rather than unfavorable, light. This would be in line with well-supported cognitive theories of depression and mood dependent efficiency of access to memories (e.g., Beck, 1967; Bower, 1981; Seligman & Nolen-Hoeksema, 1987; see also Howard & Dailey, 1979; Sprangers, 1989; Zinnbauer & Pargament, 1998 for relevant arguments). Nevertheless, it would be desirable were the results of this study to be replicated in studies utilizing real-time prospective (pre- and post-conversion) longitudinal designs to further corroborate the attachment hypotheses and the underlying theoretical assumptions of causal direction.

There are at least two potential limitations with respect to questionnaire methodology being the only mode of measurement employed. The first limitation concerns some form of response bias as a potential confound of the validity of the findings. However, there is no obvious reason as to why there would be a response-bias underlying the links between two conceptually independent phenomena, such as between attachment and conversion experiences, nonsudden conversions and socialization-based religiosity, or sudden conversions and emotionally based religiosity. Nevertheless, the confidence in these findings would be strengthened were they to be replicated by studies using different modes of measurement.

This latter point is particularly crucial when it comes to the assessment of attachment, which represents the second potential limitation with respect to questionnaire methodology. When measured with questionnaires, the attachment data risks being confounded by, among other things, lack of self-awareness, autobiographical mem-

ory biases, social desirability, and impression management.⁴ For future studies to overcome these problems, the method of choice appears to be the Adult Attachment Interview (AAI; George et al., 1996), which has been shown to yield classifications that, under conditions of relative contextual stability, are prospectively predictable from the same individual's strange situation classification in infancy (e.g., Hamilton, 2000; Main & Hesse, 1998; Waters, Merrick, Treboux, Crowell, & Alberstheim, 2000). Rather than being a retrospective measure of parents' attachment-relevant behaviors in the past, the AAI primarily taps the offspring's current state of mind, or mental organization, with respect to past and present attachment relationships, while at the same time allowing for inferences (made by a certified interview coder, not the interviewee) concerning parents' probable behaviors in the past. Individuals who coherently describe difficult experiences with insensitive parents are labeled "earned secure" in the AAI coding system.

In other words, and seen in the light of the AAI system, our findings by no means necessitate that those who have experienced sudden religious conversions, and have portrayed their parents as insensitive, are currently insecure, but may be "earned secure" in their mental organization regarding attachment (see also Granqvist & Hagekull, 2002). It may be that aspects of religion, partly through the individual's new or renewed relationship with a God perceived as loving and caring, can help promote mental integration for the individual who has experienced past attachment adversities. Such a hypothetical scenario could be expected on the basis of similar attachment considerations concerning the beneficial effects on insecure individuals of successful experiences from psychotherapy and love relationships with a secure partner (e.g., Bowlby, 1988; Pearson, Cohn, Cowan, & Cowan, 1994; Rice & Cummins, 1996). This possibility could also help shed light on the discrepancy of findings obtained between the studies on attachment history with parents versus contemporaneous romantic attachment, in relation to religiosity (see also Granqvist, 2002; Granqvist & Hagekull, 2000; Kirkpatrick, 1998, 1999).

Future research should also focus on the long-term outcomes of sudden religious conversions. If the sudden convert is earned secure, it could be predicted that the long-term effects would be beneficial in several different socio-emotional domains. On the other hand, a case could be made for the conversion as representing one among several other extreme attempts at regulating distress, in which case the convert would not have earned security and the beneficial effects would be more temporary. In such a case, it could be predicted that the religiosity of the convert

⁴Although this risk is not to be dismissed lightly, it should be noted that moderate to high relations between the retrospective self-reports and the probable experience scales of the AAI have been obtained, and that the probable experience scales have reproduced the results in relation to religiosity that emerged from the use of self-reports (Granqvist & Hagekull, 2002). It was concluded in that study that, insofar as attachment history is concerned, and in samples such as the ones included in the meta-analysis, "retrospective self-reports of attachment histories with parents [can be used] without any serious distortion in the direction or strength of results" (p. 23).

would fluctuate over time and that he or she would have to put up a rigid struggle to maintain his or her "sanctified" state. The latter scenario would correspond to James' (1902) description of the religion of the sick-souled.

A final methodological reservation pertains to the external validity of these findings. Despite the fact that the meta-analysis was based on more than 1450 participants, some of which were drawn from specifically religious populations, only around 100 participants (7%) had indicated the experience of a sudden religious conversion when the total number of participants were included, and only around 70 respondents when the studies using continuous attachment ratings were analyzed.⁵ This points to the importance for future studies to utilize different sampling techniques, such as stratified sampling and carefully matched convert and nonconvert groups, although the latter procedure seems to yield similar results to those obtained here (e.g., Ullman, 1982). As previously noted, however, a strength with respect to external validity is that participants represented different populations and nations, the latter which differ markedly with respect to the religiosity of their respective inhabitants (e.g., Pettersson, 1994).

Given that sudden religious conversions are so rare, at least when operationalized with the conservative criteria employed in this analysis, it would be interesting to see future attachment research studying other conversions than those occurring in the context of monotheistic religion, such as to political subcultures (see Hopf, 1993), New Age movements, sectarian organizations, and other religions (see Kirkpatrick, 1995, for a discussion of attachment and religion in Eastern traditions). Besides studying sudden increases in religiosity (or conversions to other phenomena), attachment research could also be directed at understanding pronounced decreases of religious beliefs and behaviors (cf. detachment), such as of apostasy, including the study of individual differences in such experiences.

To the extent that it is possible, a final recommendation for future investigators of religious conversions is that they deduce and test hypotheses from several theoretical frameworks (e.g., attachment theory, self-psychology, psychoanalysis, deprivation theory). Only after the implementation of such work will it be shown which theory, or theories, that will offer the most robust explanations, and yield the deepest psychological understanding of this intriguing phenomenon, which has held such a long interest to psychologists and sociologists of religion. Given the multitude of currently available perspectives in the literature on religious conversions, such tournaments will be particularly important for the progression of this area of study.

⁵ Corresponding analyses to those mentioned were therefore performed with more liberal criteria for sudden conversions (see Footnote 1). As would be expected from the sudden convert versus gradual change group comparisons, differences between groups decreased as a function of the more liberal criteria.

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REFERENCES⁶

- Ainsworth, M. D. S. (1985). Attachments across the life-span. *Bulletin of the New York Academy of Medicine*, 61, 792–812.
- Ainsworth, M. D. S., Bell, S. M., & Stayton, D. J. (1974). Infant-mother attachment and social development: "Socialisation" as a product of reciprocal responsiveness to signals. In M. P. M. Richards (Ed.), *The integration of a child into a social world* (pp. 99–137). Cambridge, UK: Cambridge University Press.
- Ainsworth, M. D. S., Blehar, M. C. Waters, E. & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Argyle, M., & Beit-Hallahmi, B. (1975). *The social psychology of religion*. London: Routledge.
- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: A social psychological perspective*. New York: Oxford University Press.
- Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Hoeber.
- Beckford, J. A. (1978). Accounting for conversion. *British Journal of Sociology*, 29, 249–262.
- Bergin, A. (1983). Religiosity and mental health: A critical reevaluation and meta-analysis. *Professional Psychology: Research and Practice*, 4, 170–184.
- *Birgegard, A., & Granqvist, P. (in press). The correspondence between attachment to parents and God: three experiments using subliminal separation cues. *Personality and Social Psychology Bulletin*.
- *Bjornsen, C. A. (2002). [Religious conversion and attachment history.] Unpublished raw data, Longwood College, Farmville, VA.
- Bower, G. (1981). Mood and memory. *American Psychologist*, 36, 129–148.
- Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss, Vol. 2: Separation anxiety and anger*. New York: Basic Books.
- Bowlby, J. (1980). *Attachment and loss, Vol. 3: Loss*. New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
- Cassidy, J., & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development*, 65, 971–991.
- Cassidy, J., & Shaver, P. R. (Eds.). (1999). *Handbook of attachment: Theory, research, and clinical applications*. New York: Guilford.
- Deutsch, A. (1975). Observations of a sidewalk ashram. *Archives of General Psychiatry*, 32, 166–175.

⁶References marked with an asterisk indicate studies included in the meta-analysis.

- Fraley, R. C., & Davis, K. E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships, 4*, 131–144.
- Fraley, R. C. & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77–114). New York: Guilford.
- Friedlmeier, W., & Granqvist, P. (2001, August). *Attachment transfer among Swedish and German adolescents*. Paper presented at the Xth European Conference on Developmental Psychology, Uppsala, Sweden.
- Galanter, M. (1979). The "Moonies": A psychological study of conversion and membership in a contemporary religious sect. *American Journal of Psychiatry, 136*, 165–170.
- George, C., Kaplan, N., & Main, M. (1996). *Adult Attachment Interview* (3rd ed.). Unpublished manuscript. Department of Psychology, University of California, Berkeley.
- *Granqvist, P. (1998). Religiousness and perceived childhood attachment: On the question of compensation or correspondence. *Journal for the Scientific Study of Religion, 37*, 350–367.
- *Granqvist, P. (2002). Attachment and religiosity in adolescence: Cross-sectional and longitudinal evaluations. *Personality and Social Psychology Bulletin, 28*, 260–270.
- Granqvist, P. (2003). Attachment theory and religious conversions: A review and a resolution of the classic and contemporary paradigm chasm. *Review of Religious Research, 45*, 172–187.
- *Granqvist, P. (in press-a). Building a bridge between attachment and religious coping: Tests of moderators and mediators. *Mental Health, Religion, and Culture*.
- Granqvist, P. (in press-b). On the relation between secular and divine relationships: An emerging attachment perspective and a critique of the depth approaches. *The International Journal for the Psychology of Religion*.
- *Granqvist, P., & Hagekull, B. (1999). Religiousness and perceived childhood attachment: Profiling socialized correspondence and emotional compensation. *Journal for the Scientific Study of Religion, 38*, 254–273.
- Granqvist, P., & Hagekull, B. (2000). Religiosity, adult attachment, and why "singles" are more religious. *International Journal for the Psychology of Religion, 10*, 111–123.
- *Granqvist, P., & Hagekull, B. (2001). Seeking security in the new age: On attachment and emotional compensation. *Journal for the Scientific Study of Religion, 40*, 529–547.
- *Granqvist, P., & Hagekull, B. (2002). *The Adult Attachment Interview and religiosity: Probable experiences, states of mind, and two religious profiles*. Manuscript under revision for publication.
- Granqvist, P., & Hagekull, B. (2003). Longitudinal predictions of religious change in adolescence: Contributions from the interaction of attachment and relationship status. *Journal of Social and Personal Relationships, 20*, 793–817.
- Hamilton, C. E. (2000). Continuity and discontinuity of attachment from infancy through adolescence. *Child Development, 71*, 690–694.
- Hazan, C. (1990). *Adult attachment prototypes: Mother and father versions*. Unpublished questionnaire, Cornell University, Ithaca, NY.
- Hazan, C., & Shaver, P. R. (1986). *Parental Caregiving Style Questionnaire*. Unpublished questionnaire, Cornell University, Ithaca, NY.
- Hazan, C., & Shaver, P. R. (1994). Attachment as an organized framework for research on close relationships. *Psychological Inquiry, 5*, 1–22.
- Hedges, L. V. (1981). Distributional theory for Glass's estimator of effect size and related estimators. *Journal of Educational Statistics, 6*, 107–128.
- Heirich, H. (1977). Change of heart: A test of some widely held theories about religious conversion. *American Journal of Sociology, 83*, 653–679.
- Holm, N. G. (1976). *Tungotal och andedop. En religionspsykologisk undersökning av glossolali hos finlandssvenska pingstvännen*. [Tongue-speaking and baptism of the spirit. A psychology of religion investigation of glossolalia among Finnish-Swedish members of the Pentecostal movement]. Uppsala, Sweden. *Acta Universitatis Upsaliensis, Psychologia Religionum, 5*.

- Hood, R. W., Jr., Spilka, B., Hunsberger, B., & Gorsuch, R. L. (1996). *The psychology of religion: An empirical approach* (2nd ed.). New York: Guilford.
- Hopf, C. (1993). Rechtsextremismus und Beziehungserfahrungen. *Zeitschrift für Soziologie*, 22, 449–463.
- Howard, G. S., & Dailey, P. R. (1979). Response-shift bias: A source of contamination of self-report measures. *Journal of Applied Psychology*, 64, 144–150.
- James, W. (1902). *Varieties of religious experience*. New York: Longmans, Green.
- Kirkpatrick, L. A. (1992). An attachment-theory approach to the psychology of religion. *The International Journal for the Psychology of Religion*, 2, 3–28.
- Kirkpatrick, L. A. (1995). Attachment theory and religious experience. In R. W. Hood Jr. (Ed), *Handbook of religious experience* (pp. 446–475). Birmingham, AL: Religious Education Press.
- Kirkpatrick, L. A. (1998). God as a substitute attachment figure: A longitudinal study of adult attachment style and religious change in college students. *Personality and Social Psychology Bulletin*, 24, 961–973.
- Kirkpatrick, L. A. (1999). Attachment and religious representations and behavior. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment theory and research* (pp. 803–822). New York: Guilford.
- *Kirkpatrick, L. A., & Deaton, L. (1992). [Attachment and religiosity in college students.] Unpublished raw data, University of South Carolina.
- *Kirkpatrick, L. A., & Shaver and P. R. (1990). Attachment theory and religion: Childhood attachments, religious beliefs and conversions. *Journal for the Scientific Study of Religion*, 29, 315–334.
- Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, emotion regulation, and representations of self and others. *Child Development*, 59, 135–146.
- Lofland, J. (1977). *Doomsday cult*. New York: John Wiley & Sons.
- Londerville, S., & Main, M. (1981). Security of attachment, compliance, and maternal training in the second year of life. *Developmental Psychology*, 17, 289–299.
- Loveland, G. G. (1968). The effects of bereavement on certain religious attitudes. *Sociological Symposium*, 1, 17–27.
- Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 161–182). Chicago: University of Chicago.
- Main, M., & Hesse, E. (1998). *Predicting Adult Attachment Interview response in late adolescence from infant Strange Situation behavior with mother and father*. Manuscript in preparation, University of California, Berkeley.
- Marks, I. M. (1978). Behavioral psychotherapy of adult neurosis. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change* (2nd ed.). New York: Wiley.
- Meadow, M. J., & Kahoe, R. D. (1984). *Psychology of religion: Religion in individual lives*. New York: Harper & Row.
- Nicholi, A. M. (1974). A new dimension of youth culture. *American Journal of Psychiatry*, 131, 396–401.
- Paloutzian, R. F. (1981). Purpose in life and value changes following conversion. *Journal of Personality and Social Psychology*, 41, 1153–1160.
- Pargament, K. I. (1997). *Psychology of religion and coping: Theory, research, and practice*. New York: Guilford.
- Parkes, C. M. (1972). *Bereavement: Studies of grief in adult life*. New York: International Universities Press.
- Pearson, J. L., Cohn, D. A., Cowan, P. A., & Cowan, C. P. (1994). Earned- and continuous security in adult attachment: Relation to depressive symptomatology and parenting style. *Development and Psychopathology*, 6, 359–373.
- Petterson, T. (1994). Svensk mentalitet i ett internationellt perspektiv. Ungdomars välfärd och värderingar [Swedish mentality in an international perspective. Welfare and values of youths]. *SOU*, 73. Stockholm: Civildepartementet.

- Pratt, J. B. (1946). *The religious consciousness*. New York: MacMillan.
- Rice, K. G., & Cummins, P. N. (1996). Late adolescent and parent perceptions of attachment: An exploratory study of personal and social well-being. *Journal of Counseling and Development, 75*, 50–57.
- Richardson, J. T. (1985). The active vs. passive convert: Paradigm conflict in conversion/recruitment research. *Journal for the Scientific Study of Religion, 24*, 163–179.
- Richardson, J. T., Stewart, M. W., & Simmonds, R. B. (1978). Researching a fundamentalist commune. In J. Needleman & G. Baker (Eds.), *Understanding the new religions* (pp. 235–251). New York: Seabury.
- Richters, J. E., & Waters, E. (1991). Attachment and socialization: The positive side of social influence. In M. Lewis, S. Feinman, et al. (Eds.), *Social influences and socialization in infancy, Genesis of Behavior Series* (Vol. 6, pp. 185–213). New York: Plenum.
- Seligman, M. E. P., & Nolen-Hoeksama, S. (1987). Explanatory style and depression. In D. Magnusson & A. Ohman (Eds.), *Psychopathology: An interactional perspective* (pp. 125–142). Orlando, FL: Academic.
- Shaver, P., Lenauer, M., & Sadd, S. (1980). Religiousness, conversion, and subjective well-being: The "healthy-minded" religion of modern American women. *American Journal of Psychiatry, 137*, 1563–1568.
- Sprangers, M. (1989). Subject bias and the retrospective pretest in retrospect. *Bulletin of the Psychonomic Society, 27*, 11–14.
- Sroufe, L. A., & Waters, E. (1977). Attachment as an organizational construct. *Child Development, 48*, 1184–1199.
- Starbuck, E. D. (1899). *The psychology of religion*. New York: Scribner.
- Thouless, R. H. (1923). *An introduction to the psychology of religion*. New York: MacMillan.
- Ullman, C. (1982). Cognitive and emotional antecedents of religious conversion. *Journal of Personality and Social Psychology, 43*, 183–192.
- Waters, E., Merrick, S. K., Treboux, D., Crowell, J., & Alberstheim, L. (2000). Attachment security from infancy to early adulthood: A 20-year longitudinal study of attachment security in infancy and early adulthood. *Child Development, 71*, 684–689.
- Weiss, R. S. (1982). Attachment in adult life. In C. M. Parkes & J. S. Hinde (Eds.), *The place of attachment in human behavior* (pp. 171–184). New York: Basic Books.
- Wilson, W. P. (1972). Mental health benefits of religious salvation. *Diseases of the nervous system, 33*, 382–386.
- Zinnbauer, B. J., & Pargament, K. I. (1998). Spiritual conversion: A study of religious change among college students. *Journal for the Scientific Study of Religion, 37*, 161–180.

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