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Source: *Journal for the Scientific Study of Religion*, Vol. 38, No. 2 (Jun., 1999), pp. 254-273

Published by: [Blackwell Publishing](#) on behalf of [Society for the Scientific Study of Religion](#)

Stable URL: <http://www.jstor.org/stable/1387793>

Accessed: 11/10/2010 04:09

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Religiousness and Perceived Childhood Attachment: Profiling Socialized Correspondence and Emotional Compensation

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BERIT HAGEKULL

The purpose of this study was to investigate whether religiosity stems more from emotion regulation strategies to obtain felt security (the *compensation hypothesis*) in the case of perceived insecurity of parental attachment and more from socialization of religious standards (the *revised correspondence hypothesis*) in the case of perceived security of parental attachment. Questionnaire data containing retrospective measures of perceived attachment to parents, socialization-based and emotionally based religiosity, sudden religious conversion, and characteristics of religious change were collected from 156 students. Results supported the revised correspondence hypothesis in that security of attachment was positively linked to socialization-based religiosity and to gradual religious changes that were associated with early onset and life themes indicating adoption of religious standards, whereas compensatory themes were uncharacteristic. The compensation hypothesis received support in that attachment insecurity (either avoidance or ambivalence) was positively related to emotionally based religiosity, sudden religious conversions, and intense religious changes that were characterized by late onset and compensatory life themes, whereas themes indicating adoption of religious standards were uncharacteristic. Parallels were drawn to the issue of religiosity as stemming from “within” (insecurity) or “without” (security) and to the concepts of “once-born” (security) and “twice-born” (insecurity) religious individuals. Suggestions for necessary methodological improvements in future studies were outlined.

Based on attachment theory (Granqvist 1998), we have proposed that security of attachment is positively associated with religiosity stemming from socialization of the attachment figure’s religious standards (the revised correspondence hypothesis). Insecurity of attachment was proposed to be positively associated with religiosity originating from emotion regulation strategies to obtain felt security (the *compensation hypothesis*). The present study was a first attempt to test the validity of these hypotheses.

THE DEVELOPMENT OF ATTACHMENT THEORY

Drawing from ethology and evolutionary biology, John Bowlby (1969, 1973, 1980) set about to reformulate traditional psychodynamic perspectives to obtain a scientifically grounded theory of the child-caregiver bond. The theory originally dealt with the evolutionary foundations of infants’ ties to their caregivers and argued that human infants display a set of innate attachment behaviors (e.g., crying, smiling, following) of which the “set goal” or predictable outcome is physical proximity to the attachment figure and hence an increased likelihood of infant survival from predation and other natural dangers. Although this account seems credible on a phylogenetic level, it will be maintained in the present study, which is directed more at understanding ontogenetic processes and the

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expression of attachment in older individuals, that “felt security” (cf. Kobak and Sceery 1988; Sroufe and Waters 1977) is the set goal of the attachment behavioral system.

Bowlby (1969) also introduced the concept of *working models* (i.e., an individual’s cognitive representations) of self and others in relationships. These working models were proposed to result from the sum of a child’s interactions with caregivers and, although malleable, to steer his or her behaviors and expectations in relationships from the cradle to the grave. Ainsworth et al. (1978) developed a structured observational procedure, known as the *Strange Situation*, to study individual differences in attachment quality. On the basis of such observations, three patterns of infant-caregiver attachment were described. The *insecure/avoidant pattern* is characterized by infants minimizing intimate contact with their caregivers, as evidenced in independent play, absence of displayed separation distress, and avoidance of caregivers after a brief separation. This pattern is assumed to emerge as the child’s defense against further rejection from the caregiver. Infants in the *secure pattern* use the caregiver as a secure base during exploration, may or may not show separation anxiety during separations, but are able to use the caregiver as an effective source for affect regulation upon reunions. This pattern is assumed to result from caregiver sensitivity and responsivity in relation to the child’s signals, especially those of distress. *Insecure/ambivalent* infants are characterized by maximizing contact with their caregivers, as evidenced in their failure to explore the inanimate environment productively, extreme displays of separation distress, and angry resistance coupled with demands for closeness upon reunions. This pattern is theoretically assumed to stem from inconsistent sensitivity and responsivity to child signals.

These theoretical foundations and observational procedures have given rise to a large amount of empirical research, which generally has corroborated the original ideas and extensively documented the usefulness of attachment theory for understanding the socioemotional development of the human child (see Bretherton 1985, 1987, 1991). During the last decade, a rapidly increasing body of research has been directed at understanding attachment processes in adulthood, based both on the normative attachment framework and its assumption of an attachment behavioral system that is active throughout life and on individual differences in attachment organization. These research efforts were spurred by two developments of attachment theory. The first of these was Main and co-workers’ (George, Kaplan, and Main 1985) development of the Adult Attachment Interview, which signified a move from the traditional behavioral level to a level of current cognitive representation in assessing attachment patterns. This interview technique has made possible studies of adults’ parental relationships as evidenced in the current “state of mind” with regard to those same relationships. The second source of influence came from Hazan and Shaver’s (1987; Shaver, Hazan, and Bradshaw 1988) work on attachment and love relationships, which showed that adult attachment style was strongly related to perceptions of attachment histories with parents and experiences from love relationships (for reviews, see Hazan and Shaver 1994a; Shaver and Hazan 1993).

ATTACHMENT THEORY AND THE PSYCHOLOGY OF RELIGION

Attachment theory has also been applied to the psychology of religion (Granqvist 1998; Kirkpatrick 1992, 1994, 1995, 1997, 1999; Kirkpatrick and Shaver 1990, 1992). First, it has been argued that attachment theory should function as a general heuristic framework for integrating and interpreting diverse findings in the psychology of religion. The theoretical rationale for such a conceptualization and for the need to move beyond traditional psychodynamic models has been outlined elsewhere (Granqvist 1998; Kirkpatrick 1992, 1994, 1995, 1999). Second, attachment theory has been used to derive and empirically test hypotheses of the influence of attachment quality on religiousness.

Kirkpatrick and Shaver (1990) outlined two opposing hypotheses. Based on Ainsworth's (1985) discussion of insecurely attached individuals' need for surrogate attachment figures, the compensation hypothesis assumed that people with an insecure, compared to those with a secure, attachment history would be more likely to be religious and particularly to believe in and experience a relationship with a personal God. In contrast, the original correspondence hypothesis assumed that securely, but not insecurely, attached individuals would have established the foundations upon which a future belief in and relationship with God could be built. This hypothesis was based on Bowlby's (e.g., 1969, 1988) notion of relatively stable working models being responsible for relationship continuity.

Empirical trials of these hypotheses have relied on self-report questionnaire methodology, in which attachment quality has been assessed either by retrospective measures of attachment to parents (Hazan and Shaver 1986) or by contemporaneous measures of nonparental adult attachment (Hazan and Shaver 1987). The results have mostly supported the compensation hypothesis. Avoidantly attached individuals in the maternal relationship have been found to be more than four times as likely to have experienced a sudden religious conversion compared to either their secure or ambivalent counterparts (Kirkpatrick and Shaver 1990). Also, insecure individuals in the maternal relationship were almost three times as likely to have experienced a significant increase in the importance of their religious beliefs in adulthood as compared to secure individuals (Granqvist 1998). In addition, insecurely (particularly avoidantly) attached individuals in both the maternal and paternal relationships have been found at low parental religiousness to be more religious (e.g., attend church, believe in a personal God, and experience a personal relationship with God) than securely attached individuals (Granqvist 1998; Kirkpatrick and Shaver 1990). The conclusions drawn from these cross-sectional studies have been corroborated in a prospective longitudinal study (Kirkpatrick 1997) that found that, when controlling for the influence of "Time 1: importance of religion," women with an ambivalent compared to those with a secure adult attachment classification were significantly more likely to have experienced, for instance, conversion, finding of a new relationship with God, and glossolalia over a four-year time span.

The correspondence hypothesis has also received some support. At high paternal religiousness, securely attached individuals in the paternal relationship were found to be more religious (e.g., to believe in a personal God and experience a personal relationship with God) than their insecure counterparts (Granqvist 1998). Kirkpatrick and Shaver (1992) found that respondents who were classified in the secure adult attachment category were more likely to also experience a secure "attachment to God" and to have a higher degree of religious commitment than insecure respondents. However, ambivalent respondents were most likely to have experienced glossolalia, thereby giving contradictory support for the compensation hypothesis. Also, in this study no information was provided about the potentially moderating effect (Baron and Kelly 1986) of attachment figures' religiousness on the association between attachment security and religiousness.

Correspondence and Compensation Revisited

In light of these seemingly contradictory findings, Kirkpatrick (1997; 1999) requested an integration of the correspondence and compensation hypotheses and tentatively suggested that each could be seen as consistent with different aspects of attachment theory; the correspondence hypothesis is true contemporaneously whereas the compensation hypothesis taps the longitudinal dynamics of attachment. In our view, such an integration necessitates a reformulation of the original correspondence hypothesis for three particular reasons. First, support for the original hypotheses has been shown in previous studies (Granqvist 1998; Kirkpatrick and Shaver 1990) to be dependent on parental religiousness,

implying that the latter needs to be incorporated. Second, and hypothetically, even if one of the original hypotheses would be consistently corroborated by main effects of attachment quality, there would still be a need to explain why many individuals with other attachment classifications are religious (cf. Noller 1992), even if somewhat less so. Third, postulating diametrically opposed hypotheses from attachment theory as was done with the original compensation and correspondence hypotheses sets severe restraints on the falsifiability of the predictions, that is, regardless of the direction of outcomes attachment hypotheses will be supported, raising the critical question of whether such a conceptualization could be considered scientifically informative (cf. Popper, e.g., 1959).

Based on these considerations, an alternative interpretation of the inconsistent findings has been proposed (Granqvist 1998); in the case of secure childhood attachment, religiousness may be based on socialization processes (cf. Noller 1992). This revised version of the correspondence hypothesis stated that the religiousness of securely attached individuals corresponds to their attachment figure's religiousness rather than to the security of the relationship per se. That is, children in secure dyads are more likely to be successfully socialized into and subsequently adopt parts of the attachment figure's system of religious behaviors and attitudes than are children in insecure dyads. Indeed, successful socialization of parental values appears by no means to be unique to the socialization of religious values. Kagan (1984) has argued that one important function of attachment is to make the child receptive to adopt parental standards. Using experimental methodology, Bandura (1965) showed that children were more likely to imitate a model who had previously been nurturant toward them. By means of observational methodology, Kochanska (1997) has demonstrated that children in dyads characterized by a mutually responsive, binding, reciprocal orientation are more internalized regarding maternal values and rules than other children. Attachment research has similarly shown that toddlers with a secure infant attachment classification are more compliant with maternal instructions than insecurely attached toddlers (Londerville and Main 1981; Matas, Arend, and Sroufe 1978). With regard to religion, it has also been repeatedly demonstrated that the religiousness of the parent and the quality and closeness of the parent-child relationship are all linked to the child's acceptance of his or her parent's religion in a manner that is consistent with the revised correspondence hypothesis (e.g., Hoge and Petrillo 1978; Hood, Spilka, Hunsberger, and Gorsuch 1996; Strahan 1991).

The compensation hypothesis remains in its original form; in the case of insecure attachment, God serves as a substituting "attachment figure" for obtaining or maintaining felt security. Just as with attachment relations in general (e.g., Ainsworth et al. 1978; Kobak and Shaver 1987; Kopp 1989) the perceived relationship to God may hence assist the individual in regulating emotions, where emotion regulation, for purposes of the present study, is defined as the processes responsible for modifying the intensity of distressing emotional reactions to accomplish one's goals (cf. Thompson 1994). Thus, a socialization and an emotion regulation pathway to religiousness is hypothesized for securely and insecurely attached individuals, respectively. Phrased as a specified answer to a classical question (see Batson, Schoenrade, and Ventis 1993): religiousness may be thought of as stemming more "from without" (i.e., socialization) in the case of secure attachment and more "from within" (i.e., emotion regulation) in the case of insecure attachment.

Attachment, Conversion, and Religious Change

The most salient effects of attachment quality on religiosity have been observed in relation to sudden religious conversions (Kirkpatrick and Shaver 1990; Kirkpatrick 1997) and significant religious changes (Granqvist 1998), with individuals who have experienced such events being more insecurely/less securely attached than those who have not. In the

latter investigation, two global categories of religious change themes were reliably derived from narratives of important life factors, which were provided by respondents who had indicated that their religious beliefs had become much more important during youth or adulthood. Themes of compensation are characterized by life situations indicating that religiousness fulfills an emotionally supportive function for a person in need, and themes of correspondence are defined as themes related to socialization-based takeover of religiousness.

Given that the religiosity of securely attached individuals is adopted from their parents' standards, it is likely that if secure persons encounter religious changes they will do so relatively early in life. Their changes are also likely to be characterized by a gradual process over time rather than by an intense, sudden event, and predominant life factors are likely to indicate themes of correspondence rather than themes of compensation. In contrast, as the religiosity of insecurely attached individuals would be based more on emotion regulation than on socialization processes, their religious changes are likely to occur during situations of emotional turmoil and therefore to be relatively intense and sudden, rather than gradual. And as parental transmission of religious standards is likely not to have been a part of the primary socialization, their changes probably occur later in life. Themes of compensation are likely to be predominant in comparison to those of correspondence.

These postulated differential religious change profiles can be considered as elaborations of James's (1902) notion of "once-born" and "twice-born" religious individuals, characterizing those with relatively secure and insecure attachment histories, respectively.

THE PRESENT STUDY

The purpose of the present study was to test the validity of four specific hypotheses, each sorting under the general compensation and revised correspondence hypotheses. Even though attachment theory generally differentiates between avoidance and ambivalence, the same predictions were outlined for both insecure attachment dimensions in the present study. This was done due to (1) lack of theoretical reasoning for firmly making different predictions regarding their respective associations with the religious phenomena of relevance to the present study and (2) the above described inconsistencies reported in previous studies on attachment and religion. Hence, it is unclear which of the insecurity dimensions (or both) that will follow the predicted pattern.

- H₁: Attachment security is positively associated with socialization-based religiosity (the revised correspondence hypothesis).
- H₂: Attachment insecurity is positively associated with emotionally based religiosity (the compensation hypothesis). H₁ and H₂ also entailed an examination of the potentially moderating effects of parental religiousness on the associations between attachment and religiosity.
- H₃: Sudden religious converts are less securely/more insecurely attached than those for whom a more gradual religious change has occurred and than those for whom no religious change has occurred (the compensation hypothesis).
- H₄: Security of attachment is linked to gradual religious changes as characterized by early onset and themes of correspondence, whereas themes of compensation are uncharacteristic (revised correspondence hypothesis). In contrast, insecurity of attachment is linked to intense and sudden religious changes as characterized by late onset and themes of compensation, whereas themes of correspondence are uncharacteristic (compensation hypothesis). In addition, it was asked whether different religious change profiles would be obtained in relation to avoidance and ambivalence of attachment or whether both would be equally related to the same profiles.

METHOD

Participants and Procedure

The sample consisted of 156 students at Uppsala University, Sweden. Sweden is a highly secularized country. Even though approximately 90% of the Swedish population are members of the Lutheran State Church of Sweden, less than 10% of the population are confessing Christians (Pettersson 1994). In order to obtain variation on the religiousness variables, a large proportion of the sample was therefore drawn from a religious population. The sample included students from two theology undergraduate classes ($n = 97$), members from an ecumenically based Christian students' union ($n = 16$), and students from two undergraduate psychology classes ($n = 43$). The sample consisted of 40% male and 60% female respondents. The mean age of the sample was 25 years (standard deviation = 5.7; range = 18–51).

The data collections were made after lectures or at union gatherings in November 1997. Five students chose not to participate, and one student provided incomplete answers. Of 162 students present at the occasions of data gathering, 156 remained for analysis, yielding a total participation rate of 96%. The first author (P. G.) informed participants of the anonymous and voluntary premises for participation. The aim was presented as an investigation of secularization-related intergenerational differences and similarities in religiousness. Questionnaires were filled out during approximately 20 minutes and then handed in to the investigator.

Measurements

The measurement instrument consisted of a questionnaire with the following variables (in specified order):

Background measures. Sex, age, and present field of studies.

Measures of parents' religiosity. Respondents were asked to indicate on a 6-step scale, where 1 = strongly disagree (SD) and 6 = strongly agree (SA), the extent to which the following statement corresponded to their opinion: "My mother was religiously active during my childhood". Those who disagreed (scale steps 1–3) were considered to have indicated low *Maternal Religious Activity*, whereas those who agreed (scale steps 4–6) were considered to have indicated high maternal religious activity. A corresponding procedure was performed to assess *Paternal Religious Activity*.

Measures of respondents' religiosity. 1) **Emotionally based religiosity:** This scale was constructed to tap the emotionally regulating functions of turning to and maintaining contact with God and religion to obtain felt security. A pool of 20 items on 6-step scales (ranging from SD to SA) was created, based on two general content areas, the first of which was Ainsworth's (1985) description of the three defining features of attachment relations: a relatively long-lived relationship with a unique individual from whom separation causes distress and loss causes grief (i.e., an affectional bond), a desire to maintain closeness to the attachment figure, and a search for comfort and security in the other. The second content area consisted of two aspects of the attachment behavioral system proposed by Bowlby (1969, 1973, 1980): use of the attachment figure as a secure base during exploration and as a haven of safety during distress. Internal consistency was established in Cronbach's correlation analyses (McKinnell 1970), which yielded an alpha coefficient of .98 for the total 20-item scale. On the bases of theoretical considerations (e.g., to tap the most relevant aspects of the emotion regulation functions and to avoid using highly similar items), issues of scale homogeneity, and future ease of administration, a group of 10 items was chosen for

the final emotionally based religiosity scale, *EBRS*, yielding an alpha coefficient of .96. These items are listed in the appendix.

2) Parental socialization of religiosity: This scale was created to measure the degree of transmission and adoption of religious standards from parent to offspring. A pool of 10 items (for each parent) on 6-step scales, ranging from SD to SA, with the following four content areas was created: shared religious behaviors, shared cognitive aspects of religiousness, shared values and commitment to religion, and shared transmission of religious standards to the next generation (often hypothetical for the respondents). Alpha coefficients for maternal and paternal socialization of religiousness were .93 and .91, respectively. Dropping any item resulted in lower internal consistency; hence the final socialization-based religiosity scale, *SBRS*, consisted of 10 items for each parent. The maternal socialization of religiousness items are listed in the appendix (item content was the same for the corresponding paternal items).

3) Religious change and sudden religious conversion: First, respondents were asked to indicate on a 6-step scale (ranging from SD to SA) the degree to which the following statement corresponded to their opinion: "I have experienced a change which meant that religion became more important to me during a period of my life". Those who agreed (scale steps 4–6) with this item were considered to have experienced a *Religious Change*. Second, respondents who indicated a religious change were asked to choose one of the following alternatives to describe the *Intenseness/Suddenness of 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" (scored 1–3). Those who indicated both response alternative 6 on the former item and 3 on the latter item were considered to have experienced a *Sudden Religious Conversion*. These measures were taken and elaborated, in order to fit the general response format, from Kirkpatrick and Shaver (1990). Third, respondents who had indicated religious change were asked to specify *Age at Change* by marking one of the following five life periods: a) 0–9, b) 10–15, c) 16–22, d) 23–30, or e) > 30 years (scored 1–5). Fourth, based on an exploratively derived list of life factors in relation to religious change (Granqvist 1998), a checklist with 15 life themes was constructed in order to quantitatively tap themes of compensation and correspondence, as defined in the introduction. Respondents for whom a religious change had occurred were asked to indicate on a 6-step scale (ranging from SD to SA) the extent to which each of the 10 compensation and five correspondence themes was descriptive of their life at the time the change occurred. Maximizing internal consistency yielded an alpha of .78 with the following five items for the final *Themes of Compensation* scale: problem in love relationship or divorce, relationship problem within family, relationship problem with others, mental or physical illness, and personal crisis. A corresponding procedure yielded a coefficient alpha of .70 with the following three items for the final *Themes of Correspondence* scale: close friendships with believers, meetings or discussions with believers, and membership in religious youth association.

Measures of perceived childhood attachment to each parent. These measures consisted of three paragraphs, originally proposed by Hazan and Shaver (1986) to tap the characteristic features of the attachment categories, as described by Ainsworth et al. (1978). Respondents were asked to indicate on a 6-step scale (where 1 = SD, 6 = SA) the extent to which each of the following paragraphs was descriptive of their memory of their childhood relationship with mother (labels within parentheses were not included in the questionnaires):

a) 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 (*Maternal Avoidance*).

b) 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 (*Maternal Security*).

c) 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 (*Maternal Ambivalence*).

Corresponding paragraphs were utilized to assess *Paternal Avoidance*, *Paternal Security*, and *Paternal Ambivalence*. Table 1 shows the characteristics and descriptive statistics for each variable in the questionnaire.

TABLE 1
MEASUREMENT CHARACTERISTICS AND DESCRIPTIVE STATISTICS

Continuous Variables	Number of Items	Scale-Range	Mean	Standard Deviation
EBSR	10	1-6	3.37	1.65
SBRS — Maternal items	10	1-6	3.67	1.34
— Paternal Items	10	1-6	3.46	1.34
Intenseness/Suddenness of Change	1	1-3	1.93	.67
Age at Change	1	1-5	2.87	.82
Themes of Compensation	5	1-6	2.19	1.24
Themes of Correspondence	3	1-6	3.00	1.38
Maternal Avoidance	1	1-6	1.48	1.10
Maternal Security	1	1-6	4.67	1.40
Maternal Ambivalence	1	1-6	2.35	1.62
Paternal Avoidance	1	1-6	1.62	1.04
Paternal Security	1	1-6	4.31	1.45
Paternal Ambivalence	1	1-6	2.87	1.70

Categorical Variables	Number of Items	Frequency
Maternal Religious Activity	1	Low = 101, High = 55
Paternal Religious Activity	1	Low = 111, High = 45
Religious Change	1	Change = 82, No change = 74
Sudden Religious Conversion	2	Sudden conversion = 8, No sudden conversion = 148

RESULTS

There were no sex differences on the continuous religiousness or attachment variables according to *t* tests, nor on the categorical religiousness variables according to χ^2 tests, all *ps* > .05. All correlations between attachment variables within and between parents were significant, range of $r_{s(df = 145-151)} = .16$ to $-.68$, range of *ps* = < .04 - < .001. The between-parent security correlation, the between-parent insecurity relations (e.g., maternal avoidance in relation to paternal ambivalence), and the within-parent insecurity correlations (e.g., maternal avoidance in relation to maternal ambivalence) were positive. The security-insecurity associations between parents (e.g., maternal avoidance in relation to paternal security) and within parents (e.g., maternal avoidance in relation to maternal security) were negative. EBSR was negatively related to SBRS, $r_{s(df = 152 \text{ and } 151)} = -.17$ and $-.29$, both *ps* < .05, for correlations between EBSR and maternal and paternal socialization of religiosity, respectively.

Attachment in Relation to Emotionally Based and Socialization-Based Religiosity

Associations between attachment variables, EBRs, and SBRS for the total sample and at low and high parental religious activity are shown in Table 2. By inspecting the leftmost columns of Table 2, it can be seen that both maternal and paternal avoidance were positively related to EBRs in the total sample (ignoring parental religious activity), which was in agreement with predictions. Both maternal and paternal ambivalence were unrelated to EBRs. As hypothesized, both maternal and paternal security were positively related to SBRS. In addition, maternal and paternal insecurity (both avoidance and ambivalence) were negatively associated with SBRS.

TABLE 2

PRODUCT MOMENT CORRELATIONS BETWEEN ATTACHMENT VARIABLES, EBRs, AND SBRS FOR THE TOTAL SAMPLE AND AT LOW AND HIGH PARENTAL RELIGIOUS ACTIVITY

Maternal Attachment	Total Sample (N = 156)		Low Maternal Religious Activity (n = 99)		High Maternal Religious Activity (n = 55)	
	EBRS	SBRS	EBRS	SBRS	EBRS	SBRS
Avoidance	.13 ^a	-.30 ^{****}	.28 ^{***}	-.32 ^{****}	.11	-.10
Security	-.04	.29 ^{****a}	-.19 ⁺	.23 [*]	.10	.36 ^{**}
Ambivalence	.02 ^a	-.22 ^{**}	.14	-.17	-.04	-.26 ⁺

Paternal Attachment	Total Sample (N = 156)		Low Paternal Religious Activity (n = 108)		High Paternal Religious Activity (n = 45)	
	EBRS	SBRS	EBRS	SBRS	EBRS	SBRS
Avoidance	.18 ^a	-.26 ^{****}	.30 ^{***}	-.27 ^{***}	-.06	-.29 ⁺
Security	-.01	.27 ^{****a}	-.11	.18 ⁺	.10	.46 ^{***}
Ambivalence	.01 ^a	-.27 ^{****}	.08	-.19 [*]	-.01	-.41 ^{***}

NOTE: ^a Predicted relations = one tailed/EBRS = Emotionally Based religiosity Scale, SBRS = Socialization-Based Religiosity Scale/SBRS means maternal socialization of religiosity when correlated with maternal attachment, and paternal socialization of religiosity when correlated with paternal attachment; ⁺ $p < .10$, ^{*} $p < .05$, ^{**} $p < .01$, ^{***} $p < .005$, ^{****} $p < .001$; two-tailed.

By splitting the sample into low and high parental religious activity groups, positive associations remained at low parental religious activity between both maternal and paternal avoidance and EBRs, whereas no associations between avoidance and EBRs were obtained at high parental religious activity. Maternal and paternal ambivalence were unrelated to EBRs at both low and high parental religious activity. The predicted pattern of significant associations between SBRS and maternal and paternal security remained in both low and high parental religious activity groups, although paternal security was only marginally associated with SBRS at low paternal religious activity.

Attachment and Sudden Religious Conversion

Table 3 shows standardized attachment variable means, standard deviations, and effect sizes of differences in means for respondents who had experienced a sudden religious conversion (sudden converts), for those who had experienced a religious change that was not characterized by an intense and sudden event (religious change), and for those who had not experienced a religious change (no change). Planned t tests were performed to test the predictions of the sudden convert group having higher means on attachment insecurity

TABLE 3
 PLANNED *t* TESTS AND EFFECT SIZES OF DIFFERENCES IN STANDARDIZED ATTACHMENT VARIABLE MEANS FOR THE SUDDEN
 RELIGIOUS CONVERSION GROUP IN COMPARISON TO THE RELIGIOUS CHANGE AND NO-CHANGE GROUPS

Attachment Variables	(1) Sudden Converts		(2) Religious Change		(3) No Change		Comparison 1 vs 2		Comparison 1 vs 3	
	M	SD	M	SD	M	SD	<i>t</i> values	Effect sizes	<i>t</i> values	Effect sizes
<i>Maternal Attachment</i>										
Avoidance	.24	.94	.17	1.26	-.19	.94	.16	.06	1.75*	.66
Security	-1.02	1.26	-.02	1.06	.13	1.26	-2.49**	-.92	-3.44****	-1.29
Ambivalence	1.10	1.21	-.03	.98	-.10	1.21	3.00****	1.12	3.32****	1.24
<i>Paternal Attachment</i>										
Avoidance	.49	.96	.13	1.12	-.19	.96	.87	.33	2.17*	.81
Security	-1.29	1.18	.04	.95	.09	1.18	-3.48****	-1.37	-3.57****	-1.42
Ambivalence	.81	1.17	-.03	.99	-.06	1.17	2.24*	.83	2.39**	.89

NOTE: *n*s were 8 for the sudden converts (1), 74 for the religious change (2), and 74 for the no change (3) groups // ^aEffect sizes were computed according to the formula provided by Hedges (1981): $(M_1 - M_2) / S_{pooled}$; * $p < .05$, ** $p < .01$, *** $p < .005$, **** $p < .001$; one-tailed.

(avoidance and ambivalence) and lower means on attachment security than the religious change and no change groups.

As hypothesized, respondents who had experienced a sudden religious conversion had significantly lower values on maternal security, as well as higher values on maternal ambivalence than respondents who had experienced a gradual religious change (comparison 1 vs. 2). No differences between the sudden convert and religious change groups were obtained on maternal avoidance. However, all predictions of differences in maternal attachment means were confirmed in the comparisons of the sudden religious converts and those who had not experienced a religious change (comparison 1 vs. 3); sudden converts scored significantly higher on both maternal avoidance and ambivalence. In addition, the sudden convert group had significantly lower values on maternal security than the no-change group.

Differences on the paternal attachment dimensions were virtually identical; sudden converts scored lower on paternal security and higher on paternal ambivalence than those who had experienced a gradual religious change (comparison 1 vs. 2), whereas no significant differences were obtained between these groups on paternal avoidance. As for the maternal comparisons, all predictions of differences in paternal attachment dimensions were confirmed in the comparisons of the sudden convert and no-change groups (comparison 1 vs. 3); sudden religious converts had higher values on both paternal avoidance and ambivalence, as well as lower values on paternal security than those who had not experienced a religious change.

Note that these significant effects emerged despite the low statistical power that resulted from only eight respondents having experienced sudden religious conversions. Hence, effect sizes of differences in means were large for all significant findings ($> .80$; e.g., Kirk 1996), except for the sudden converts vs. no-change comparison on maternal avoidance, which yielded a medium effect size ($> .50$).

Attachment and Religious Change Profiles

Cluster analysis was employed to test the hypothesis of different religious change profiles in relation to attachment security and insecurity. Cluster analysis is a multivariate statistical technique for empirically classifying objects into groups and for assisting in determining an appropriate number of groups, based on within-group proximity and between-group distance with respect to the variable patterning within the individual. In this case, the purpose was to (1) empirically establish different religious change clusters among individuals who had experienced a religious change ($n = 82$) and (2) to investigate whether or not these clusters were differentially related to attachment security and insecurity. The strategy for conducting the analyses was based on the procedures outlined by Hair, Anderson, Tatham, and Black (1995). Suddenness/intenseness of change, age at change, themes of compensation, and themes of correspondence were included as internal variables in the cluster analyses, whereas attachment variables were utilized as external variables. All included variables were standardized into Z-scores in order to minimize the potential problem of differential variable weights due to different scale formats. To determine an appropriate number of clusters, an agglomerative hierarchical cluster analysis (grouping cases), based on squared Euclidean distance measures and Ward's method for combining clusters, was performed, which yielded a satisfactory solution of two clusters (percentage increase in the agglomeration coefficient = 161%; explained variance = 61.7%). To fine-tune the results from the hierarchical procedure, a nonhierarchical (K-means) cluster analysis was then performed. The results of this analysis, along with effect sizes of differences in means, are presented in the top panel of Table 4, in which it can be seen that all religious change variables differed significantly between the two clusters at large effect

size levels. Cluster 1 was characterized by high scores on suddenness/intenseness of change, age at change, and themes of compensation, and by low scores on themes of correspondence. In contrast, cluster 2 was characterized by low scores on suddenness/intenseness of change, age at change, and themes of compensation, and by high scores on themes of correspondence.

TABLE 4

STANDARDIZED GROUP MEANS, STANDARD DEVIATIONS, F RATIOS, AND EFFECT SIZES FOR TWO-GROUP NONHIERARCHICAL CLUSTER SOLUTION BASED ON RESPONDENTS WHO HAD INDICATED RELIGIOUS CHANGE + PLANNED *t* TESTS OF DIFFERENCES IN CLUSTER MEANS ON ATTACHMENT VARIABLES

Cluster Variables	Cluster 1 (<i>n</i> = 36)		Cluster 2 (<i>n</i> = 46)		F ratios	^a Effect Sizes
	Means	SD	Means	SD		
Suddenness/						
Intenseness of Change	.48	.83	-.38	.95	18.42 ^{****}	.96
Age at Change	.61	.88	-.48	.80	34.82 ^{****}	1.35
Themes of Compensation	.70	1.00	-.55	.50	54.69 ^{****}	1.74
Themes of Correspondence	-.71	.85	.55	.79	57.37 ^{****}	-1.69
External Variables	Cluster 1 (<i>n</i> = 36)		Cluster 2 (<i>n</i> = 46)		^b <i>t</i> values	^a Effect sizes
	Means	SD	Means	SD		
<i>Maternal Attachment</i>						
Avoidance	.72	1.53	-.27	.63	3.94 ^{****}	.97
Security	-.64	1.26	.30	.76	-4.15 ^{****}	-.96
Ambivalence	.38	1.06	-.16	1.00	2.36 ^{**}	.53
<i>Paternal Attachment</i>						
Avoidance	.53	1.32	-.13	.81	2.75 ^{***}	.63
Security	-.41	1.16	.19	.84	2.63 ^{**}	-.61
Ambivalence	.11	1.03	.01	1.05	.42	.12

NOTE: ^a Computed according to the formula provided by Hedges (1981) / ^b*t* tests were one-tailed; ** *p* < .01, *** *p* < .005, **** *p* < .001.

Planned *t* tests were then performed to investigate whether or not the two clusters were related to attachment security and insecurity in the hypothesized manner. Results from these analyses are presented in the bottom panel of Table 4, which shows that the prediction of differential religious change profiles in relation to attachment security and insecurity was strongly supported. Members in cluster 1 had higher scores on maternal avoidance and ambivalence, whereas members in cluster 2 had higher scores on maternal security. Effect sizes of differences in means were large for the avoidance and security comparisons, and medium for the ambivalence comparison. Similar results were obtained for the comparisons between clusters on the paternal attachment variables; cluster 1 was characterized by higher scores on paternal avoidance, whereas cluster 2 had higher scores on paternal security, both at a medium effect size level. However, no significant difference between clusters was obtained for the paternal ambivalence comparison.¹

DISCUSSION

The predictions outlined in the present study were, taken as a whole, strongly supported. First, avoidance in the attachment relations to both parents was positively

related to emotionally based religiosity, and particularly so at low parental religious activity. However, ambivalence was unrelated to emotionally based religiosity. Second, regardless of parental religious activity, security of attachment to both parents was generally positively associated with socialization-based religiosity. In contrast, insecurity was generally negatively related to socialization-based religiosity. Third, sudden religious converts reported being less securely and more ambivalently attached to both parents than were respondents for whom a more gradual religious change had occurred. In addition, sudden converts reported being more insecurely (avoidantly and ambivalently) and less securely attached to both parents than those for whom no religious change had occurred. The sizes of these differences were generally large. Fourth, by means of cluster analysis different religious change profiles in relation to security and insecurity of attachment were demonstrated. More specifically, insecurity (and particularly avoidance) of attachment to both parents was linked to a group of respondents (cluster 1) who had experienced religious changes as characterized by more intensity and suddenness, later onset, more of compensatory life themes, and less of correspondence life themes. In contrast, security of attachment to both parents was linked to a group of respondents (cluster 2) who had experienced religious changes as characterized by a more gradual process, an earlier onset, a lower degree of compensatory life themes, and a higher degree of correspondence life themes. In terms of effect sizes, these differences ranged from medium to large.

Previous Studies and Theoretical Issues

Several issues regarding the predictions and results of the present study need to be highlighted in relation to previous studies and theoretical concerns. To begin with, the revised correspondence hypothesis withstood falsification in that security of attachment was shown to be positively associated with socialization-based religiosity. However, these results do not imply that the religiosity of securely attached individuals can not serve other functions or be related to other factors than the socialization of parental standards. For instance, even if emotion regulation is not specified nor thought of as a primary causal agent, securely attached individuals may also derive a sense of felt security from religion, which may thereby serve as a secondary reinforcer. Neither do these results imply that the religiosity of securely attached individuals would optimally be identical with their parents' religiosity but merely that intergenerational similarity in religiousness is likely to be higher in secure than in insecure attachment dyads and that this might reflect a difference in susceptibility of adopting important standards held by the primary attachment figures in childhood.

In agreement with previous studies on religiosity and perceived attachment quality to parents (Kirkpatrick and Shaver 1990), the compensation predictions were supported for avoidance, but not for ambivalence, in that the former was positively associated with emotionally based religiosity, particularly at low parental religious activity. Interestingly, the opposite pattern of results has been obtained in two studies (Kirkpatrick 1997, 1998) that longitudinally investigated links between adult attachment styles and religiosity. Whether these differences reflect methodological biases or truly differential implications of childhood and adult insecure attachment styles remains for future studies to resolve. Kirkpatrick (1998, 1999) has suggested that the combination of negative mental models of self with positive models of others, which is thought to underlie ambivalent adult attachment (Bartholomew and Horowitz 1991), is associated with positive religious change over time. However, the reason for why this particular combination of mental models is true for adult nonparental attachment but not for perceptions of childhood attachment to parents, in relation to religious change in adults, is unclear at present.

The findings of sudden religious converts having perceived more insecure and less secure attachment histories than nonconverts conform to results obtained in previous studies (cf. Granqvist 1998; Kirkpatrick and Shaver 1990; Ullman 1989). Given the consistency in results across studies and the substantial effect sizes obtained in the present study, the connection between attachment insecurity and sudden religious conversion may be considered the most robust and corroborated finding from the research on attachment and religion. However, this study was the first to document that sudden converts perceive less secure and more ambivalent attachment histories than those for whom a more gradual religious change had occurred. A tentative conclusion is that the more sudden and intense a religious change is, the more it is associated with attachment insecurity, particularly ambivalence (cf. Kirkpatrick 1995, 1999). This interpretation is in line with ambivalents' observed tendency to desperately seek care and easily fall in love (e.g., Hazan and Shaver 1987, 1994a), and may be a continuation of the inconsistency in parental caregiving that has been shown to be characteristic of parents in ambivalent dyads (e.g., Ainsworth et al. 1978).

Utilizing cluster analyses to establish differential religious change profiles yielded a satisfactory two cluster solution, where cluster 1 was characterized by respondents having experienced sudden / intense changes at a comparatively high age, and during life situations characterized by relationship problems (with parents, peers, and lovers), personal crises, and mental / physical illness, whereas themes indicating adoption of religious standards were uncharacteristic. This cluster bears striking resemblances to James's (1902) notion of "twice-born" religious individuals. In addition, members of this cluster reported a comparatively high degree of insecurity (particularly avoidance) and a low degree of security of attachment to both parents, suggesting that attachment insecurity (and again particularly avoidance) may underlie the path toward becoming "twice-born". The salience of the themes of compensation for this cluster could be interpreted as demonstrating that there is continuity in attachment relationship problems, with parents in childhood and peers and lovers in adolescence and adulthood, and that the religious changes may serve compensatory functions by turning the individual toward God as the perfect attachment substitute, with whom a personal relationship can be established, one which is not susceptible to the same restraints as the earthly attachment relations (cf. Kirkpatrick 1999).

In contrast, cluster 2 was characterized by respondents having experienced gradual changes at a comparatively young age, and during life situations that highlighted the importance of socialization of religious standards from significant persons (e.g., peers and members of Christian youth associations) in the individual's life, just as was shown to be true for the socialization of parents' religious standards. Compensatory life themes were not characteristic for the religious changes of these respondents. This cluster bears resemblances to James's (1902) notion of "once-born" religious individuals. The members of this cluster also reported a high degree of security and a low degree of insecurity of attachment to both parents, thereby suggesting that attachment security may be relevant to understand the profile of "once-born" religious individuals. The importance of the socialization of both parents' and friends' religious standards may be explained by security of the primary attachment relations in childhood as being predictive of high social competence (e.g., Bohlin, Hagekull, and Rydell 1998; Elicker, Englund, and Sroufe 1992), which may be associated with a tendency to partially adopt standards and values in social and personal relationships (cf. Hill, Rubin, and Peplau 1976; Moreland and Levine 1988).

The fact that avoidance and ambivalence were not differentially related to the profiles of religious change suggests that a common insecurity dimension may underlie the same cluster. However, two points need to be raised with regard to this interpretation. First, *t* tests showed that avoidance differed more strongly between clusters than did ambivalence (particularly in the paternal relationship), suggesting that the former is more important to

understand the patterning of religious change variables that was characteristic for cluster 1. Second, ambivalence appears to be more important to understand the suddenness/intenseness of change than avoidance is, in that ambivalence was higher for those who had experienced highly sudden/intense changes (the sudden religious converts) than for those who had experienced more gradual changes, whereas avoidance did not differ between these groups (see Table 3).

Maternal and paternal attachment variables consistently had strikingly similar links to religiousness throughout this whole study. This is unlike both Kirkpatrick and Shaver's (1990) study, which found superior influence of maternal attachment, and our previous study (Granqvist 1998), showing paternal attachment influence to be stronger for most variables investigated. Future studies will have to continue to address whether or not maternal and paternal attachment have similar or differential effects on adults' religiousness and if cultural differences in maternal and paternal child rearing investments could be relevant to our understanding of such potentially differential effects. At present, it seems reasonable to assume that both maternal and paternal attachment, as well as the religiousness of both parents, are important.

Thus, the results of the present study seem to indicate that religiosity stems more from an emotion regulation strategy to obtain felt security (from "within") in the case of perceived insecurity of attachment and more from socialization processes (from "without") in the case of perceived security of attachment. These findings and their interpretations signify an important integration of the original compensation and correspondence hypotheses. Besides having withstood falsification in the present study, our revised correspondence hypothesis has at least three important advantages as compared to the original one: (1) it incorporates the previously, consistently documented (Granqvist 1998; Kirkpatrick and Shaver 1990) moderating effect of parental religiosity, (2) it explains why many individuals with other than insecure attachment classifications are religious, and (3) it leads attachment predictions to be falsifiable to a larger extent. Also, by specifying separate conditions of emotion regulation and socialization mechanisms, this reformulation provides a new perspective from which to answer the classical question (see Batson et al. 1993 for a review) of whether religiosity originates from within or without.

Methodological Issues and Future Investigations

Several issues pertaining to methodological concerns and future directions deserve to be mentioned. By utilizing a cross-sectional design, the present study does not permit a drawing of causal inferences, for purposes of which replication studies employing prospective longitudinal designs are a necessity. And as is true for the vast majority of studies in the psychology of religion, the results of the present study can not be generalized a priori to traditions outside of Western monotheism. Also, future studies will do good in transcending the kind of "sample of convenience" that student samples exemplify and to move towards a random selection of subjects. The latter point, however, is increasingly demanding in countries, such as Sweden, where the secularization process is prominent, implying that if a random sample is the goal, huge data collections are a necessity. In such countries, stratified sampling appears to be a more reasonable demand. Furthermore, shared methodological variance is a potential validity threat to this and all other studies that use a single mode of measurement, suggesting that different modes such as structured interviews and behavior observations are called for.

This concern is particularly crucial with regard to the selection of attachment measures in future studies. Those employed in the present study risk being confounded by, for instance, social desirability and diverse defensive strategies. While awaiting the utopia of a prospective longitudinal study being conducted, which assesses infants in the Strange

Situation and adults on religiosity measures, the method of choice for future investigations appears to be the extensively validated (e.g., Main, Kaplan, and Cassidy 1985; Waters et al. 1995; van Ijzendoorn 1995) Adult Attachment Interview (George et al. 1985). Until such investigations have been performed, the conclusions drawn from the currently available studies on attachment and religion, including those (Kirkpatrick and Shaver 1992; Kirkpatrick 1997) that have employed Hazan and Shaver's (1987) unsatisfactorily validated (e.g. Baldwin and Fehr 1995; Crowell and Treboux 1995; De Haas, Bakermans-Kranenburg, and van Ijzendoorn 1994) adult attachment measures, must be considered as suggestive. Further, although attachment research convention has it that individual differences in attachment is to be assessed in terms of categories rather than dimensions, the present study utilized the latter² based on the assumption that a self-classificatory procedure yielding categorical data is associated with both lower reliability and discriminatory capacity than that obtained from multi-item ratings on continuous scales (cf. e.g., Hazan and Shaver 1994b; Simpson, Rholes, and Nelligan 1992). Nevertheless, future investigations should seek to replicate the results of the present study by using the more conventional attachment categories approach.

New religiosity measures were employed in the present study. The Emotionally Based Religiosity Scale deserves special attention. First, by specifically having operationalized "the attachment behavioral system" (Bowlby 1969) and "attachment relations" (Ainsworth 1985) with direct reference to the religious individual's experience of and relationship with God, while at the same time having achieved remarkable homogeneity, we now possess an easily administrated instrument with good psychometric properties, which can be utilized in diverse areas within the psychology of religion. For instance, the EBRs may have some interesting conceptual and empirical links to the domains of "religion and coping with stress" (cf. e.g., Koenig, George, and Siegler 1988; Pargament 1990, 1997; Pargament and Park 1997), particularly to the notion of "emotion-focused coping" (Lazarus and Folkman 1984), as well as to "the affective theory of religion" (e.g., Hill 1995). Emotionally based religiosity may also be linked to or have implications for, among other things, attributional/explanatory style (Heider 1958; Hood et al. 1996), and diverse health outcomes (cf. e.g., O'Brien 1982; Schaefer and Gorsuch 1991). The Socialization-Based Religiosity Scale, which was also shown to possess adequate homogeneity, may be used when research efforts are directed at determining to what extent the offspring has adopted the religious standards of his or her parents. Further, the establishment of the themes of compensation and correspondence scales has made possible for future investigators to quantitatively tap into empirically derived predominant life themes in relation to religious change, implying that open questions and exploratory-like qualitative procedures can be supplemented. To the extent that it is possible, all these instruments would optimally be validated against behavioral observations, and in the case of SBRS and the themes of compensation and correspondence scales, also against nonretrospective measures.

Although the reformulation of the correspondence hypothesis was not undertaken with Hazan and Shaver's (1987) adult attachment styles in mind, further research efforts deserve to be directed at investigating whether or not the outlined emotion regulation and socialization pathways to religiosity are also true in relation to insecurity and security of the attachment relationships in adulthood. Besides explaining and deriving predictions from individual differences in attachment quality, attachment theory also provides a normative account of mammalian behavior in response to certain situations such as separation from and loss of primary attachment figures. Hence, with regard to adult attachment and religion in humans, it may be equally valid to focus on such topics as the normative effects of divorce and bereavement on religiosity. Although such issues have traditionally been approached from a sociological "deprivation" frame of reference (e.g., Glock and Stark 1965), possible attachment theoretical interpretations and predictions

merit attention (cf. Kirkpatrick 1999). Finally, research efforts should be directed at understanding whether or not the “therapeutic” functions of religiosity (e.g., Batson et al. 1993; Bergin 1980, 1983) are related to individual differences in attachment style. Of special interest from a clinical point of view would be to investigate whether or not religiosity may have positive effects on mental health outcomes for those whose attachment relations are or have been insecure, and to outline the extent to which parental religiousness may moderate these potential effects.

To conclude, attachment theory has taken us further down the road of detecting, explaining, and understanding empirical regularities within the domain of the psychology of religion. Yet, we still have a long way to go, especially with regard to methodological issues, before its true utility and limitations can be fully comprehended.

NOTES

Acknowledgements: Thanks to Håkan Stattin for suggestions pertaining to the cluster analyses and to Lee A. Kirkpatrick for many helpful comments on previous drafts of this article.

¹In order to determine whether or not a third cluster could differentiate between ambivalence and avoidance, a three-cluster solution was chosen on the basis of a corresponding hierarchical cluster analysis to that reported above (increase in agglomeration coefficient = 41%; explained variance = 73%). The results from this procedure were once again fine-tuned in a nonhierarchical analysis. However, this solution resulted in two clusters not being clearly differentiated, neither on the internal cluster variables nor on the external attachment variables. Furthermore, the same cluster had the highest values on avoidance and ambivalence, both in the maternal and paternal comparisons, implying that a third cluster did not contribute to a differentiation of avoidance and ambivalence in relation to characteristics of religious change.

²Analyses on all of the above reported religiosity variables were also made on the basis of categorical attachment classifications. Respondents who had indicated a higher value on one attachment style than on the others were assigned to the category with which the highest value was associated, whereas those who had similar values on more than one style ($n_s = 26$ and 16 in the maternal and paternal relationships, respectively) were dropped from subsequent analyses. This procedure yielded only 3 and 4 respondents in the maternal and paternal avoidant categories, respectively (n_s for secure and ambivalent maternal styles = 117 and 20, respectively; corresponding paternal numbers = 89 and 37). Due to the small number of avoidants obtained, the results from these analyses may not be generalizable. However, the general pattern of results obtained from the between-group comparisons conforms to the conclusions drawn above (e.g., paternal avoidants had highest scores on EBRS, whereas secures had highest scores on SBRs, maternal and paternal ambivalents were most likely to have experienced a sudden religious conversion). More detailed information can be provided from the first author (P. G.) upon request.

REFERENCES

- Ainsworth, M. D. 1985. Attachments across the life-span. *Bulletin of the New York Academy of Medicine* 61: 792–812.
- Ainsworth, M. D., M. C. Blehar, E. Waters, and S. Wall. 1978. *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum.
- Baldwin, M. W., and B. Fehr. 1995. On the instability of attachment style ratings. *Personal Relationships* 2: 247–61.
- Bandura, A. 1965. Vicarious processes: A case of no-trial learning. In *Advances in experimental social psychology*, Vol. 2, edited by L. Berkowitz, 1–55. San Diego, CA: Academic Press.
- Baron, R. M., and D. A. Kenny. 1986. The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology* 51: 1173–82.
- Bartholomew, K., and L. M. Horowitz. 1991. Attachment styles in young adults: A test of a four-category model. *Journal of Personality and Social Psychology* 61: 226–44.
- Batson, C. D., P. Schoenrade, and W. L. Ventis. 1993. *Religion and the individual: A social psychological perspective*. NY: Oxford University Press.
- Bergin, A. 1980. Psychotherapy and religious values. *Journal of Consulting and Clinical Psychology* 48: 95–105.
- . 1983. Religiosity and mental health: A critical reevaluation and meta-analysis. *Professional Psychology: Research and Practice* 4: 170–84.
- Bohlin, G., B. Hagekull, and A-M Rydell. 1998. *Attachment and social functioning: A longitudinal study from infancy to middle childhood*. Manuscript submitted for publication.
- Bowlby, J. 1969. *Attachment*. Vol. 1 of Attachment and loss. NY: Basic Books.

- . 1973. *Separation anxiety and anger*. Vol. 2 of Attachment and loss. NY: Basic Books.
- . 1980. *Loss*. Vol. 3 of Attachment and Loss. NY: Basic Books.
- . 1988. *A secure base: Parent-child attachment and healthy human development*. NY: Basic Books.
- Bretherton, I. 1985. Attachment theory: Retrospect and prospect. In *Growing points of attachment theory and research*, edited by I. Bretherton and E. Waters. *Monographs of the Society for Research in Child Development* 50:3–35.
- . 1987. New perspectives on attachment relations: Security, communication, and internal working models. In *Handbook of infant development* (2nd ed.), edited by J. D. Osofsky, 1061–1100. New York: Wiley.
- . 1991. The roots and growing points of attachment theory. In *Attachment across the life-cycle*, edited by C. M. Parkes, J. Stevenson-Hinde, and P. Marris. London and New York: Tavistock / Routledge.
- Crowell, J. A., and D. Treboux. A review of adult attachment measures: Implications for theory and research. *Social Development* 4: 294–327.
- De Haas, M. A., M. J. Bakermans-Kranenburg, and M. H. van Ijzendoorn. 1994. The Adult Attachment Interview and questionnaires for attachment style, temperament, and memories of parental behavior. *The Journal of Genetic Psychology* 155: 471–86.
- Elicker, J., M. Englund, and L. A. Stroufe. 1992. Predicting peer competence and peer relationships from early parent-child interactions. In *Family-peer relationships: Modes of linkage*, edited by R. D. Parke and G. W. Ladd, 77–106. Hillsdale, NJ: Lawrence Erlbaum ass.
- George, C., N. Kaplan, and M. Main. 1985. *Attachment interview for adults*. Unpublished manuscript. University of California, Berkeley.
- Glock, C. Y., and R. Stark. 1965. *Religion and society in tension*. Chicago: Rand McNally.
- Granqvist, P. 1998. Religiousness and perceived childhood attachment: On the question of compensation or correspondence. *Journal for the Scientific Study of Religion* 37: 350–67.
- Hair, J. F., Jr., R. E. Anderson, R. L. Tatham, and W. C. Black. 1995. *Multivariate data analysis with readings*. 4th ed. Prentice-Hall International, Inc.
- Hazan, C., and P. R. Shaver. 1986. *Parental Caregiving Style Questionnaire*. Unpublished questionnaire.
- . 1987. Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology* 52: 511–24.
- . 1994a. Attachments as an organized framework for research on close relationships. *Psychological Inquiry* 5: 1–22.
- . 1994b. Deeper into attachment theory. *Psychological Inquiry* 5: 68–79.
- Hedges, L. V. 1981. Distributional theory for Glass's estimator of effect size and related estimators. *Journal of Educational Statistics* 6: 107–28.
- Heider, F. 1958. *The psychology of interpersonal relations*. NY: Wiley.
- Hill, C. T., Z. Rubin, and L. A. Peplau. 1976. Breakups before marriage: The end of 103 affairs. *Journal of Social Issues* 32: 147–68.
- Hill, P. C. 1995. Affective theory and religious experience. In *Handbook of religious experience*, edited by R. W. Hood, Jr., 353–78. Birmingham, AL: Religious Education Press.
- Hoge, D. R., and G. H. Petrillo. 1978. Church participation among high school youth. *Journal for the Scientific Study of Religion* 17: 359–79.
- Hood, R. W., Jr., B. Spilka, Jr., B. Hunsberger, and R. L. Gorsuch. 1996. *The Psychology of religion: An empirical approach*. (2nd ed.) NY: Guilford.
- James, W. 1902. *Varieties of religious experience*. NY: Longmans, Green.
- Kagan, J. 1984. *The nature of the child*. NY: Basic.
- Kirk, R. E. 1996. Practical significance: A concept whose time has come. *Educational and Psychological Measurement* 56: 746–59.
- Kirkpatrick, L. A. 1992. An attachment-theory approach to the psychology of religion. *The International Journal for the Psychology of Religion* 2: 3–28.
- . 1994. The role of attachment in religious belief and behavior. In *Attachment processes in adulthood*, edited by K. Bartholomew and D. Perlman. *Advances in Personal Relationships* 5: 239–65. London and Bristol, PA: Jessica Kingsley Publishers.
- . 1995. Attachment theory and religious experience. In *Handbook of religious experience*, edited by R. W. Hood, Jr., 446–75. Birmingham, AL: Religious Education Press.
- . 1997. A longitudinal study of changes in religious belief and behavior as a function of individual differences in adult attachment style. *Journal for the Scientific Study of Religion* 36: 207–17.
- . 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: 961–73.
- . 1999. Attachment and Religious Representations and Behavior. In *Handbook of attachment theory and research*, edited by J. Cassidy and P. R. Shaver. NY: Guilford.
- Kirkpatrick, L. A., and P. Shaver. 1990. Attachment theory and religion: Childhood attachments, religious beliefs and conversions. *Journal for the Scientific Study of Religion* 29: 315–34.
- . 1992. An attachment-theoretical approach to romantic love and religious belief. *Personality and Social Psychology Bulletin* 18(3): 266–75.
- Kobak, R. R., and A. Sceery. 1988. Attachment in late adolescence: Working models, emotion regulation, and representations of self and others. *Child Development* 59: 135–46.
- Kobak, R., and P. R. Shaver. 1987. *Strategies for maintaining felt security: A theoretical analysis of continuity and change in styles of social adaptation*. Unpublished manuscript. University of Denver.

- Koenig, H. G., L. K. George, and I. C. Siegler. 1988. The use of religion and other emotion-regulating coping strategies among older adults. *The Gerontologist* 28: 303–10.
- Kochanska, G. 1997. Mutually responsive orientation between mothers and their young children: Implications for early socialization. *Child Development* 68: 94–112.
- Kopp, C. B. 1989. Regulation of distress and negative emotions: A developmental view. *Developmental Psychology* 25: 343–54.
- Lazarus, R. A., and S. Folkman. 1984. *Stress, appraisal, and coping*. NY: Springer.
- Londerville, S., and M. Main. 1981. Security of attachment, compliance, and maternal training in the second year of life. *Developmental Psychology* 17: 289–99.
- Main, M., N. Kaplan, and J. Cassidy. 1985. Security in infancy, childhood and adulthood: A move to the level of representation. In *Growing points of attachment theory and research*, edited by I. Bretherton and E. Waters. *Monographs of the Society for Research in Child Development* 50: 66–104.
- Matas, L., R. A. Arend, and L. A. Sroufe. 1978. Continuity of adaptation in the second year: The relationship between quality of attachment and later competence. *Child Development* 49: 547–56.
- McKennell, A. 1970. Attitude measurement: Use of coefficient alpha with cluster or factor analysis. *Sociology* 4: 227–45.
- Moreland, R. L., and J. M. Levine. 1988. Group dynamics over time: Development and socialization in small groups. In *The social psychology of time*, edited by J. E. McGrath, 151–81. Newbury Park, CA: Sage.
- Noller, P. 1992. Religion conceptualized as an attachment process: Another deficiency approach to the psychology of religion? *The International Journal for the Psychology of Religion* 2: 29–36.
- O'Brien, M. E. Religious faith and adjustment to long-term hemodialysis. *Journal of Religion and Health* 21: 68–80.
- Pargament, K. I. 1990. God help me: Toward a theoretical framework of coping for the psychology of religion. In *Research in the Social Scientific Study of Religion* 2: 195–224.
- . 1997. *The psychology of religion and coping: Theory, research, practice*. NY: Guilford.
- Pargament, K. I., and C. L. Park. 1997. In times of stress: The religion-coping connection. In *The psychology of religion: Theoretical approaches*, edited by B. Spilka and D. N. McIntosh, 43–54. Colorado, Oxford: Westview Press.
- Petersson, T. 1994. Svensk mentalitet i ett internationellt perspektiv. Ungdomars välfärd och värderingar. [Swedish mentality in an international perspective: Welfare and values of youths.] *Statens Offentliga Utredningar* 73. Stockholm: Civildepartementet.
- Popper, K. 1959. *The logic of scientific discovery*. London: Routledge and Kegan Paul.
- Schaefer, C. A., and R. L. Gorsuch. 1991. Psychological adjustment and religiousness: The multivariate belief-motivation theory of religiousness. *Journal for the Scientific Study of Religion* 30: 448–61.
- Shaver, P. R., and C. Hazan. 1993. Adult romantic attachment: Theory and evidence. In *Advances in personal relationships*, edited by D. Perlman and W. Jones, vol. 4: 29–70. London: Jessica Kingsley.
- Shaver, P. R., C. Hazan, and D. Bradshaw. 1988. Love as attachment: The integration of three behavioral systems. In *The psychology of love*, edited by R. J. Sternberg and M. L. Barnes, 68–99. New Haven, CT: Yale University Press.
- Simpson, J. A., W. S. Rholes, and J. S. Nelligan. 1992. Support seeking and support giving within couples in an anxiety provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology* 62: 434–46.
- Sroufe, L. A., and E. Waters. 1977. Attachment as an organizational construct. *Child Development* 48: 1184–99.
- Strahan, B. J. 1991. *Parents, religion, and interpersonal orientation*. Unpublished master's thesis. CA: Loma Linda University.
- Thompson, R. A. 1994. Emotion regulation: A theme in search of definition. In *Monographs of the Society for Research in Child Development* 59: 25–52.
- Ullman, C. 1989. *The transformed self: The psychology of religious conversion*. NY: Plenum.
- van Ijzendoorn, M. H. 1995. Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin* 117(3): 387–403.
- Waters, E., S. K. Merrick, L. J. Alberstheim, and D. Treboux. 1995. *Attachment security from infancy to early adulthood: A 20-year longitudinal study of attachment security in infancy and early adulthood*. Paper presented at the Biennial Meeting of the Society for Child Development, Indianapolis.

APPENDIX

**ITEMS OF EMOTIONALLY BASED RELIGIOSITY SCALE AND
SOCIALIZATION-BASED RELIGIOSITY SCALE**

EBRS:

1. When I experience situations of crisis I feel that God's accessibility is important if I am to handle the situation.
2. I feel most content when I experience a close communion with God.
3. My religious faith helps me to feel less lonely.
4. When I feel lost I find support in my religious faith.
5. I strive to maintain closeness to God.
6. I would experience grief if I knew that I could never get in touch with God again.
7. I may feel worried or insecure when God is not accessible.
8. When I am under mental stress (e.g., during moments of sadness or anxiety) I may feel an urgent need for God's support.
9. I pray to God particularly when I find myself in difficulties.
10. I turn to God when I am in pain.

SBRS:

1. I feel sympathetic towards my mother's view of religious issues.
 2. I will probably give /I give/ my children an equally religious/nonreligious upbringing as my mother gave me.
 3. 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.
 4. Religion is equally important/unimportant to me in my everyday life as it was to my mother during my childhood.
 5. I pray (e.g., say grace) to God as often/seldom as my mother did during my childhood.
 6. My mother and I are equally active religiously.
 7. My religious beliefs correspond with my mother's religious beliefs.
 8. My mother and I do not at all share the same values regarding religious issues (R).
 9. My mother and I attend Church (Synagogue, Mosque, Temple etc.) about equally often/seldom.
 10. I read religious literature (e.g., the Bible, the Koran, the Veda literature) as often/seldom as my mother did during my childhood.
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