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Attachment and Religion

An Integrative Developmental Framework

BY

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ABSTRACT

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The aim of the thesis was to examine the applicability of attachment theory to adult and adolescent religiosity. Attachment theory is an empirically oriented research paradigm that takes evolutionary theory as the starting point in the study of child-parent relations and their socioemotional correlates in development. The work consisted of two interrelated tasks. First, limitations in theory and research in the psychology of religion, particularly the traditional psychodynamic perspectives, were highlighted, and attachment theory was proposed as an integrative framework to remedy some of those limitations. Second, four empirical studies (I-IV), based on attachment theoretical predictions, were conducted to investigate relations between individual differences in attachment and religiosity.

The combined results from the studies suggest the existence of two religiosity profiles in relation to attachment. Both profiles resemble influential descriptions of individual religiosity differences in the psychology of religion literature. The religiosity of individuals in the first profile is similar to their parents' religiosity and is likely to be stable over time. If religious changes have been experienced, these are likely to be gradual, to occur early in life, and in a context pointing to the importance of relationships with religious significant others. Such individuals' God image is likely to be loving, and not distant. It was hypothesized that these religiosity characteristics stem from experiences with sensitive attachment figures in childhood, and that such experiences have promoted partial adoption of the attachment figures' religious standards. The mental representations of attachment resulting from the favorable experiences were suggested to be responsible for a corresponding image of a loving God. The religiosity of individuals in the second profile is independent of parental religiosity, and is likely to fluctuate (increase and decrease) over time. Their religious changes are more sudden and intense, occur relatively later in life, and in a context pointing to an emotionally supportive function for religion. Such individuals' God image is more distant, and less loving. These religiosity characteristics were hypothesized to stem from experiences with insensitive attachment figures in childhood. It was suggested that they reflect an affect regulation strategy to obtain/maintain a sense of felt security, and that God is utilized as a compensatory attachment-like figure in this regard.

Findings pertaining to the profiles generally emerged regardless of whether the design was cross-sectional (I-IV) or longitudinal (III); whether participants were adults (I, II, and IV) or adolescents (Study III); and whether attachment was assessed with self-report questionnaires (I-IV) or independent ratings based on a semi-structured interview (IV).

Key words: Attachment theory, the Adult Attachment Interview, romantic attachment, affect regulation, felt security, socialization, religiosity, parental religiosity, religious change, religious conversion, emotionally based religiosity, socialization-based religiosity, God image

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INTRODUCTION

The present thesis has a cross-disciplinary scope in that it applies a theory and research agenda drawn from mainstream psychology, particularly developmental psychology, to topics most often studied by theologians in the behavioral sciences of religion. The dissertation is intended not only to be comprehensible both for psychologists and theologians, but also to provide an integrative framework for research in the behavioral sciences of religion, particularly the psychology of religion. Hence, as a service to theologians, space will first be set aside in the introduction to present the relevant psychological theory, known as attachment theory, and the research program stemming from it. As a service to psychologists, theoretical traditions and research efforts in the behavioral sciences of religion will then be presented and criticized. Due to being highly influential in the literature on the relational underpinnings of religiosity, particular emphasis will be placed on traditional psychodynamic accounts of religion. Prior to presenting the aims of the dissertation, the two disciplines will finally be brought together in a section where the basic tenets of attachment theory are applied to religiosity, and the pioneering empirical attachment and religion studies are reviewed. To avoid occupying too much space with definitional issues, most such have been placed in an appendix.

Attachment Theory and Research

Bowlby's Basic Principles

Originally being trained as a psychoanalyst, but growing increasingly dissatisfied with some of its theoretical assumptions and constructs, as well as with its methodological approach, John Bowlby set the task for himself of reformulating psychoanalytic theory to make it more consonant with current cognitive psychology and modern theory of natural selection. Bowlby labeled the resultant body of theory "attachment theory" and it was thoroughly presented in the three volumes of *Attachment and Loss* (1969, 1973, 1980).

In distinguishing this theory of personality development from the traditional psychodynamic perspectives (see APPENDIX 1 for a definition), Bowlby (1969) gave attention to five differentiating characteristics. First, he argued for the need of prospective designs as opposed to the retrospective designs of psychoanalytic work. Second, he favored direct observations of the behavior of children in real-life situations, as distinguished from data obtained in the treatment of patients. Third, and insofar as the interest is in the development of psychopathology, Bowlby argued for a supplementary focus on a pathogen and its developmental sequelae, instead of reliance on historic reconstruction of pathology as seen in the room of the analyst. Fourth, unlike traditional psychodynamic theorists, he drew attention to data on animals' behaviors in similar situations as those thought to be important for human development, as well as to the ethological concepts utilized to explain such behaviors. Finally, and probably most importantly, he replaced the psychical "energy" or "drive" motivational model of psychoanalysis with a motivational model drawn from control systems theory. This latter kind of motivational framework was, and still is, common among contemporary ethologists. Yet, it differs drastically from the drive-analogue framework that was popular among the natural scientists of the 19th century. It was this latter framework that inspired young Freud and that remained the building block of psychoanalysis throughout his

life, and indeed continues to be so among traditional psychodynamic theorists even today, in spite of the fact that it was long ago abandoned in the biological sciences (Bowlby, 1969).

What originally motivated Bowlby's theoretical reformulation of psychoanalysis was his and his colleagues' real-life observations of children's responses to separation and loss, experiences from which he thenceforward believed to be important for the development of subsequent psychopathology (Bowlby, 1969). Upon separation from parents, as observed in children placed in hospitals and residential nurseries, three response sequences were delineated, and evidence was presented to show that a similar sequence is present also among offspring of some other primates (Bowlby, 1973). First, the child signals "protest" through intense crying, searching for the parent, psychomotor agitation, disinterest in exploration, and refusal to be consoled by others. This resembles a state of intense anxiety. Second, a phase of "despair" was described as evident in sadness, psychomotor retardation, and depression. Finally, "detachment" was described as a state of apparent emotional reorganization, in which the child seemed to have recovered from the distress associated with separation, and in which he or she negotiated new relationships and recovered interest in exploratory behavior. However, when reunited with the parent, the child behaved as if the former emotional bond between them had been broken, as evident in disinterest and often also in anger and hostility. Repeated and/or prolonged experiences of separation, or threats thereof, were thought by Bowlby to be an important pathogen for subsequent development of anxiety problems (1973). Experience of loss, in conjunction with lack of supportive relationships, was postulated as a pathogen for the development of disordered mourning and depression (1980).

Coupled with insights gained from ethology, such as from Harlow's studies of separated infant rhesus monkey responses (e.g., Harlow & Harlow, 1962; Harlow & Zimmermann, 1959), such real-life observations led Bowlby to the conclusion that a child's emotional bond with its caregiver was not a secondary phenomenon due to its association with food attainment. It was not secondary to that of oral drive satisfaction, as traditional psychoanalysis would have it, nor to food as an unconditioned stimulus (i.e., mother presumably being the conditioned stimulus), as learning theory proposed (see also Ainsworth, 1969; Fonagy, 1999). In Bowlby's words: "the young child's hunger for his (sic.) mother's love and presence is as great as his hunger for food" (1969, p. xxix). In order to explain the primacy of the emotional bond, Bowlby turned to control systems theory and the theory of natural selection.

He claimed that in the environment in which mammals have evolved (the environment of evolutionary adaptedness, EEA), there was a systematic selection pressure favoring the survival of the helpless offspring who received protection from danger (e.g., predators, rival hordes) to that of offspring who did not. Throughout evolution, this selection pressure was assumed to have resulted in the development of instinctive behavioral systems both in the offspring and its caregivers. Bowlby introduced an analogy to the principles of thermostats in this regard, drawn from control systems theory. Thermostats function in such a way that whenever the temperature in a room diverges from a specified set-point, the detectors of the thermostat signal this divergence, and the thermostat is activated to reset the temperature within the limits of the set-point. As such, the thermostat is pre-programmed, or designed, to react in a specific way depending on environmental circumstances; together with the "internal" detectors, these "external" circumstances serve as elicitors that activate the system.

The counterpart behavioral system of mammal offspring, to which Bowlby gave attention, was labeled the "attachment behavioral system", and the system of the caregiver, or "attachment figure", was labeled the "caregiving behavioral system". Both of these systems are supposedly pre-programmed, reflecting the selection pressures of the EEA, and are in ideal circumstances in harmony with one another. With respect to the attachment behavioral system, it can be activated both by external (e.g., a predator approaching) and internal (e.g., fear, anxiety) elicitors. The manifestation of attachment system activation is seen in "attachment behaviors", such as in crying, crawling, and infant pick-up gestures. The predictable outcome, or "set-goal", of attachment system activation is physical proximity to the caregiver. It is so by virtue of proximity being necessary for offspring protection, in turn potentiating (gene) survival. However, for this to be accomplished, the caregiving system of the attachment figure must also be activated, which is particularly true for young infants who are unable to do much by themselves for the establishment of proximity. Apart from potential danger to the offspring, attachment behaviors serve as important elicitors of caregiving system activation. Activation of this system is manifest in caregiving behaviors, such as in approaching the infant, picking him/her up, consolation.

Despite presumably being biologically primary, attachment is not fixed at birth, but develops continuously in accordance with infant ontogenetic maturation. Bowlby (1969) distinguished between four phases of attachment development. First, during the phase of "preattachment", lasting from birth to approximately 12 weeks of age, the infant is promiscuous in his or her social responsiveness, although showing preference for familiar adults (and particularly mother) in some regards. This promiscuity allows for flexibility in the formation of attachment, such as in the context of maternal death. That is, the infant may well establish attachment relationships to others than the very early caregivers in the event that these would be unavailable. Second, up to approximately 6 months of age, the infant is in a phase of "attachment in the making", during which discrimination of those who are familiar to the infant from those who are not, along with an increased preference for the former, is shown. Third, during the phase of "clear-cut attachment", lasting to approximately 2.5-3 years of age, the discrimination of attachment figures peaks in salience. The infant is now able to explore more freely by means of crawling and walking, and also develops object constancy. Consequently, separation anxiety becomes prominent, and the infant develops a fear of strangers. During this phase, it is most visible how the infant uses the attachment figure as a "safe haven" when distressed (i.e., when the attachment system is activated), and as a "secure base" from which exploration is undertaken. Finally, during the phase of "goal-corrected partnership", and having acquired preoperational thinking and a rudimentary theory of mind, the child is able to infer feelings and motives in the attachment figures, and, thus, is more skilled at predicting his/her behavior. To the naked eye, therefore, attachment becomes somewhat less visible.

When distressed, it may suffice for an older child or adolescent to be able to see or to merely know that the attachment figure will be available in case the situation gets worse (Bretherton, 1987). In fact, unless the situation is serious, the need for physical proximity may be a sign of anxiety with increasing age. Therefore, Sroufe and Waters (1977a) have argued that "felt security" may be a more viable set-goal to consider for older children than is physical proximity. In spite of these maturational changes, Bowlby (1979) contended that the attachment system is active from the cradle to the grave.

A final concept of Bowlby to be presented is that of "internal working models" (IWMs). Based on repeated experiences with caregivers in situations of attachment system activation, the offspring supposedly develops such working models of self and others. These models are said to be part conscious, part unconscious, mental structures, or schemas, that inform the child of his or her self-worth (e.g., "Am I worthy of being taken care of?") and of the likely responses of others (e.g., "Will she take care of me?"). They are particularly informative in situations of attachment system activation, during which they serve a prescriptive function telling the child what to do (e.g., to seek or not to seek comfort, to cry or not to cry). According to Bowlby (1969, 1973) the content of these models are reasonable approximations of the actual experiences that the child has encountered. That is, as opposed to assumptions made in psychoanalysis in particular, and in some traditional psychodynamic perspectives in general (e.g., Klein, 1932), the content of the models does not derive from mere fantasies, as associated with sexual or death instincts. It was to these models Bowlby drew attention to explain temporal continuity of attachment-related functioning. The models are not fixed, however, following the infant's experiences with caregivers, but in so far as these experiences are continuous, so are the models ("general continuity"). If experiences change, so may the models ("lawful discontinuity"), but this becomes more and more difficult with increasing age. The points are that the models are constructed and modified on the basis of the same processes of assimilation and accommodation that underlie cognitive development in general, and that the early period is especially sensitive due to the disproportionate plasticity of central nervous system development at this age.

Reflecting on the relative strengths of Bowlby's attachment theory, as compared to the theories of offspring-caregiver relatedness that were dominant at the time of its formulation, Sroufe (1986, p.848) concluded:

No longer does one need to choose between a vital but untestable theory and sterile, operationalized part theories which have dominated behavioral psychology. By pointing again to the centrality of vital relationships as the bedrock of human experience, and by reconceptualizing these within the evolutionary framework, Bowlby has led the way to a fully satisfactory theory of human behavior. This evolved psychoanalytic theory not only is testable but has received ample validation from empirical research. At the same time it remains a clinically rich theory, which does justice to the complexity and subtlety of the human animal. Bowlby's theory is certain to be a major part of the science of human behavior for years to come.

Sroufe's prophecy has proven true. In what follows, pioneering theoretical extensions, methodological developments, and empirical research, all in one way or the other based on Bowlby's foundation, will be presented.

Ainsworth and the Study of Individual Differences in Child-Caregiver Attachment

Although Bowlby legitimately stands as the founder of attachment theory, his colleague and collaborator Mary Ainsworth probably contributed with the most important empirical foundations. This was accomplished by a consideration of individual differences in infant-caregiver attachment organization, as observed in the now famous Ainsworth Strange

Situation (SS) procedure (Ainsworth, Blehar, Waters, & Wall, 1978). Ainsworth also introduced the concept of "maternal sensitivity".

The SS is a semi-structured laboratory procedure, consisting of eight 3-minute episodes, and usually conducted with infants aged 12-18 months, that is, during the phase of clear-cut attachment. The infant and his or her caregiver are introduced to a room with toys. The episodes proceed as follows: A stranger enters the room; the caregiver leaves the room (infant alone with stranger); the caregiver returns; the caregiver leaves again (infant left all alone); the stranger returns; the caregiver returns again. The SS is designed to activate the attachment and exploration behavioral systems, and, hence, to make possible the study of how attachment is organized around the caregiver. Infant responses to separation from and reunion with the caregiver are thus of primary importance. Throughout the episodes, it is observed if and how the infant uses the caregiver as a safe haven when distressed and as a secure base in exploration (i.e., in play and affiliation with the stranger). The underlying idea is that of observing the behavioral manifestations of IWM organization.

Three "organized" patterns of attachment were described by Ainsworth et al. (1978), and were found to be related, as hypothesized, to previous experiences in relation to maternal sensitivity in natural settings. These findings have subsequently been extensively replicated by other researchers (see Cassidy & Shaver, 1999). Before proceeding with a description of the attachment patterns, a note with respect to maternal sensitivity is in place. A high degree of sensitivity is found in a parent who correctly interprets, and promptly, as well as consistently, responds to the child's signals in accordance with such an interpretation. If an infant signals fear, for instance, a sensitive response is to promptly pick up the infant and console him or her. An insensitive response is evident, for instance, in rejection (e.g., irritably telling the infant to stop behaving like a baby), neglect (e.g., not noticing the signal or not being interested in responding to it), and role-reversal (e.g., falling apart or panicking, placing the infant in a situation wherein it becomes his or her responsibility to parent the parent). A special case of insensitivity is evident in inconsistency of responsiveness, hence seen in parents who sometimes respond sensitively and sometimes not. Even though subsequent research has been unable to provide clear links between different expressions of insensitivity and different forms of less favorable attachment patterns (see below), the bulk of the evidence clearly points to the conclusion that sensitivity is related to more favorable and insensitivity to less favorable patterns of attachment (De Wolff & van IJzendoorn, 1997).

The first pattern of attachment was labeled *Secure* (or "B"), and approximately two thirds of all dyads are classified in such a way. Such a pattern is evident in children who use the parent as a secure base during exploration and as a safe haven when distressed. In the SS, such infants often explore freely, occasionally checking the availability of the attachment figure. At separation, they may react either with distress (e.g., locomoting, crying) or else seem relatively calm. Most importantly, upon reunion they re-establish proximity, and after having reassured that the attachment figure is available, they most often return to exploration. Hence, there is an optimal balance between exploration and attachment in such infants. The characteristics of this pattern are, at least in part, attributable to past experiences with a sensitive caregiver, whose likely responses are presumably stored in the infant's IWMs as information saying that the attachment figure is available when needed and that the self is worthy of care.

Two patterns of anxious or insecure attachment were also delineated. The *insecure/avoidant*, or "A", pattern contains approximately one fourth of all dyads. Infants in

such dyads are characterized by a seemingly "deactivated" attachment system. In the SS, they generally show independence in exploration and do not react strongly to separation. Upon reunion, they avoid the caregiver, which is often accomplished by subtle means such as gazing in a different direction, staying involved with toys. Despite behaviorally giving the impression of being calm and confident following separation, some studies have shown psychophysiological reactions (e.g., heart rate, cortisol) indicative of a stress response, which avoidant infants are unable to resolve by means of turning to the caregiver upon reunion (e.g., Donovan & Leavitt, 1985; Spangler & Grossmann, 1993; Sroufe & Waters, 1977b). Hence, these infants are organized in relation to the caregiver so as to favor (defensive) exploration to attachment. This pattern of attachment is hypothesized to stem from experiences with rejecting caregivers, which are supposedly stored in the avoidant offspring's IWMs as information saying that the attachment figure is not available in times of need and that the self is not worthy of care.

The other pattern of organized insecure attachment was labeled *insecure/ambivalent* or resistant, "C", attachment, and it is characteristic of approximately 10-15% of all dyads. Besides sharing underlying insecurity of attachment with avoidant infants, this pattern is in many respects the opposite of avoidant attachment in that it is characterized by seeming "hyperactivation" of attachment. In the SS, infants in such dyads are apt not to explore, instead frequently clinging passively to the caregiver. Upon separation, they are likely to be highly distressed. Yet, on reunion they mix contact-seeking behaviors with an often angry refusal to accept the caregiver's provision of it, hence, the term "ambivalent". In other words, there is an imbalance in organization so that the infant favors attachment to exploration. Such an organization is hypothesized to stem from experiences with an inconsistently available (cf. intermittent reinforcement) and/or role-reversing caregiver. The IWMs of these children are likely to provide information that the caregiver is unavailable lest the child makes very salient demands, and that, when availability is present, it will be maintained only in so far as the child does not let the caregiver attend to other things than him- or herself.

More recently, a fourth, *disorganized/disoriented*, or "D", pattern of attachment has been described (Main & Solomon, 1990). Technically speaking, the D pattern is not a "pattern" as such, but is rather characterized by the absence of any clear patterning. Initially, such dyads were discovered in a reassessment of cases difficult to classify in any of the above, "organized" groups. Infants in such dyads are characterized by what seems to be a collapse in the organization of attachment, evident in the SS as disoriented behaviors and dissociated states such as freezing, circle- and contradictory movements. As such, there is no particular organization of attachment in relation to the caregiver, but rather a special form of conflict behaviors (Hinde, 1970) characterized by a break-down in behavioral strategy. Main and Hesse (1990) attribute these break-downs to experiences with frightened and/or frightening caregivers. They argue that the infant subjected to such experiences is placed in a "paradoxical injunction". When such an infant is distressed, the attachment system is activated with the set-goal of establishing proximity to the caregiver, but the caregiver is him- or herself the very source of alarm, and therefore cannot be approached, constituting an experience which is likely to create further distress and attachment system activation (i.e., a positive feedback loop); hence, the break-down to disorganized and disoriented behaviors. Such break-downs can be very brief and occur in infants who otherwise display behaviors typical of infants in the other attachment patterns. For these reasons, D infants are given a

secondary A, B, or C classification, but a primary D assignment is nevertheless consonant with underlying insecurity of attachment.

The introduction of the SS procedure, and the description of individual differences in attachment, spurred an extensive body of prospective studies that examined associations between early attachment and later indices of socioemotional development. The combined results from these studies are presumably what led Sroufe (above) to conclude that, "This evolved psychoanalytic theory not only is testable but has received ample validation from empirical research" (see also Cassidy & Shaver, 1999). Suffice to say here that secure attachment has generally predicted more favorable outcomes than has insecure attachment, including, but not limited to, social competence, empathy, peer popularity, and behavior problems (e.g., Bohlin, Hagekull, & Rydell, 2000; Weinfield, Sroufe, Egeland, & Carlson, 1999). In what follows, a brief description will be presented only of theorizing and correlates that are of immediate relevance to the present thesis.

To begin with, Cassidy (1994) has suggested that different strategies of affect regulation underlie individual differences in attachment organization. By drawing on the definition of Thompson (1994), as well as on Bowlby's postulated set-goal of the attachment behavioral system, Cassidy defines affect regulation as an adaptive process that drives the organism towards achieving its goals (i.e., to obtain proximity, in the case of attachment). It is important to note that affect regulation not only refers to the inhibition of affective states, but sometimes also to a heightening of them. The responsibility for regulating affect is implicitly shared in secure dyads, in that the infant freely and flexibly signals negative affect when distressed and positive affect when content, and in that he or she is willing to let the caregiver help him or her to resolve it, would the scenario be of the former kind, and to reciprocate it, were it of the latter kind. This free display of affect is presumably a result of caregiver sensitivity in relation to previous displays. As a consequence of adequate caregiver responses, the child will subsequently achieve control over the affect displays, while still being able to turn to others for support.

To achieve the proximity set-goal in lieu of experiences with a rejecting caregiver, the seeming deactivation of attachment in avoidant children may be thought of as reflecting the "minimization" of negative affect. Hence, these infants take large responsibility themselves for regulating negative affect. However, in so doing, they may nevertheless obtain the adaptive outcome of being as close as possible to a caregiver who would risk to further reject or even abandon the child were he or she to give free display of negative affect (Main, 1981). In spite of the minimizing strategy being potentially adaptive in the context in which it arose, it is likely to become psychologically maladaptive when the child is to form other close relationships and is interacting in other contexts (cf. Hinde & Stevenson-Hinde, 1990).

The seeming "hyperactivation" of attachment in ambivalent infants is termed by Cassidy (1994) a strategy of "maximizing" negative affect, wherein the infant is passive, that is, does not take any own responsibility for sharing the task of regulating it. In view of an intermittently reinforcing caregiver, loud calls will provide maximum proximity, whereas displays of contentment run the risk of leading the caregiver to loose interest. Again, though, being potentially adaptive in the context in which it arose, the maximizing strategy will not psychologically serve the child well in future relationships and contexts (cf. Hinde & Stevenson-Hinde, 1990). Hence, in terms of affect regulation, secure attachment is associated with flexibility, whereas insecurity is characterized by minimizing and maximizing strategies, both of which are likely to be psychologically maladaptive in later contexts and relationships.

Another area of research that is relevant to the present thesis concerns attachment in relation to the internalization of parental values, or "socialization". Several studies have been performed within the attachment framework (e.g., Ainsworth, Bell, & Stayton, 1974; Londerville & Main, 1981; Matas, Arend, & Sroufe, 1978; Stayton, Hogan, & Ainsworth, 1971; see also Richters & Waters, 1991), whereas other studies, whilst being of theoretical relevance, have been conducted outside the attachment framework (e.g., Bandura, 1965; Kochanska, 1997; see also Kagan, 1984; Maccoby, 1984). A clear conclusion from this literature is that offspring with warm, competent, and nurturing parents, that is, in most cases securely attached children, are more well-socialized than (insecure) children with parents who possess the opposite characteristics. Richters and Waters (1991) conclude that attachment theory provides a theoretically parsimonious integration of the psychoanalytic and social learning accounts that have dominated the field of socialization research in psychology. It does so by virtue of pointing out the importance of parental responsiveness and secure attachment, both amenable to clear operationalizations, for subsequent successful identification with parents.

Finally, when Ainsworth (1985) discussed potential attachment relationships after early childhood, she formulated a surrogate or "compensation" hypothesis, stating that insecurely attached children may direct their unsatisfied attachment needs towards others than their primary attachment figures. This hypothesis has been supported with respect to insecurely attached children's reliance on peers, teachers, and relatives outside of the immediate family context (e.g., Booth, Rubin, & Rose-Krasnor, 1998; Elicker, Englund, & Sroufe, 1992). However, evidence is mixed concerning the extent to which this compensation actually works in bringing about favorable outcomes (e.g., Booth et al., 1998; Cooper & Cooper, 1992; Stocker, 1994; van Aken & Asendorpf, 1997).

The Adult Attachment Interview – A Move to the Level of Representation

Following the construction of the SS and the studies documenting prospective relations between SS classifications and socioemotional development, interest came to be directed towards understanding attachment processes in adolescence and adulthood. Both Bowlby and Ainsworth had stated that the attachment system is active throughout life, and both had considered long-term adult love relationships as being of attachment relationship type, but none of them subjected these claims to further empirical work. Instead, other researchers, working in two different traditions, developed the study of attachment in adulthood. The first of these traditions is described in the present section, whereas the other tradition is described in the next section. The first tradition has methodologically come to be centered on an interview technique, the Adult Attachment Interview (AAI), designed to be the adult counterpart of the Ainsworth SS procedure. Researchers developing and working within this tradition are generally the same developmental psychologists who were responsible for the initial infant attachment studies. Among these researchers, the research question that originally drew attention to the field of attachment in adulthood, and that was potentiated by the development of the AAI, concerned transmission of attachment across generations (see Hesse, 1999).

The AAI (George, Kaplan, & Main, 1996) is a semi-structured interview that consists of approximately 20 questions designed to activate the individual's attachment system in a similar way as is done in Ainsworth's SS, but with two important exceptions.

First, the interviewee's task is to reflect primarily on past, rather than to enact current, attachment relationships. Second, the focus when coding the interview is on linguistic, rather than behavioral, expressions of the individual's IWMs. Hence, the study of attachment was lifted from the traditional behavioral to a cognitive representational level of analysis (Main, Kaplan, & Cassidy, 1985). The purpose of the interview is to capture individual differences in inner working models of attachment, defined by Main et al. (1985) as "a set of conscious and/or unconscious rules for the organization of information relevant to attachment and for obtaining or limiting access to that information" (p. 66-67).

The interview normally varies in length between 45 and 90 minutes and is administered in a relaxed conversational style. The most important questions ask the participant to freely describe childhood relationships with parents; to select five adjectives to describe those relationships, which are subsequently to be supported by the recall and elaboration of specific episodes; to describe what he/she did as a child when being emotionally upset, ill, and in pain, as well as what parents did in those circumstances; to recall and describe feelings associated with physical separation from parents; to elaborate on experiences of rejection and fear; and to speculate on effects on current personality from childhood experiences with parents, as well as on the reasons why parents behaved in the manner they did. Another important set of questions concerns experiences of traumatic loss and abuse.

The interviews are tape recorded and then transcribed verbatim, resulting in approximately 15 to 30 pages per interview. The transcripts are subjected to coding on three types of scales: probable experiences with parents, current "organized" state of mind with regard to attachment, and unresolved/disorganized states of mind in relation to loss and abuse (see Method section). It is important to note that what is of primary interest is the form (e.g., internal consistency, collaboration) of present discourse, not its content (e.g., difficulties with parents). Therefore, the assignment of participants to categories is based on the state of mind scales. The categories parallel the infant SS classifications. An alternative way of considering the quality of discourse is in terms of the extent to which principles of coherent conversation are violated (Grice, 1989). Coherent discourse is characterized by truth and evidence (the maxim of quality), completeness and succinctness (the maxim of quantity), clarity (the maxim of manner), and of being relevant (the maxim of relation).

The first category, "F" (or free to evaluate/autonomous), is characterized by speakers providing an objective and credible recount of childhood experiences, regardless of whether these have been primarily positive or negative. Such interviews are also characterized by a valuing of attachment that, in the case of childhood adversities, often has as one element an implicit attempt at understanding and/or forgiving parental misdeeds. F speakers do not seriously violate any of Grice's maxims of discourse. This category corresponds to the secure Ainsworth SS category.

The second category, "Ds" (or dismissing), is characterized by idealization of parents, due to either overt contradictions or an insistence on lack of memory for childhood relationships and events. Other characteristics of Ds speakers are active contemptuous derogation of attachment figures and experiences, and a dismissal of most negative effects upon self from adverse childhood experiences. Ds speakers typically violate the maxims of quality (i.e., no evidence) and quantity (i.e. not complete). This category corresponds to the avoidant SS category.

The third category, "E" (or preoccupied), is characterized by a mental entanglement with past or ongoing attachment relationships, as revealed in preoccupied anger, that is, anger that is not only described, but also inappropriately leveled at attachment figures in the actual interview situation, and in passivity or vagueness of mental processes concerning attachment. In doing so, E speakers typically violate the maxims of manner and relation. This category corresponds to the ambivalent SS category.

A fourth category, unresolved/disorganized with respect to loss or abuse (or U/d), is superimposed on the F, Ds, and E categories. This fourth category specifically refers to mental processes concerning traumatic experiences of loss and abuse, and, as such, not to a general state of mind with regard to attachment. In discussions of loss and/or abuse, speakers in this category provide striking lapses in the monitoring of reasoning and/or discourse, and/or extreme and lingering behavioral reactions to the traumatic event. The U/d category corresponds to the disorganized/disoriented classification assigned to infants in the SS.

For statistical power reasons, it should be noted that procedures have been identified to arrive at state of mind dimensions for use in subsequent analyses, instead of utilizing categories. Fyffe and Waters (1997) used the original state of mind scales in discriminant function analyses, utilizing the three organized AAI classifications as *a priori* groups. The resultant two discriminant functions, F vs. non-F and Ds vs. E, correctly reproduced about 90% of the *a priori* classifications. With respect to the reliability of the AAI, several studies have reported satisfactory test-retest and interobserver agreement estimates (Hesse, 1999).

The most important predictive validity issue for the AAI is its ability to predict the SS responses of the speaker's own child (i.e., "intergenerational transmission"). A meta-analysis (van IJzendoorn, 1995), comprising 18 samples with 854 participants, has shown a 75 per cent correspondence between parent and offspring security classifications ($d = 1.06$). The predictive strength was not affected by whether or not the AAI was conducted prior to the birth of the child, indicating that it is not the relationship with the child that is responsible for the parent's state of mind. It would take at least 1,087 studies to reduce this association to non-significance. Furthermore, the AAI and SS correspondence was specific, that is, F predicted B, Ds predicted A, E predicted C, and U/d predicted D attachment. Parental state of mind was also significantly related to the speaker's sensitivity in relation to the child's signals.

Two additional validity issues concern predictability of AAI classifications from the speaker's own SS classifications in infancy, and the relationship between AAI status and psychopathology. With respect to the former issue, making attachment predictions are not entirely straightforward. In case of consistency of experience, continuity of attachment is to be expected, but in case of inconsistency of experience, discontinuity of attachment should be found. Hesse (1999) reviewed findings pertaining to these issues from the five studies that have been performed to date. In three of the samples (Hamilton, 2000; Main & Hesse, 1998; Waters, Merrick, Treboux, Crowell, & Alberstheim, 2000) there was a significant AAI-SS (secure vs. insecure split) correspondence, averaging about 75%. Within the samples, however, predictability was weaker among participants subjected to major life events (e.g., death of or separation from parent, parental divorce). These findings support Bowlby's notion of general continuity and lawful discontinuity of attachment. The remaining two studies, one which comprised a high risk sample (Weinfield, Sroufe, & Egeland, 2000) and one which did not use the regular AAI coding procedure (Zimmermann, Grossmann, & Fremmer-Bombik,

1998), failed to display predictability of AAI responses from SS classifications. The results from the first of these two studies are in line with the hypothesis of lawful discontinuity, whereas results from the second study are difficult to evaluate due to idiosyncratic methodology. Hence, although evidence is insufficient for drawing firm conclusions, it appears that the hypotheses of general continuity and lawful discontinuity fare well in accounting for such evidence as there is.

The relationship between AAI classifications and psychopathology has been firmly established in a meta-analysis (van Ijzendoorn & Bakermans-Kranenburg, 1996), which comprised 33 samples with more than 2,000 participants. Although systematic relations between clinical diagnosis and type of insecurity was absent, there was a clear underrepresentation of autonomous states of mind in clinical (8%) as compared to normal (55–57%) samples.

A final validity issue to be considered, and an important one given the above associations, pertains to the discriminant validity of the AAI. Several studies have now documented that the AAI classifications are unrelated or weakly related to social desirability, socioeconomic status, sex, negative affectivity, temperament, autobiographical memory capacity with respect to other issues than those pertaining specifically to attachment, discourse styles in relation to non-attachment issues, and intelligence (including verbal intelligence) (see Hesse, 1999, for a review). Hence, it appears as if the AAI captures reasonably well what it is designed to capture, while not tapping that which it was not designed to tap.

Attachment and Romantic Love – A Social Psychological Application

The main focus of the second research tradition on attachment in adulthood has been on adult pair bond relationships, particularly romantic love relationships. This tradition typically encompasses social and personality psychologists. Taking Bowlby's (1969, 1973, 1980) reasoning as the point of departure, the attachment behavioral system, the caregiving system, and the reproductive system are supposedly integrated in romantic love relationships; that is, both partners serve as attached, as caregivers, and as the primary persons in whom issues related to reproduction are invested (see Simpson & Rholes, 1998).

The romantic attachment theory also applies Bowlby's postulated processes of forming attachment in infancy, and the processes of separation and loss in relation to parents, to corresponding processes in romantic love relationships (see Hazan & Zeifman, 1999). Hence, what is of primary interest among these researchers is not current mental organization with respect to past or ongoing attachment to parents, as for AAI-researchers, but mental organization with respect to romantic attachment. Nevertheless, the pioneering theoretical conceptualization (Hazan & Shaver, 1987; Shaver, Hazan, & Bradshaw, 1988) argued that if romantic love is analyzable in terms of attachment, then it should display corresponding individual differences as those described by Ainsworth et al. (1978) concerning infant-caregiver attachment. Further, the argument went, childhood attachment to parents probably do account for parts of the individual differences observed in romantic attachment. Hence, a line of reasoning is present that presupposes IWM-continuity as based on attachment to parents.

Individual differences in romantic attachment, unlike infant-caregiver attachment, is not a relationship construct, but rather a construct at the level of the individual,

referring to a trait-like orientation to close relationships (e.g., Hazan & Shaver, 1994). The reason for this is that the IWMs of adults, unlike those of infants, have become relatively fixed and stable. Hence, despite the changing qualities that close relationships may have for a given adult, he or she is nevertheless thought of as contributing with his or her own characteristic patterns of thought, behavior, and expectations concerning both the self and the other.

Methodologically, this tradition has come to be centered on questionnaire assessments of attachment. It began (Hazan & Shaver, 1987) with constructions of simple paragraph measures, designed to tap the adult love counterparts of the infant-caregiver attachment patterns described by Ainsworth et al. (1978). Accordingly, three patterns of attachment were described. Secure attachment is characterized by ease in getting close to others, comfort in being close and dependent, and absence of fear of abandonment. Insecure/avoidant attachment is characterized by discomfort with dependence, nervousness with closeness, and lack of trust. Finally, insecure/ambivalent attachment is characterized by fear of abandonment, desire for union, and worries about lack of love and closeness. Hazan and Shaver (1987) found a similar proportion of self-classifications into the three attachment styles as those reported in the infant-caregiver attachment literature.

More recently, the simple categorical self-report measures have been replaced by continuous multi-dimensional measures. At present, the most widely used instrument is Brennan, Clark, and Shaver's (1998) "Experiences in Close Relationships" (ECR), which consists of two dimensions, derived by means of factor analysis of previous attachment items. These two dimensions correspond to those found by Ainsworth et al. (1978) to underlie infant-caregiver attachment, and were labeled accordingly: "Avoidance" (of intimacy and emotional expression) and "Anxiety" (about abandonment and insufficient love). Although previous findings suggest that there is no latent typology in these two dimensions (Fraley & Waller, 1998), the dimensions can be used to group participants into the romantic attachment styles described above. Secure individuals are then characterized by low avoidance and low anxiety, avoidant/dismissing individuals by high avoidance and low anxiety, and ambivalent/preoccupied people by low avoidance and high anxiety. As based on a recent conceptualization of romantic attachment (Bartholomew & Horowitz, 1991), a fourth, avoidant/fearful pattern, is usually added, and this pattern is characterized by high avoidance and high anxiety.

Concerning the origin of individual differences in romantic attachment, and as noted above, childhood attachment to parents is thought to be an important determinant. To test this hypothesis, simple retrospective questionnaire methods were constructed (Hazan, 1990; Hazan & Shaver, 1986) to tap the characteristic parenting experiences of children with avoidant, secure, and ambivalent attachment, as described by Ainsworth et al. (1978). Results have supported the anticipated links between self-reports of secure romantic attachment and a favorable attachment history and between insecure romantic attachment and an unfavorable attachment history (e.g., Collins & Read, 1990; Hazan & Shaver, 1987), although these findings risk being confounded by shared method variance and issues related to self-report response biases.

With respect to reliability and validity issues in relation to the romantic attachment measures, several studies have documented satisfactory estimates. Romantic attachment has been found not only to be related to a vast array of other self-reported phenomena, such as those of relevance to self-esteem, relationship functioning, and coping

(e.g., Brennan, Clark, & Shaver, 1998; Crowell, Fraley, & Shaver, 1999; Granqvist, Lantto, Ortiz, & Andersson, 2001), but also to predict theoretically anticipated phenomena (e.g., romantic relationship outcomes) when the influence of potentially confounding parameters (e.g., personality dimensions) is held constant (e.g., Shaver & Brennan, 1992). Furthermore, romantic attachment orientation predicts experimental responses, behavioral, physiological, projective, and cognitive outcomes, and it is, at most, moderately related to phenomena such as socioeconomic status, social desirability, sex, and personality dimensions, attesting to reasonable discriminant validity for the measures (see Brennan, Clark, & Shaver, 1998; Crowell, Fraley, & Shaver, 1999).

A special topic of interest in the literature on romantic attachment has been that of attachment processes in adolescence. The reason is that adolescence is commonly thought of as an attachment transitional period, where attachment components (i.e., the proximity seeking, safe haven, separation anxiety, and secure base phenomena) are gradually transferred from parents to peers (e.g., Allen & Land, 1999; Fraley & Davis, 1997; Friedlmeier & Granqvist, 2001; Granqvist & Friedlmeier, 2001; Hazan & Shaver, 1994). This does not imply that parents become unimportant, nor that "detachment" from parents would be a favorable developmental milestone. On the contrary, favorable attachment experiences with parents seem to foster continuity of adaptation also throughout adolescence (e.g., Armsden & Greenberg, 1987; Lapsley, Rice, & Fitzgerald, 1990; Moore, 1987; Palladino Schultheiss & Blustein, 1994; Papini & Roggman, 1992; Rice, 1990). However, attachment transition supposedly does imply an increasing autonomy vis-a-vis parents, as well as a relocation of attachment figures in the individual's attachment hierarchy, where peers (most often lovers) gradually come to possess the primary position (Hazan & Shaver, 1994; Hazan & Zeifman, 1999). Note, though, that this is the normative scenario.

Some individuals, particularly those with a self-reported insecure attachment history, are less likely to build close, trusting, and satisfactory peer relations (i.e., with intimate friends and lovers). The attachment transitional period is sometimes also marked by increased conflicts with parents and personal uncertainties on behalf of the adolescent offspring (e.g., Allen & Land, 1999). Again, though, there are important individual differences with respect to how smoothly the adolescent and his/her parents can handle this transitional period. Security, unlike insecurity, of attachment is associated with generally favorable outcomes (Allen & Land, 1999; Kobak, Cole, Ferenz-Gillies, & Fleming, 1993; Kobak & Ferenz-Gillies, 1995; Kobak, Ferenz-Gillies, Everhart & Seabrook, 1994). Hence, insecurely attached adolescents may be left in a state wherein felt security cannot be derived either by turning to parents or to peers for support.

The Psychology of Religion

A Discipline in Need of Remedy?

One reason for undertaking the present thesis was a conviction that, unfortunately, and as seen from the perspective of mainstream academic psychology, the psychology of religion as a discipline was ill, scattered, and in need of a remedy. Its illness and disunion resulted from several causes associated with meta-theoretical, theoretical, methodological, and value issues.

Accordingly, psychologists of religion have frequently complained about the lack of respect that their discipline receives from general psychologists. However, Batson (1997) was probably right in pointing out that "our discipline does not get respect, at least in part, because it does not deserve it." (p. 4). The reason why it does not deserve it will be outlined below, and the remaining parts of the thesis is an attempt to provide one remedy, among potential others.

Concerning the disunion of the psychology of religion, Batson (1997) makes a distinction between three sub-disciplines, which will be useful to keep in mind. First, he coins the term "psychology by religion" for professional religious work with pastoral care and related topics, representing a discipline that we will have little reason to discuss further, given the basic research of the present thesis. Second, "religion by psychology" is a discipline inhabited by psychological theorists, typified by Freud, who make statements about what is or ought to be the essence of human nature, sometimes including explicit, but perhaps more often implicit, propositions concerning the ontological status of God's existence. In this way, religion by psychology throws itself outside the boundaries of science and into the realms of metaphysics and philosophy of life, regardless of whether it denies (ontological reductionism) or affirms (which may be labeled "ontological embracement") the existence of God. Accordingly, by scientific standards, psychology by religion also becomes inappropriately value-laden with respect to its topic of inquiry. Third, Batson reserves the term "psychology of religion" for the scientific study of individuals' religious beliefs and behaviors. Such a study is, by definition, agnostic while in progress; it *methodologically* reduces the existence of God (Geels & Wikström, 1993) but it refrains from any kind of ontological reductionism or embracement. This is the paradigmatic counterpart of mainstream academic psychology. In the view of the author, it is also to this discipline that the hope of remedy for the psychology of religion should be directed, and accordingly, the present thesis is based on its presuppositions. In order to distinguish this sub-discipline from the overall psychology of religion, it will henceforward be labeled "empirical psychology of religion".

With respect to meta-theory, the psychology of religion, as an overall discipline, is also scattered concerning both philosophy of knowledge and philosophy of science issues. This disunion reflects two different broad intellectual traditions. Somewhat oversimplified, in the psychology of religion, one of these derives from North America and is predominant among researchers working at psychology departments, and one derives from Europe and is predominant among researchers working at theological faculties (cf. Geels & Wikström, 1993). Henceforward, these traditions will be referred to as "Tradition I" and "Tradition II", respectively.

The research programs deriving from Tradition I can generally be subsumed under the empirical psychology of religion discipline. Hence, in terms of philosophy of knowledge, they are generally based on the correspondence theory, that is, on the presupposition that true knowledge derives from empirical observations of the external world. In terms of philosophy of science, the foundation is realist, pragmatist, and sometimes even empiricist. Research in this tradition is nomothetic, that is, it is devoted to the study of general empirical regularities. It is also a part of the natural sciences in that the underlying task, in general, is that of establishing and explaining causal relationships between phenomena. In other words, this tradition conforms to the standard scientific program of mainstream academic psychology, encompassing such disciplines as developmental, social, personality, biological, and cognitive psychology.

The research programs deriving from Tradition II are more meta-theoretically scattered, and therefore cannot easily be divided into Batson's (1997) scheme. In terms of philosophy of knowledge, and as compared to Tradition I, they are more based on the coherence theory, that is, on the presupposition that true knowledge derives from an internally consistent and coherent network of theoretical postulates. It is also difficult to clearly summarize this tradition's philosophy of science foundations, but it tends to be more constructivist and sometimes even relativist. Research in this tradition is idiographic, that is, it is more devoted to studying unique processes in individuals or groups of individuals. It is also a part of the humanist sciences as it seeks to understand meaning rather than to establish and explain general empirical regularities. Hence, this tradition generally encompasses phenomenological, existential, and humanist psychologists, and corresponds more closely to disciplines such as history and literature than to psychology as an empirical science. Curiously, this tradition also encompasses the most well known traditional psychodynamic formulations of religion, despite the fact that psychodynamic theories can be used, and are sometimes used, differently in mainstream academic psychology (see e.g., Wallerstein, 1986; Westen, 1998).

Concerning theoretical issues, commentators on the status of the psychology of religion have often complained about the lack of theory for guiding research (e.g., Batson, Schoenrade, & Ventis, 1993; Hood, Spilka, Hunsberger, and Gorsuch, 1996). Batson (1997) claims that what the psychology of religion needs is not primarily theories per se, but good theories, summarized by some very general attributes, which are difficult to disagree with:

The theory should provide a conceptual structure that renders the phenomenon in question more understandable than before. Simply to describe the phenomenon is not enough; a good theory helps explain it; (2) The theory should be testable – capable of being shown wrong if it is wrong. If a theory is to be scientifically useful, it should be stated with sufficient precision that one can specify empirical observations that would contradict it [Popper's (1959) demarcation criterion]; (3) The theory should help answer one or more important questions about the phenomenon ... not just explain superficial aspects. ... a good theory is "load bearing", not just a plan for some aspect of the facade. (p. 5, brackets added).

As one might guess from the above quote, research in the psychology of religion, including its empirical sub-discipline, has often been atheoretic. Two other problems, also hinted at in the above quote, and which are particularly serious for research originating from Tradition II, are that when a theoretical perspective has been elected, it has often been more descriptive than explanatory, and that some of the most popular perspectives have been unable to meet Popper's demarcation criterion; accordingly, they have been *applied* to the phenomena in question rather than *tested*. A final theoretical concern of Batson (1997) is that when testable theories have in fact been tested in relation to religious beliefs and behaviors, they have sometimes been tested in relation to surface or isolated aspects of religiosity without proving to be "load bearing", that is, to hold integrative capacity for the deep and central aspects of religiosity in the individual's life.

Finally, with respect to methodological issues, research conducted in Tradition II has often been hermeneutic. That is, the research "data base" has often consisted of qualitative material that has either been drawn from unstructured interviews with single (or

few) participants, or else from texts, such as religious biographies. This type of methodology is clearly insufficient if one seeks to obtain replicable knowledge on the psychology of religious beliefs and behaviors in human beings in general. Concerning Tradition I, the methodological approach has often followed the quantitative standards of mainstream academic psychology. In practice, however, and presumably in part due to the subject matter of religiosity, questionnaire methods and correlational designs have clearly dominated the field, whereas structured interview methods, for instance, and experimental designs have been far less common.

Presumably as a consequence of the above illustrated disunion, and because of the meta-theoretical, theoretical, and methodological concerns raised above, the psychology of religion has not been integrated with mainstream psychology, nor has it within itself generally integrated the large knowledge base on human functioning that has accumulated in mainstream psychology over the years. Instead, the discipline has grown into a largely isolated and neglected area of inquiry. This is highly unfortunate, given the importance of religion in most people's lives (e.g., Gallup & Jones, 1989). To remedy this situation, the discipline needs testable and corroborated theories that are well anchored in mainstream psychology, that consist of central concepts amenable to sound quantitative operationalizations, and that possess adequate explanatory and integrative capacity for the deep and central aspects of the individual's religious beliefs and behaviors. Fortunately, in recent years, the social psychology of religion has seen the rise of some such theories, including, but not limited to, coping theory (Pargament, 1997) and attribution theory (Hood et al., 1996). A purpose with the present thesis is to show also that a developmental theory, more specifically attachment theory, holds considerable promise in this regard (see also Kirkpatrick, 1999a).

Theoretical and Research Traditions

In Hood et al.'s (1996) comprehensive psychology of religion textbook, a summarizing distinction is made between three broad theoretical and research traditions in the behavioral sciences of religion, which have their paradigmatic counterparts also in the general behavioral sciences: the "defensive/protective" tradition, the "growth/realization" tradition, and "religion as habit".

Some keywords, referring to "negative" motivational states supposedly underlying religiosity, that are common in the defensive/protective tradition are fear, anxiety, guilt, and deprivation. The most well known scholars in this tradition are probably Freud (e.g., 1964a) and Marx (1964), who focused on religiosity as emanating from personal infantile needs and structural deprivation, respectively. These analyses subsequently inspired other psychodynamic (e.g., Erikson, 1958, 1959, 1963; Rizzuto, 1979, 1991) and deprivation (Glock & Stark, 1965) perspectives on religion, which have been highly influential in the psychology and sociology of religion, respectively. Researchers in the psychological defensive/protective tradition, particularly those favoring a psychodynamic perspective, have generally theorized about religiosity as stemming from within the individual (e.g., from defense mechanisms; see Batson et al., 1993). In what follows, some of the most important psychodynamic accounts will be briefly presented and criticized.

The growth/realization tradition derives from humanist/existentialist and cognitive psychology, and focuses on religion as being functionally tied to more "positive"

and supposedly universal psychological phenomena, such as self-realization (e.g., Maslow, 1964) and the quest for meaning (e.g., Elkind, 1970; Fowler, 1981). This tradition encompasses several stage theories of religious development, based in one way or the other on a Piagetian perspective, and hence primarily focusing on the cognitive aspects of religious development (Hood et al., 1996). Since the present thesis is dedicated to the study of individual differences and socioemotional development, rather than normative phenomena and cognitive development, there will be little more to say about this tradition. However, in their review of the religious development literature, Hood et al. (1996) argue that "fresh conceptual approaches are needed to revitalize the study of of children's religious development" (p. 62). They specifically mention the work stemming from attachment theory as a promising new direction and a much needed socioemotional supplement to the near exclusive cognitive focus of the developmental psychology of religion.

Religion as habit is a tradition intimately associated with role theories (e.g., Sundén, 1959) and theories of learning, such as the reinforcement and social learning principles of behaviorism (e.g., Bandura, 1977; Skinner, 1953). A common topic in this tradition is how religiosity is transmitted across generations, often from parents to their children in the socialization process. Researchers in this tradition have generally theorized about religiosity as stemming from without (e.g., from societal roles or parents' religiosity; see Batson et al., 1993). Theory and research pertaining to social learning of parents' religiosity will be briefly reviewed and criticized below.

Much of the developmental research in the psychology of religion that has not dealt specifically with cognitive underpinnings of religious development has been directed at understanding what happens in adolescence and early adulthood, which are the life periods since long known to be most intimately associated with religious changes, conversions, and other significant religious experiences (e.g. Hall, 1904; Hood et al., 1996; James, 1902; Starbuck, 1899). Research on religious change and conversion is not a "tradition" in the same paradigmatic sense as in the above distinction. Although there have been attempts to understand why these processes so often take place in adolescence and early adulthood from the perspectives in each of the above traditions (e.g., Coe, 1916; Cornwall, 1988; Ozorak, 1989; Thouless, 1923), research on religious change and conversion has come to constitute a relatively separate field of inquiry. Some of the key theoretical proposals and empirical findings from such research will be briefly summarized and criticized below.

Jointly, these traditions and areas of investigation have yielded a large knowledge base on the aspects of religiosity that are relevant to psychology. As in psychology in general, however, a theoretically parsimonious integration of the knowledge base emanating from each tradition is still awaiting the light of day. Instead, the borders between traditions have been reified.

Psychodynamic perspectives

In this section, the most popular and/or well-known traditional psychodynamic conceptualizations of religion will be briefly presented, namely those of Freud, Erikson, and Rizzuto. This is by no means an exhaustive list of psychodynamic theoreticians' views on religion (the interested reader is also referred to e.g., Guntrip, 1969; Jones, 1991; Jung, 1938; McDargh, 1983; Meissner, 1984; Pruyser, 1968; Winnicott, 1953). In making explicit the functional and structural connections between child-parent and believer-God relatedness, it will nevertheless serve our purposes reasonably well. Following the presentations, some

common elements of the traditional psychodynamic approaches will be criticized in view of the demands posed on a good scientific theory.

It is somewhat difficult to place the psychodynamic perspectives on religion into the theoretical and research tradition scheme proposed by Hood et al. (1996). While Freud's pioneering analysis clearly belongs to the defensive/protective tradition, those of Erikson and Rizzuto also encompass elements of the growth/realization tradition and, in the latter case, from religion as habit. However, for theoretical and methodological reasons, in terms of the two paradigms sketched in the section *A discipline in need of a remedy?*, the psychodynamic approaches should clearly be subsumed under Tradition II. The reasons will be apparent below.

(1) Freud: An act of murder. Freud offered the pioneering psychodynamic account of religion, consisting both of phylogenetic and ontogenetic analyses. In *Totem and Tabu* (1919) Freud presented his view of what happened at the beginning of civilization. Men supposedly lived in hordes under the domination of a single, powerful, violent, and jealous father who had privileged access to all females. The brothers, who had been driven out by the primeval father, joined together and killed him. Following the murder, each brother partly identified with the father and acquired some of his strength, while the murder itself was repressed. To resolve the guilt of the killing act, as well as the longing for the dead father, a totem animal was formed as the dead father's substitute, and the parricide was continually repeated through ritual totem sacrifices. The totemic representation of the father, along with the guilt and the longing, was then directly inherited and cross-inherited by all sons and daughters to come, respectively, as a kind of latent memory trace, or a repressed object representation. This is the phylogenetic building block out of which God is subsequently to be carved. However, an intermediate stimulus was necessary to accomplish the "return of the repressed" representation, and this was provided by Moses' presentation of the monotheistic God, evoking overwhelming feelings in man still to date, due to the recognition of the ancestral representation (1964b).

Concerning the ontogenetic origins of religiosity (1964a), the inherited memory traces of the ancestral father supposedly merge with the oedipal son's ambivalent representation of his own father into a combined ambivalent ancestral and childhood father representation. Thus, the memory traces are reawakened and the child is made "to fit into the phylogenetic pattern" (in Rizzuto, 1979, p. 22). Following the libidinal energy transformations associated with identification with the earthly father and the formation of the superego, this merged representation becomes exalted and projected onto cosmos, that is, the child forms a representation of God. Freud claimed that, as a substitute for the longing for the father, the superego contains the material from which religions are built. Important to note is also the claim that the male individual's relationship with God depends on his experiences in relation to his earthly father; the former "oscillates and changes along with that relation" (1919, p. 147). Once the representation of God has been formed, God, as the surrogate paternal figure He is, may be used in situations that are difficult for the individual in one way or the other. According to Freud, this would represent regression to the developmental stage of the identification with the earthly father and the formation of the superego; in other words, it represents an infantile wish for parental protection in the face of one's own helplessness. According to Freud (1964a), the mature individual should resist such a temptation, because:

... religious doctrines ... are illusions and unsusceptible of proof. No one can be compelled to think them true, to believe in them. Some of them are so improbable

... that we may compare them ... to delusions. Of the reality value of most of them we cannot judge; just as they cannot be proved, so they cannot be refuted. ... scientific work is the only road that can lead us to a knowledge of reality outside of ourselves (p. 31).

(2) *Erikson: Basic trust.* Erik Erikson devoted little interest to the phylogenetic origins of religion, but was more elaborate than Freud in specifying which personal experiences with parents (mother) that were thought to be linked to the individual's subsequent faith; that is, in elaborating on individual differences in religiosity, and their ontogenetic origins. Taking his own stage theory of psychosocial development as the point of departure, Erikson (1959, 1963) claimed that such experiences with the mother that help the infant to favorably resolve the first crisis of life, to obtain basic trust rather than mistrust, is the cornerstone of faith and hope in adult life. As in the Freudian ontogenetic analysis, Erikson linked the adult's use of myths and rituals to regression as a defense mechanism, but rather than implying that this would be immature and something which the adult should sustain from, his analysis implies regression in the service of the ego, that is, regression that serves important mental survival functions and, hence, potentiates mental *progression*. Religion thus becomes a symbolic and collective arena in which the individual may be helped to continually resolve the crisis of trust vs. mistrust.

According to Erikson, there are three factors in the child's life that determine the development of the child's God image, each being a characteristic of the child's relationship with his or her mother: (1) the affective tone of the relationship, (2) the presence or absence of mutual recognition, and (3) the experience of being abandoned by the mother. The affective tone, in favorable circumstances, is described by Erikson as a kind of sanctified presence, leaving behind a reminiscence of which the feeling of God's invisible presence (e.g., in rituals) is an adult religious counterpart. Concerning mutual recognition, the important task is to establish a sense of being "seen" by and being able to "see" the other face to face, and to feel accepted as an individual during these encounters. An analogy in religious life is to feel accepted and loved by a benevolent and caring God. In Erikson's theory, this mutual recognition is the foundation of a later sense of identity. The flip side of developing the capacity to differentiate between self and (m)other, however, is a sense of feeling abandoned by her. In essence, it is this conflict of developing one's own self (underlying identity formation), while feeling abandoned in doing so, that religion helps the individual to come to terms with. In establishing a personal relationship with the deity, the individual may re-establish the security associated with "the paradise lost".

Erikson did not devote a collected effort in any one book or paper to develop a unified theory of religion. Instead, his thoughts were scattered across books and papers without ever being fully formalized. Others, most notably Fowler (1981) and Oser (1991), have used Erikson's stage theory (in addition to Piaget's, Kohlberg's etc.) to derive more formalized accounts of the development of religiosity. However, such applications have been more inclined to describe maturational religiosity development, applying the notions of discrete and hierarchical stages quite literally. In addition, when individual differences have been described, these applications concern more "cognitive" differences, depending on the solution to the particular maturational task at hand, than, for instance, differences in the affective tone of the God image and relationship with God. Thus, a more thorough description of these perspectives falls outside the scope of the present thesis.

(3) Rizzuto: God as a transitional object. Ana-Maria Rizzuto has formulated the most systematic traditional psychodynamic account of the ontogenetic origins and functions of the individual's relationship with God, particularly the process of forming a "living" God representation (1979, 1991). Being an object-relationist, Rizzuto takes the child's formation of object representations of self and parents (of both sexes) as the starting point in her analysis. Based on Winnicott's (1953) notion of an illusory, yet psychologically real, "transitional space", which is intermediate to the inner subjective and outer objective worlds of the child, Rizzuto (1979) summarizes her perspective as follows.

God is a special type of object representation, created by the individual in the psychic "space" that encompasses transitional objects such as blankets, toys, and mental representations. It is special for two principal reasons. First, unlike, for instance, blankets and toys, it is created out of representational material whose sources are the representations of primary objects (i.e., parents). Second, it does not follow the usual course of other transitional objects (i.e., does not fade in importance). Rather, the process of creating and finding God never ceases in the individual's life, but "follows epigenetic and developmental laws that can be studied systematically." (1979, p. 179).

As an object representation, God can be used or rejected, but never fully repressed. In "protecting the minimum amount of relatedness to primary objects and a baseline of self-respect" the usefulness of the object God is "at the service of gaining leverage with oneself, with others, and with life itself" (1979, p. 179). The object God thus serves the function for the individual of obtaining/maintaining psychic equilibrium, something which is particularly salient in critical moments (e.g., the death of a loved one, great pain, intense joy).

So far has Rizzuto's account of the private origins of the representation of God been presented. She also declares that it has public origins, due to God being a culturally sanctioned creation that is taken seriously by adults in general and the child's parents in particular. The particular combination of these private and public origins creates an idiosyncratic God representation in each individual's life, regardless of whether or not the representation is consciously embraced by the individual as belief in God. Rizzuto also claims that one's sense of self is affected by the representational traits of the object God. In favorable circumstances, God "remains a potentially available representation for the continuous process of psychic integration." (1979, p. 180).

In true psychoanalytic spirit, Rizzuto describes the developmental processes underlying the formation of the God representation in terms of stages of development. Before doing so, however, she notes that the "process of forming a God representation is exceedingly complex and is influenced by a multitude of cultural, social, familiar, individual phenomena ranging from the deepest biological levels of human experiences to the subtlest of spiritual realizations." (p.182). Accordingly, Rizzuto's account is itself highly complex. Not only does it depart from the postulate of the psychosexual and -social stages, with their associated concepts and developmental tasks, of Freud, Erikson, Mahler (1972) and Kohut (1971), among others, but also places Winnicott's heuristic concepts of transitional space and transitional object at the center of theorizing. Hence, this is not the place for a detailed presentation of Rizzuto's analysis of the development of the God representation. Suffice it to say that its formation can be divided into three stages, ranging from a "prestage" (age 0 – 2-3 years), where mirroring experiences with parents are important, via the stage of the formation of a living God (2-3 – 5-7 years), containing the particular idiosyncratic blend of private and

public material described above, to the final stage wherein God becomes the representational object of a religion.

Important to note is the assumption that favorable experiences with the primary objects are associated with a favorable development of the Self and God representations. For instance, Rizzuto (1979), similarly to Erikson, claims that the young infant, in the first period of "narcissistic" relation to the primary object, needs to be seen as "an appealing, wonderful, and powerful child reflected in the maternal eye" (p. 185). When this mirroring stage evolves normally, the child slowly begins to separate his or her own representation from that of the primary object, hence moving to the next stage of separation-individuation (in Mahler's [1972] terms), which involves the creation of the child's first transitional objects and representations. If the mirroring evolves differently, however, the individual may "remain fixated to a narcissistic need for psychic mirroring" (p. 186), perhaps even compensating "by feeling 'like God.'" (p. 188).

(4) *A critique of the traditional psychodynamic approaches to religion, Or why other theories are needed.* The traditional psychodynamic accounts of religion are not without merits. In the view of the author, Freud's legacy to the psychology of religion was twofold: (1) God, like parents, serves psychologically protective functions for the believer (although more so for some believers than for others), and (2) the believer's personal relationship with God is linked, somehow, to his or her personal experiences with parents. Erikson left the legacy of formulating an important and testable hypothesis: Are favorable circumstances in the child's relationship with his or her mother conducive to later development of faith in the adult child? Rizzuto's analysis has clearly left the most important contributions, threefold in the view of the author, and each amenable to empirical scrutiny: (1) it integrates the contribution of both the maternal and paternal objects for the formation of the individual's God representation, (2) it emphasizes the importance of both the private and public sources of the God representation, and (3) it suggests that the God representation may serve mentally integrative functions for the individual.

Despite the merits, the problems with each of these traditional psychodynamic analyses, and also with those not presented, are severe, probably severe enough to warrant an altogether different theoretical point of departure for an adequate understanding of the relational underpinnings of religiosity. These problems amass to an extensive list, which can be divided into theoretical, methodological, and empirical shortcomings, the latter two of which are highly intertwined. They will be briefly presented below according to this division (see also Granqvist, 2002d).

Concerning theoretical problems, and as noted already by Bowlby (see above), the traditional psychodynamic approaches are inherently at odds with current thinking in the biological sciences, in that the motivational account of the former departs from a drive or psychical "energy" framework, whereas that of the latter usually favors a control systems perspective. The drive approach is particularly ill suited when applied to religion, because its emphasis on sexual libido is not consonant with what is usually observed in the believer-God relationship, being marked as it is by an unusual degree of asexuality and as being more clearly linked to a sense of protection (see also Kirkpatrick, 1995).

Second, each of the psychodynamic approaches presupposes the existence of broad stages of psychosexual or –social development. Except in the cases of some biological, motor, and cognitive developments, however, the notion of stages of development, particularly that of psychosexual stages, has since long fallen out of favor in empirically

oriented developmental psychology. Closely tied to the presupposition of stages of development is the assumption that when development has unfolded unfavorably, the individual remains "fixated" at the stage associated with developmental trauma. Such fixation is supposedly evident in the operation of defense mechanisms, such as splitting, projection, regression, and repression, each of which is thought to be of primary importance also in the traditional psychodynamic conceptualizations of religiosity. The postulate of such defense mechanisms not only limits the operationalizability, parsimoniousness, and refutability of the accounts (see further below), but should probably be recast along completely different theoretical lines that do not presuppose psychological energy, stages of development, or fixation (see also Bowlby, 1969). Hence, one of the most important tools of the traditional psychodynamicists' analysis of religion are of limited usefulness when carved out of the current theoretical material.

Third, as noted above, the postulate of defense mechanisms sets restraints on the refutability of the traditional psychodynamic accounts of religion, in part because they are difficult to operationalize, but also because of the way in which they are inferred. They are inferred in such a way as to leave the conditions (e.g., types of past experiences with parents) leading to their operation unspecified. For instance, although Freud (1919) noted that the male individual's relationship with God "oscillates and changes along" (p. 147) with his relationship with the earthly father, he never specified which kinds of experiences with the earthly father that resulted in which kinds of experiences in relation to God. That is, he failed to explain what would cause only some individuals to utilize the defense mechanisms of repression, regression, sublimation, projection etc. in such a combination as to create his (or her) infantile need for cosmic rescue, despite the supposedly universal existence of inherited memory traces. Ironically, for these and other reasons (see below), it may be concluded about some of Freud's doctrines, and to use his own words as directed against religious doctrines (1964a, p. 164), that "just as they cannot be proved, so they cannot be refuted". That Freud was also terribly value-laden and ontologically reductionist, in addition to failing to provide an account for the religiosity of females (i.e., they did not contribute in the primal murder act) as well as of the maternal components of most believers' God image (e.g. Godin & Hallez, 1965; Nelson, 1971) (i.e., no distant mother was killed) are all additional serious problems. Batson (1997) was therefore right in pointing out that Freud's analysis was more a "religion by psychology" than a "psychology of religion". Hence, and to paraphrase his own words, Freud left us with little more than yet another illusion, as if the original illusion to which he applied it was not difficult enough to scientifically evaluate.

Rizzuto's (1979) analysis suffers from a similar problem of near irrefutability. To take two examples:

Objects who originally provided a referential framework for the formation of the God representation can move, through defensive maneuvers, into any of the following positions in relationship to God: (1) direct continuity between one and the other [continuity] ... ; (2) direct opposition to each other so that they are either antagonistic or at the opposite poles of the representational gamut [discontinuity] – God is giving while parents frustrating, or parents are idealized while God is seen as an object to be avoided; (3) a combination in which some aspects of God are lined up with the parents and others oppose them (p. 89; brackets added).

Although this account may well be true, regardless of alternative the formation of the God representation is said to be driven by "defensive maneuvers". In the absence of specifying the conditions under which each defensive maneuver is to be expected, Rizzuto's analysis becomes fool proof, and thereby fails to be scientifically informative; either there is continuity or discontinuity, or else there is a combination of the two, and we do not know when to expect which. An analogue would be to claim that a parent and child may either (1) match in height (both are tall or short), (2) mismatch in height (one is tall and the other is short), or (3) half-match in height (one is half-short and the other is half-tall). This is by necessity true, but there is a need to explain why and to make *a priori* predictions about when to expect which possibility. Also:

"we sometimes call in our God ... sometimes we discard him because he is either too colorless for our needs or too hot for us to handle. Some of us never get him out of the magician's box where we placed him in childhood; others never stop throwing him around ... others are content simply to know that he is there, if needed; others find him so fascinating that they want nothing else" (1979, p. 180).

This is almost certain to be true. In fact, one could imagine close to an endless list of possibilities. However, to formulate a good scientific theory means to pose and accurately answer questions such as "In what kinds of situations do we do the one and the other in relation to God, and why?", "Which individuals have which kinds of relationships with God, and why?", and "For which individuals should we expect fluctuations in their relationships with God over time, and why?" Rizzuto's analysis fails to clearly pose just these kinds of questions; accordingly, her account cannot answer them either. Also, object relations theory is not a framework well suited for understanding the public origins of religiosity in the child (see also Geels & Wikström, 1993). Instead, a theory that can credibly throw light both on the private and public origins of religiosity is needed.

In suggesting that basic trust is the cornerstone for faith in adult life, Erikson probably fares better than both Freud and Rizzuto in terms of refutability. However, his thoughts on basic trust, as well as the parental behavior supposedly causing it, have not yielded much empirical research, probably mostly due to a neglected specification of how they should be operationalized. Accordingly, we know very little about the actual empirical fruitfulness of Erikson's description of the infancy "stage". Also, Erikson's focus on basic trust as a prerequisite for adult faith leaves the question unanswered of why some adults, who are likely to have developed mistrust in infancy, nevertheless seem to obtain faith in adulthood. As religion is an arena for the continual resolution of the trust-mistrust crisis, they presumably use that arena for compensatory functions, but Erikson failed to account for how this is possible, given their basic mistrust. Additionally, in contrast to Freud, Erikson emphasized the importance of the child's relationship with his or her mother for the subsequent formation of the God image, while neglecting to take the paternal attributes that are characteristic of most believers' God image into account (e.g., Nelson & Jones, 1957, Vergote & Tamayo, 1981).

Tied to the irrefutability problems, in other words, are the absent descriptions of what types of experiences with parents that lead to the operation of what types of defense mechanisms, in turn linked to what types object representations, including the representation

of God. The absence of such descriptions need not be so problematic for traditional psychodynamic theorists, given their preoccupation with the content of the representations as stemming from the child's fantasy (e.g., Klein, 1932). This absence, however, is problematic for theorists, such as Bowlby (1969), who hold the content of the representations as reasonably accurate reflections of the real experiences that the child has had in relation to his or her caregivers (see also Kirkpatrick, 1995). This latter assumption, moreover, seems to be strongly supported by systematic empirical work (e.g., Ainsworth et al, 1978; De Wolff & van IJzendoorn, 1997).

Furthermore, a good scientific theory should not only explain the ontogenetic origins and immediate causation of a phenomenon, but also why the human animal, as a species considered, acquired it in the first place; that is, its phylogenetic origins and ultimate causation should be delineated as well. Apart from Freud, traditional psychodynamic theorists, Erikson and Rizzuto included, have shown a striking disinterest both in phylogenetic processes in general and as these may be relevant for understanding the development of religion in particular. In addition, when a phylogenetic account is present, it should probably not be in opposition to modern theory of natural selection, which brings us to Freud (1919, 1964b). Freud never clarified, presupposing the actual existence of the primal murder, how an object representation could be inherited across generations, that is, how inherited memory traces are possible. Unless contemporary evolutionary theory has made a serious mistake in discrediting the Lamarckian notion of the inheritance of acquired characteristics, Freud was probably utterly wrong in assuming heritability of memories in general, and most certainly in assuming heritability of latent memories. Relatedly, as with the drive framework, the notion of "ontogeny as recapitulating phylogeny", which clearly influenced the Freudian account of religion (Shafranske, 1995), is no longer taken seriously in the biological sciences. Had Freud elected to favor the Darwinian, as opposed to the Lamarckian, account of evolutionary processes, the situation "with psychoanalysis remaining permanently beyond the fringe of the scientific world" (Bowlby, 1973, p. 403) could have been avoided, but he would consequently have had to recast his theory along principally different theoretical lines.

A final theoretical issue to be raised concerning the traditional psychodynamic accounts of religion is that of parsimony. The situation is most clear with respect to the Freudian analysis. In all its complexity of primal murder, repression of the crime, totem sacrifice and representation, inherited latent memory traces (in need of another stimulus for the return of the repressed), transformed libidinal energies, oedipal conflicts, formations of the superego, ambivalent object representations of earthly fathers, and a particular combination of defense mechanisms, all being necessary for the formation of the God representation, the Freudian account can hardly be claimed to possess parsimony. The analyses of Erikson and Rizzuto fare better in this regard. However, they both presuppose psychical energy, stages of development, fixation, oedipal conflicts, and a particular combination of defense mechanisms to account for the development of faith (Erikson) and of the God representation (Rizzuto). As has been and will be further argued, many of these constructs are both unnecessary, thus contributing to make the analyses overly complex, and unfortunate, given their theoretical foundation.

With respect to methodological and empirical shortcomings, and as has been repeatedly hinted at above, the most central theoretical constructs of the traditional psychodynamic accounts are notoriously difficult to operationally define. This holds true

particularly for defense mechanisms such as repression, regression (whether or not in service of the ego), and splitting, but also for constructs such as basic trust and mistrust, transitional space and transitional object. To operationally define phenomena such as "the return of the repressed" and "latent memory trace" seems to be even more difficult. Hence, apart from all of the above listed theoretical shortcomings, it is practically impossible to make observations of some of the key phenomena postulated in the traditional psychodynamic accounts of religion. As a consequence, their empirical fruitfulness can not be determined satisfactorily.

Second, the traditional psychodynamic accounts of religion have been based on unsystematic empirical work, such as of a few unrepresentative clinical cases and religious biographies. This is particularly true with respect to Freud's and Erikson's analyses. Rizzuto fares somewhat better. However, although her analysis (1979) was based on 20 in-depth case studies of clinical patients, only four (20%) of these were presented to the reader. Impressive in depth as her analyses of these four cases are, one is left wondering both whether the remaining 16 cases would also fit her scheme, presuming that it is possible not to, and whether alternative interpretations of the four cases presented can really be ruled out. Hence, due to the unsystematic nature of investigation and the few unrepresentative cases that have been analyzed, both the internal and external validity of the traditional psychodynamic analyses presented to date are potentially severely restricted.

Third, the methodology underlying the traditional psychodynamic analyses has been one of post-hoc reconstructions of the participants' past. That is, prospective studies that test psychodynamic predictions, again presuming that such may be derived, have not been performed. A related problem is that the analyst may have generalized backwards from the inferred current God representation to the patient's past representations and experiences (see also Kirkpatrick, 1995). If this would be so, it is hardly surprising that the God representation seems to be related to the latter. Nevertheless, Rizzuto (1979) does credit this methodological approach in stating that "The reconstructive approach to the understanding of developmental processes provides information that is otherwise inaccessible" (p. 181). There is a fair possibility that this may in part be true, but it is equally possible that the "results" from her four case analyses reflect hindsight bias in the service of a nearly irrefutable theoretical framework.

Fourth, the methodology underlying the traditional psychodynamic analyses makes replication impossible. This is so due to its idiosyncrasy, that is, standardized methods are not used. Accordingly, the approaches used seem to vary somewhat from one case to another. Replication attempts are also made difficult due to a neglect to present the details of the methodological approaches. Finally, no criteria have been presented in the traditional psychodynamic analyses of how to determine that two or more phenomena (e.g., relationship with parent and God representation) are in fact related at an acceptable degree of statistical likelihood. Of course, this is so due to the utility of qualitative, as opposed to quantitative, analyses.

In view of all of the above theoretical, methodological, and empirical shortcomings, the assertion of Hood et al. (1996) seems well founded:

Although these [traditional psychodynamic] theories can offer rich sources of ideas and insights into religious development ... (1) they have not generated much empirical research; (2) the relevant research that has been carried out has been compromised by the difficulties inherent in operationalizing and testing some ...

concepts; and (3) the conclusions of related studies are somewhat ambiguous and contradictory (p. 65; brackets added).

For these reasons, the traditional psychodynamic accounts have fallen out of favor in Tradition I of the psychology of religion (i.e., its empirical sub-discipline), yet have simultaneously been very influential in Tradition II; that is, among researchers who are satisfied with the mere possibility of "rich sources of ideas and insights", despite the fact that many of these possibilities are not amenable to critical empirical trials. Judging from the standards of the empirical psychology of religion, and perhaps of the entire scientific enterprise as such (Popper, 1959), there is something inherently flawed in a theoretical program from which falsifiable predictions cannot be derived and tested, either because the program is fool proof or else because its constructs cannot be operationalized. Psychologists of religion may therefore do well in turning their attention to developmental theories that not only possess heuristic value but are also amenable to empirical trials, while still ascribing influence to the traditional psychodynamic accounts as precursors in the history of ideas.

The social learning of religion

Foremost of the contributions to the tradition of religion as habit (Hood et al., 1996) is that offered by social learning theory. This research program should clearly be subsumed under Tradition I, as characterized in the section *A discipline in need of remedy?*.

In summarizing the predictive power of "social background" parameters (e.g., SES, educational level, race, sex, town size, parental religion) in predicting offspring religiosity, Batson et al. (1993) conclude that, not surprisingly, the most powerful predictor is the religious involvement of the parents. Hood et al. (1996) come to the same conclusion. Positive correlations between indices of offspring and parent religiosity, typically around .50, are usually obtained, regardless of whether it is the offspring or the parents themselves who rate parental religiousness (Hoge & Petrillo, 1978; Hunsberger, 1985; Myers, 1996; Newcomb & Svehla, 1937; de Vaus, 1983). Batson et al. (1993) and Hood et al. (1996) note that, although this relation is well established in empirical research, its explanation is not, partly due to the fact that correlational designs have typically been employed. The most common explanatory attempts have been based on social learning theory (Bandura 1977), emphasizing principles of parental reinforcement and modeling of religious behaviors.

A consistent finding in the literature on similarities between offspring and parental religiosity is that the predictive power of parental religiousness is increased when estimates of the warmth and quality of the parent-child relationship are taken into account. Offspring with more favorable relationships have been shown to possess a religiosity that is more similar to parental religiosity than offspring with less favorable relationships (e.g., Dudley, 1978; Erickson, 1964; Hoge & Petrillo, 1978; Hoge, Petrillo, & Smith, 1982; Myers, 1996; Nelsen, 1980; Ozorak, 1989, Weigert & Thomas, 1972). An explanation for why this is so needs to be offered, and it is not readily available in social learning theory *per se*.

Also, the social learning account of the influence of parental religious behaviors cannot explain why people with unfavorable experiences with non-religious parents are religious, unless the influence of social learning in the context of relationships with other religious individuals is drawn to the discussion. This is because, in Rizzuto's terms, the social learning account is devoted primarily to explaining the public origins of religiosity (or religiosity as stemming "from without"; Batson et al., 1993). Finally, the social learning

paradigm, with its emphasis on principles of reinforcement and modeling occurring at the individual level over time, is difficult to concretely apply in studies using correlational design and employing several participants at the same time in the statistical analyses; that is, it is more ideally suited to functional analyses and (experimental) within-subject designs. In practice, in the parent-offspring religiousness similarity studies, which have been correlational, the principles of reinforcement and modeling have therefore been inferred, rather than directly studied. As a complement to the social learning account, then, a theoretical framework which allows for studies based on correlational design, the employment of several participants in the statistical analyses, and which also has the potential of psychologically explaining the private sources of religiosity (i.e., religiosity as stemming "from within"), should be sought out and tested.

Religious change and conversion: Adolescence and early adulthood as religious transitional periods

As noted above, research on religious change and conversion, which is typically tied to adolescent and young adult research, stems from different theoretical and research traditions. Depending on theoretical background and methodological approach, this research may possess characteristics of either Tradition I or Tradition II, as defined in the section *A discipline in need of remedy?*

Influential claims have been made that two "paradigms" on religious conversion co-exist in the behavioral sciences of religion (Richardson, 1985; see also Hood et al., 1996; Paloutzian, Richardson, & Rambo, 1999). In this section, these two paradigms will be presented and criticized. The section will end with a brief discussion of religious processes in adolescence and early adulthood.

The "classic paradigm" of religious conversions encompasses the classic psychologists of religion such as James (1902), Leuba (1896), Starbuck (1899), and Coe (1916). In conceptualizing the psychology of religious conversions, this paradigm is said to have emphasized predispositional individual factors, passivity of the convert, a precipitating crisis, suddenness and intensity of the conversion itself, and a radical change in well-being and of the prior self as a consequence of the conversion (Richardson, 1985). William James (1902) has offered the indisputably most well-known characterization of conversions in this tradition. In doing so, he drew on a qualitative database of biographies and other personal documents, intended to highlight the exemplar types of religious conversions and converts. Using a phenomenological and descriptive approach to this material, James described the typical convert as being in possession of a temperamental disposition that was labeled the "sick soul". Some characteristics of this disposition are religious melancholy, a discordant personality or divided self, a sense of lost meaning, dread, and emotional alienation, a preoccupation with one's own limitations and sinfulness, as well as with the evil inherent in the world. Tolstoy, Saul (prior to becoming Paul), and Martin Luther, among others, were offered as exemplar types of the sick soul disposition. As an illustration, James (1902) quotes a passage from Tolstoy's autobiographical *Confession*, describing a period of utter despair in the author's life:

During the whole course of this year, when I almost unceasingly kept asking myself how to end the business, whether by the rope or by the bullet, during all that time ... my heart kept languishing with another pining emotion. I can call this

by no other name than that of a thirst for God. This craving for God had nothing to do with the movement of my ideas ... but it came from my heart. It was like a feeling of dread that made me seem like an orphan and isolated in the midst of all these things that were so foreign. And this feeling of dread was mitigated by the hope of finding the assistance of some one (p. 156).

The religious conversions of people with such an inclination were described as typically being sudden and intense (although occasionally gradual), following a period of severe emotional turmoil, characterized by "subconscious incubation", leading to "self-surrender". The fruit of such a conversion, according to James, was a radical increase in well being and a corresponding transformation of the self. The prior divided self becomes unified following the conversion, and the individual is born anew. Accordingly, James described the sick soul's religiosity as "twice-born".

This twice-born religiosity of the sick soul was contrasted with another exemplar type, namely the "once-born" religiosity of the "healthy-minded" individual, typified by the poet Walt Whitman. This latter type of individuals has typically not made the kind of dramatic conversion experiences encountered by the sick souls (but see below). As an illustration of the healthy-minded individual's once-born religiosity, James (1902) quotes one of Starbuck's respondents as saying:

I observe, with profound regret, the religious struggles which come into many biographies, as if almost essential to the formation of the hero. I ought to speak of these, to say, that any man has an advantage, not to be estimated, who is born, as I was, into a family where the religion is simple and rational; who is trained in the theory of such a religion, so that he never knows, for an hour, what these religious or irreligious struggles are. I always knew God loved me, and I was always grateful to him for the world he placed me in (p. 82).

The critique of the classic account of conversions, and particularly of James's description, is almost as well-known as the accounts themselves (see Wulff, 1991). One of the most important points concerns the lack of a credible framework for the psychological explanation of the two religious dispositions that were primarily described by James. It is possible that some unknown constitutional factors may account for part of the variance between them (cf. D'Onofrio, Eaves, Murrelle, Maes, & Spilka, 1999). Another possibility is that childhood relationship experiences, leading to different affect regulatory dispositions, may explain part of the variance. A second notable point of critique concerns James's use of the exemplar type approach to illustrate the conversion phenomena, with the implication that more ordinary forms of religious transformations were neglected.

Partly responsible for this second point of critique is the "contemporary paradigm" (see Richardson, 1985) of conversion, which includes many sociologists and humanist psychologists. The contemporary paradigm explicitly rejects the use of prototypes, and claims that each convert and conversion is unique. It also emphasizes non-determinism both in terms of predispositional and situational factors. Curiously, the convert is nevertheless described as being an active agent in the process, the conversion is portrayed as being gradual, and no particular change of the self is said to occur as a consequence of the conversion. Richardson's (1985) portrayal of these two competing paradigms implies that

both accounts neglect to consider individual differences among converts in conversion characteristics.

This portrayal of the classic paradigm is unfair to scholars such as James (1902) and Starbuck (1899). As noted, James made clear distinctions, as did Starbuck, between the first-born religiosity of the healthy-minded and the twice-born religiosity of the sick soul. In fact, part of the task that James set up for himself in writing *Varieties* was to place individual differences, at the time a neglected topic in general psychology, at the center of description (see Wulff, 1991). It is specifically the description of the conversion of the sick soul which Richardson labels the classic paradigm. Insofar as healthy-minded individuals had made conversion experiences, they were described by James as being relatively smooth and gradual, being more of active decisions than radical transformations of the self; in James's terms, this type of conversion was "volitional". Finally, this conversion prototype was claimed not to occur in situations of crisis. However, the contemporary paradigm, favored by Richardson himself, does neglect to consider individual differences both in the process of conversion and in the converts themselves.

Concerning adolescence as a religious transitional period, the classic paradigm emphasizes the link between this life period and the experience of religious conversions. In Starbuck's (1899) words: "Theology takes the adolescent tendencies and builds upon them" (p.224). According to the contemporary paradigm, early adulthood, rather than adolescence, is the life period most intimately associated with conversions (Richardson, 1985). It is probably safe to conclude that conversions can occur throughout life, but that they are unusually common during the mid-adolescent to early adult years. The reason why this is so, however, is unclear. Speculations have ranged from psychoanalytic notions of increased libidinal energy, via a humanistic psychology emphasis on self-realization, to more sociological explanations in terms of re-socialization processes (see Hood et al., 1996). Besides being linked to increased religiousness, as in the experience of religious conversion, adolescence and early adulthood are also associated with apostasy, that is, the decline of religiosity among those raised in a religious home (Roof & Hadaway, 1979; Roof & McKinney, 1987).

As different as the classic and contemporary conceptualizations of conversion are, and due to differing operationalizations of conversion (Zinnbauer & Pargament, 1997), it is possible that two different populations of conversions and converts have been studied by the two paradigms. In that case, the conflict may in part be an artifact. To explore this possibility, it seems necessary for researchers to be data driven rather than to impose limitations, as prescribed by one's own theoretical preference, on the phenomenon at hand. In the case of conversion, studies should use samples for which both sudden and gradual, as well as early and late, conversions may have had the chance to occur, samples for which both predispositional and situational factors, as well as the absence of both, may have been present etc. The key to resolving the conversion paradigm chasm may, hence, lie in a consideration of individual differences between converts, in turn leading to different conversion experiences. In fact, this proposal conforms to James's original suggestions. However, James's descriptive exemplar type approach needs to be complemented with explanatory approaches and studies of representative participants.

Attachment and Religion

Theoretical Considerations: God as an Attachment-Like Figure

The believer and God in relation to five defining features of attachment relationships

The most obvious point of departure for an attachment theoretical application to religiosity is the oft mentioned centrality, in the scriptures as well as in psychological research, of the religious individual's close relationship with a personal God (see Kirkpatrick, 1999a). However, according to Bowlby's normative attachment framework, the term "attachment relationship" does not refer to all types of close relationships, but exclusively to relationships that meet four criteria: proximity maintenance, safe haven, secure base, and separation distress (Hazan & Zeifman, 1999). These four phenomena all concern how the attached person presumably feels and observably behaves in relation to its attachment figure. Bowlby added a fifth criterion concerning characteristics of the attachment figure in relation to the attached person, namely that the former should be stronger and wiser. All of these five criteria have presumably derived their significance from evolutionary processes in that the relationships that met them potentiated survival via protection of the attached person in the EEA. If attachment theory is to be applied to religiosity, an important task is to demonstrate that these five criteria are reasonably met with regard to the believer's relationship with God. In doing so, Kirkpatrick's (1999a) line of reasoning will be followed.

With respect to the infant's attachment to its primary caregiver, by all means representing the prototypical attachment relationship, it is readily observable in overt behavior how the infant continuously monitors the proximity and availability of its caregiver (proximity maintenance). If the infant senses danger or feels distressed for some other reason, he or she usually retreats to his or her caregiver as a source of comfort (safe haven). Upon separation, the infant often protests, and following separation, he or she signals anxiety through crying (separation distress). When the caregiver is perceived to be sufficiently near and responsive, the infant is usually motivated to explore his or her environment. In this way, the infant's caregiver serves as a secure base for infant exploration, and a balance is struck between attachment and exploration. This prototypical scenario is most evident at infant age 12-15 months (Ainsworth et al., 1978). As noted above, with cognitive and emotional maturation, the expression of attachment becomes less visible.

Concerning the proximity maintenance criterion in relation to believers' relationships with God, and keeping maturational changes in mind, God is supposedly omnipresent. That is, according to Christian theology, God is always near. There are several means available for the religious individual to make this a more personal and concrete experience, ranging from utilizing symbols, such as a cross-shaped necklace or an icon on the shelf, to rituals, such as daily visits to the Church or the actual partake of the Communion. The most salient mean of obtaining proximity to God, however, is probably accomplished in prayer. According to Kirkpatrick (1999a), prayer is analogous to social referencing in young children, which consists of occasional checks of the availability of the caregiver.

Regarding the safe haven aspect of attachment, one of the most well documented findings in the psychology of religion is that religious individuals turn to God in situations of distress. Such situations are diverse, and include loss through death and divorce (Granqvist & Hagekull, 2000, 2002; Loveland, 1968; Parkes, 1982), fear in relation to serious illness (Johnson & Spilka, 1991; O'Brien, 1982), emotional crises (James, 1902; Starbuck,

1899; Clark, 1929), relationship problems (Ullman, 1982), and other types of negative life events (see Hood et al., 1996), all of which are likely to activate the individual's attachment system (Bowlby, 1969). It is interesting to note that in situations such as these, the most likely religious response is to pray to God, rather than to visit Church (Argyle & Beit-Hallahmi, 1975), suggesting that private prayer may function as a religious analogue to attachment behaviors (see Kirkpatrick, 1999a). In the recent research on coping and religion (Pargament, 1997), much attention has also been devoted to how believers turn to God and utilize their perceived relationships with Him in such stressful life situations. Further, in situations such as these, religious experiences, significant religious changes, and conversions occur at a disproportionately high rate (Hood et al., 1996). For instance, Ullman (1982) found that 80 % of her sample of religious converts had experienced emotional turmoil immediately precipitating their conversion experiences.

Concerning the secure base phenomenon, and as is the case with the distressed child seeking security from parents, there is typically a notable increase in well being following the conversion experience (e.g., Bergin, 1983; Granqvist & Kirkpatrick, 2000), which, in attachment terms, may suggest that the individual obtains felt security from his or her encounter with God. In Ullman's (1982) sample, for instance, 80 % of the participants indicated relief from anxiety, depression, or anger as predominant consequences of their conversions. With respect to the secure base component, it is notable also that God possesses sensitivity-related attributes that are supposedly ideal for a secure base. This notion is supported both by the theological portrayal of God as "the Shepherd", "the Father", "the Shield" etc. and by psychological research inquiring into the actual God images of believers. For instance, factor analytic studies have shown factors of "availability" (with items such as "gives comfort", "a warm-hearted refuge", "who will take loving care of me"; Tamayo & Desjardins, 1976) and "benevolence" (e.g., "comforting", "loving", "protecting"; Gorsuch, 1968) to account for most variance in God image. Moreover, correlates of religiosity seem to suggest that possessing an image of God as an adequate secure base, and relating to Him accordingly, are associated with outcomes that are analogue to the situation of secure "earthly" attachment. For instance, holding a loving, as opposed to distant, image of God is linked to higher self-esteem (Benson & Spilka, 1973). There has also accumulated a large data base in the psychology of religion attesting to the fact that intrinsic religiosity, in which God and religion are the master motives in the individual's life (Allport & Ross, 1967), is associated with mental health indices such as low anxiety, loneliness, and depression (for an overview, see Batson et al., 1993). In what is probably the most elegant study to date in this domain, Koenig, George, and Peterson (1998) found that intrinsic religiosity, unlike Church attendance, prospectively predicted shorter time to remission of depression in medically ill older patients, while statistically controlling for the effects of demographics, physical health, psychosocial and treatment factors.

With regard to separation distress, it is difficult to evaluate this component in relation to the religious individual's relationship with God, because, and as noted by Kirkpatrick (1999a), separation experiences from God are typically not encountered; recall that He is supposedly omni-present, in addition to being eternal. However, psychological experiences of God as distant and inaccessible are subjects of many biblical passages, for instance in the Psalms and the book of Job, and theological metaphors, such as "wilderness experience" and "the dark night of the soul" (St. John of the Cross, 1990), which imply emotional states of despair and emptiness. Also, according to Christian theology, to be

separated from God is the essence of Hell. Further, there are some indications that, following the euphoria of conversions and personal experiences of being near God, the convert often has to struggle to maintain the "sanctified" state of being in contact with Him (Hood et al., 1996; Starbuck, 1899). Finally, following de-conversion, or apostasy, Wright (1987) has noted the presence of symptoms, such as separation anxiety, that are similar to those found after separation in earthly attachment relationships.

Concerning the criterion of the relative strength and wisdom of the attachment figure and the attached person, it is probably superfluous to state that, by virtue of definition, God is both stronger and wiser than those who believe in Him. In fact, the God-believer relationship meets this criterion even better than the caregiver-infant relationship in that God is supposedly both omnipotent and omniscient, representing attributes that are difficult for any earthly caregiver, sensitive as he or she may be, to compete with. This criterion also holds far better for the God-believer relationship than for the lover-lover relationship, the latter presumably being symmetrical in wisdom and close to symmetrical in strength (i.e., the male usually being somewhat stronger).

Hence, it seems as if the religious individual's relationship with God meets the five attachment relationship criteria reasonably well, particularly the safe haven and secure base phenomena, as well as the relative strength and wisdom criterion, whereas support for the component of separation distress is (by necessity, given God's omnipresence) less compelling.

The above analysis focused almost exclusively on religiosity in monotheistic, and particularly Christian, religions. By virtue of portraying a personal God who is involved in the individual's private life and affairs, religiosity within these traditions is intuitively better apt to suit an attachment theoretical conceptualization than, for instance, that of pantheistic religions. A more thorough discussion of other religious traditions falls outside the scope of the present dissertation (but see Kirkpatrick, 1995, for some notable attachment aspects occurring also in the context of non-theistic religions). Before concluding that the believer-God relationship is a true attachment relationship, one needs to consider its evolutionary function.

Evolutionary and conceptual disclaimers

As noted above, the evolutionary function of infant-caregiver attachment supposedly was, and probably still is, survival of the infant via physical proximity and protection (Bowlby, 1969). It obviously makes far less sense to think of survival via protection as the evolutionary function of the believer-God "attachment" relationship. In fact, and if anything, in situations of potential danger, such as a predator attacking, it would probably have been detrimental to survival to pray to God. Instead, if the theory of natural selection is at all relevant, the believer-God relationship probably has had some other evolutionary function(s) than the survival function posited by attachment theory.

Another possibility is that religiosity, including the believer-God relationship, is an evolutionary exaptation (Gould, 1991), rather than a direct adaptation. What this would mean is that religiosity is not directly tied to such genetic design features of the human organism that have been shaped by pressures of natural selection, but only indirectly so via its association(s) with some phenomenon/-a that has/have a direct tie to such features (see also Hinde, 1999; Kirkpatrick, 1999b, Spilka, 1999). Another way to express this is to say that religion parasites on mechanisms that originated to serve other functions. For instance, Hinde

(1999) claims that religious beliefs, narratives, rituals, moral codes, and experiences can be understood as expressions of basic psychological propensities, and that these propensities, in turn, are shaped by natural selection. Similarly, Spilka (1999) hypothesizes that religiosity is an exaptation of three adaptational design features (which he terms "needs"), need for meaning, need for control, and need for others, and he goes on to suggest that attachment is a part of the need for others. From this perspective, then, the believer-God relationship aspect of religiosity has not had an evolutionary function in its own right, but utilizes the design feature of a "need for others", including the attachment system, which has had survival and reproductive functions in the EEA. Speaking phylogenetically, even if an important part of the believer-God relationship is an exaptation of the evolutionary adaptation offered by the attachment system, the relationship may well receive its ontogenetic and emotional significance from involving this same system, including a sense of felt security for the believer, despite the absence of physical proximity with and protection by God in the EEA.

It is notable that difficulties arise also in establishing the evolutionary function of survival via protection as the foundation of other relationships proposed to be of attachment type (e.g., Ainsworth, 1985), such as the late teenager-mother relationship, the lover-lover relationship, or relationships between very close friends and siblings of similar age. In none of these relationships is it normative for one partner to serve as the stronger and wiser protector of the other, while they may still meet the remaining criteria for attachment relationships.

Perhaps a more fruitful approach towards understanding category membership, than that provided by the "classical essentialism" (i.e., necessary and sufficient conditions) implied in the above sections, is offered by the late Wittgenstein's (1953) notion of family resemblances (see also Rosch, in press). As applied to the "family" of attachment relationships, the infant-caregiver relationship would constitute the prototype of the category. An important task for the potential inclusion of a new "family member" is then to demonstrate that it bears resemblance to this prototype, just as we have seen that the believer-God relationship does.

Hence, the believer-God relationship can be seen as a member of the category attachment relationships. Nevertheless, to avoid the semantic dilution that may result from applying theoretical concepts, with specific original referents, to new domains, it is probably wise to err on the side of caution. For this reason, the believer-God relationship will henceforward be referred to as "attachment-like".

Empirical Research

As in attachment research within the areas of developmental, social and personality psychology, empirical research on attachment and religiosity has mostly used Ainsworth's individual difference perspective, rather than Bowlby's normative framework, as the point of departure. In the pioneering study in this domain, Kirkpatrick and Shaver (1990) derived two general hypotheses from attachment theory.

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. Although a complex issue in its own right, this hypothesis broadly resembles the

assumptions of the protective/defensive tradition, particularly Freud's (1964a) notion of God as an exalted parent figure, in that religiosity is supposed to compensate for inadequacies in other relationships. It is also similar to Rizzuto's (1979) notion of discontinuity between object representations of primary objects and God.

In contrast, the "correspondence hypothesis" (or mental models hypothesis) assumed that securely unlike 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 IWMs being responsible for relationship continuity over time. Hence, the individual's relationship with God was supposed to correspond to his or her IWMs with regard to attachment. This hypothesis bears resemblances to Erikson's (1959, 1963) analysis of basic trust as a prerequisite for faith in adult life and to Rizzuto's (1979) notion of continuity in object representations of primary objects and God. This hypothesis had received indirect support from research undertaken within other theoretical frameworks, most notably from Rohner's (1986) cross-cultural work with parental acceptance-rejection theory, which showed that societies marked by warm and accepting parenting had constructed deities with analogous qualities, whereas societies in which parenting was rejecting had constructed more distant and interfering deities.

As a first test of these hypotheses, Kirkpatrick and Shaver (1990) had 213 adult Denver Post advertisement readers mark a questionnaire containing religiosity variables along with a simple retrospective self-report measure of attachment history with mother and father in childhood (Hazan & Shaver, 1986). The attachment measure contained three brief paragraphs, intending to tap the characteristic parenting experiences of children with avoidant, secure, and ambivalent attachment, as described by Ainsworth et al. (1978). Participants were simply instructed to choose the one paragraph per parent that was most characteristic. The paragraphs read as follows:

- She/He was fairly cold, distant, and rejecting, and not very responsive; I often felt that her/his concerns were elsewhere; I frequently had the feeling that she/he just as soon would not have had me (Avoidant attachment).
- She/He was generally warm and responsive; she/he 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 attachment).
- She/He was noticeably inconsistent in her/his reactions to me, sometimes warm and sometimes not; she/he had her own needs and agendas which sometimes got in the way of her/his receptiveness and responsiveness to my needs; she/he definitely loved me but didn't always show it in the best way (Ambivalent attachment).

The most important religiosity variables included were used to tap sudden religious conversions, belief in a personal God, and the experience of a personal relationship with God. Results from the study uniformly supported the compensation hypothesis. First, participants who reported an avoidant attachment history with mother were more than four times as likely to have experienced sudden religious conversions than were participants who reported secure attachment histories with their mothers, representing a salient main effect of attachment. Sudden converts were also asked to freely write about the life circumstances during which their conversions took place. Upon qualitative analysis of the narratives, three main themes

were claimed to have emerged: problems with love relationships, problems in relationships with parents, and severe emotional distress. According to the authors, these themes "represent the very sorts of circumstances in which people are likely to seek the safe haven provided by an attachment figure: in this case, God." (p. 328). Results for the remaining religiosity variables were more complex, however, and pointed to moderating effects of parental religiosity (estimated by the participants themselves). These interactions can be described in two ways. First, at low parental religiousness, participants reporting avoidant attachment histories were more religious than those reporting secure histories, whereas no differences between attachment groups were obtained at high parental religiousness. Second, participants' and their parents' religiousness were positively associated among participants reporting secure attachment histories, whereas they were generally either negatively related or unrelated for participants reporting avoidant histories. Overall, results for participants reporting ambivalent attachment histories generally fell in-between those of participants who reported avoidant and secure attachment histories. Detailed results were only presented for attachment history with mother, although similar, but weaker, findings were said to have emerged for attachment history with father.

The remaining attachment and religion studies that have been published to date (Byrd & Boe, 2000; Kirkpatrick 1997, 1998b; Kirkpatrick & Shaver, 1992) have examined connections between religiosity and romantic attachment, rather than attachment history with. More specifically, they focused on how religiosity is related to current romantic attachment orientation, as measured with Hazan and Shaver's (1987) adult attachment measure or Bartholomew's (Bartholomew & Horowitz, 1991) extension of it. Together, these studies have shown support for the correspondence hypothesis in cross-sectional evaluations (Byrd & Boe, 2000; Kirkpatrick, 1998b; Kirkpatrick & Shaver, 1992). That is, at a given point in time, current secure romantic attachment orientation is linked to higher religiosity (e.g., relationship with God, belief in a personal God, loving image of God) than is insecure attachment. However, in prospective longitudinal evaluations (Kirkpatrick, 1997, 1998b), insecure, particularly ambivalent, attachment has been found to be associated with increased religiosity (e.g., increased loving God image, a new religious experience, a new relationship with God) over time, whereas the religiosity of individuals reporting secure romantic attachment has been found to be more stable.

On the basis of the combined findings from the studies on attachment history with parents and romantic attachment, Kirkpatrick (1998b, 1999a) tentatively suggested that the correspondence hypothesis is true concurrently, in that there is correspondence between images of self/other and God at a given time, and that the compensation hypothesis taps more longitudinal aspects of religiosity; the religiosity of individuals with insecure attachment histories and/or romantic attachment is more tied to attachment system dynamics than that of individuals with secure attachment histories and/or romantic attachment. These suggestions constitute testable hypotheses that will henceforward be referred to as the "concurrent correspondence" and "longitudinal compensation" hypotheses, respectively.

Aims and Background

The overarching aim of the dissertation was to examine the applicability of attachment theory to religiousness. This work consisted of two interrelated tasks. The first task was to show that attachment theory may be utilized as an integrative framework for research in the psychology

of religion. To accomplish this, some of the key issues that needed to be addressed and resolved have been reviewed above. At the most general level, these included the need to provide an accurate and parsimonious model that helps increase both our understanding (see Tradition II, above) and our prediction and explanation (Tradition I) of central aspects of religiosity. Somewhat more specifically, this should be a model that highlights both the “inner” (e.g., defensive processes) and “outer” (e.g., socialization processes) ontogenetic origins of religiosity, one which may be deemed sound also on the basis of phylogenetic considerations. Some of the more specific challenges for such a model are to take advantage of what has been suggested in the traditional psychodynamic literature on structural and functional connections between child-parent relations and the individual’s relationship with God, but to assimilate these suggestions within a better explanatory framework. Also, the well-replicated findings on parent-offspring similarity in religiousness should be incorporated, and important individual differences in this regard explained. A final important task is to help account for why religious conversions and changes tend to occur in adolescence and early adulthood, and to resolve the chasm between the two competing paradigms in this study. The aim of theoretical integration will be further discussed and evaluated in the Discussion.

Related to the task of theoretical integration are, of course, the actual empirical studies. Apart from their integrative aim, the four empirical studies to be presented had their own rationales, and were in all cases driven by predictions based on attachment theory. Study I was undertaken to replicate the Kirkpatrick and Shaver (1990) study. Consequently, it studied cross-sectional relations between adult religiousness and perceived attachment history with parents, as based on the original correspondence and compensation hypotheses. Following the results of Study I, Study II revised the hypotheses to explain the religiosity of individuals reporting both secure and insecure attachment histories. New scales were constructed to enable a test of these revisions. Accordingly, Study II also studied cross-sectional relations between adult religiousness and perceived attachment history with parents. Study III utilized an adolescent sample and a prospective longitudinal design to test whether perceived attachment history with parents and/or romantic attachment predicted unique variance in religiosity. Hypotheses were further revised to integrate the concurrent correspondence and longitudinal compensation effects, described above. Finally, for validation purposes, Study IV utilized AAI-methodology to cross-sectionally test these most recent hypotheses on adults.

THE EMPIRICAL STUDIES

Method

Participants and Procedures

Sweden is a highly secularized country. Even though a large majority of the Swedish population are members of the Lutheran Church of Sweden, barely 10% of the population are confessing Christians (Pettersson, 1994). In order to obtain variation on the religiousness variables, a large proportion of each sample to be described was drawn from a religious population. In all studies, the purposes were concealed and participants were informed of the confidential and voluntary premises for participation.

Study I. The sample consisted of 203 students at Uppsala University, including general theology undergraduate students ($n = 50$), undergraduates in other fields of theology (Hebrew and Greek; $n = 39$), members from an ecumenically based Christian students' union ($n = 12$), and students in a dormitory ($n = 25$) belonging to a Christian denomination. In addition, two undergraduate biology classes ($n = 46$) and two psychology classes ($n = 31$) participated. The sample consisted of 38% male participants. The mean age of the sample was 26 years ($SD = 6.7$; range = 20-50). The questionnaire data collections were made after lectures or other gatherings in April 1996, except for the dormitory students, who were individually visited on a Sunday evening. Of 222 distributed questionnaires, 203 remained for analysis (participation rate = 91%). Questionnaires were filled out during approximately 15 minutes and then handed in to the investigator in all cases but one psychology group.

Study II. The sample consisted of 156 students at Uppsala University, including 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 participants. The mean age of the sample was 25 years ($SD = 5.7$; range = 18 - 51). The questionnaire 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 collection, 156 remained for analysis (participation rate = 96%). Questionnaires were filled out during approximately 20 minutes and then handed in to the investigator.

Study III. The sample consisted of 196 adolescents in Stockholm, including adolescents from the Christian youth organization of the Lutheran Church of Sweden ($n = 82$) and Swedish upper secondary school classes ($n = 114$). There were 37% male participants at Time 1 (T1) and 34% at Time 2 (T2) and the mean age of the sample at T1 was 16.3 years, $SD = 1.2$, range = 14-19 (corresponding figures at T2: $M = 17.6$, $SD = 1.2$, range = 15-20). At T1, the questionnaire data collections were made at the end of lectures or at organization gatherings during the early fall of 1998. Questionnaires were filled out during approximately 20 minutes and then handed in to the investigator. A total of six adolescents chose not to participate (participation rate = 97% at T1). At T2, questionnaires were mailed home to the participants during the late fall of 1999. They were then offered a cinema check worth approximately USD 5 for participation. A reminder was sent two weeks after the first draft, and after another two weeks, a second reminder (including questionnaire and response envelope) was sent out (response rate = 72%, $N = 142$, at T2). An attrition analysis was performed on all variables included. No significant differences emerged on any of the variables used.

Study IV. The sample consisted of 84 participants, drawn from different religiosity relevant groups in Uppsala, including two theology classes, one of which was a general introductory course in theology ($n = 32$), and the other a more specialized course on the Greek language ($n = 12$); from a student gathering at the Pentecostal Movement ("Pingstkyrkan") ($n = 20$); from a prayer meeting for former drug and alcohol addicts associated with Pingstkyrkan ("LP-stiftelsen") ($n = 2$); from a Bible study group, held by the Swedish Lutheran Church ($n = 2$); and from a student seminar (at which all selected participants were priest students) on the relation between therapy and pastoral care, held at the Department of psychology ($n = 7$). Finally, nine participants were recruited via a newspaper advertisement asking for participants to a study about "spirituality and human relationships"; the same information was given to the other groups. Four out of a total of 88 presumptive

participants subsequently dropped out (95 % participation rate). The mean age of the sample was 29 years ($SD = 9.39$; range = 20-50) and 40% were males. At recruitment, in the fall of 1999 and early spring of 2000, participants were promised, and subsequently received, two cinema checks at a total worth of approximately USD 10. Two weeks to three months later, participants were contacted by telephone, and Adult Attachment Interview (AAI) appointments were scheduled. A questionnaire was mailed home to the participants and they were asked to fill it out at least two days prior to the interview appointment.

AAIs were individually administered at the Department of Psychology, Uppsala University, by the author. Following the interview, participants were left alone to fill out two sheets containing the Correspondence and Compensation prototypes (see below). Each interview was tape recorded, and verbatim transcriptions were made by two secretaries, after which transcription accuracy was checked by the author. All AAIs were coded by the author, who was blind to all other data, except sex and age. The coder was trained at the University of Western Ontario Institute by Dr. David Pederson in 1998, and achieved full AAI reliability with Drs. Mary Main and Erik Hesse at the University of California, Berkeley, across 30 consecutive transcripts in 2000.

Measurements

The measurement instruments consisted of questionnaires and interviews in accordance with the following description.

Attachment measures. Three different types of attachment measures were utilized: (1) retrospective self-report measures of attachment history with parents in childhood, (2) current self-report measures of romantic attachment orientation, and (3) the AAI.

(1) The self-reports of attachment history were Hazan and Shaver's (1986) Parental Caregiving Style Questionnaire (Studies I, II, and III) and Hazan's (1990) revision of this measure (Study IV). Concerning Hazan and Shaver's (1986) paragraph measure, its purpose is to tap the characteristic features of parenting in the organized attachment categories described by Ainsworth et al. (1978). The original forced choice assessment was used in Study I, yielding classifications into *avoidant*, *secure*, and *ambivalent* attachment history with each parent (see Introduction). To achieve higher measurement precision and increase statistical power, Study II utilized continuous ratings of each paragraph according to the extent to which each of the paragraphs was descriptive of their memory of their childhood attachment relationship with each parent, yielding continuous ratings of attachment history in terms of *avoidance*, *security*, and *ambivalence*.

In Study III, Hazan and Shaver's (1986) paragraphs were broken down to 13 items per parent (e.g., "she was generally distant", "he knew when to be supportive", "she was noticeably inconsistent in her reactions to me, sometimes warm and sometimes not"), rated on continuous response scales. The reasons for transforming the Study II paragraphs to multi-item measures were to potentiate an examination of the empirical structure of the instrument, evaluate its homogeneity, as well as to further increase its measurement precision (cf. Fraley & Waller, 1998; Simpson, Rholes, & Nelligan, 1992). To examine the empirical structure, two factor analyses (one per parent) with varimax rotation were conducted. Satisfactory one-factor solutions were obtained for both parents (total variance accounted for in the maternal and paternal solutions = 36% and 58%, respectively), yielding *Insecurity with*

mother ($\alpha = .84$) and *father* ($\alpha = .94$) scales, where low values denote perceptions of sensitive and responsive parenting and high values denote distant, rejecting, and inconsistent parenting.

Hazan's (1990) revised self-report attachment history measure was used in Study IV, but instead of the original forced-choice classifications, continuous ratings of each paragraph were used. The measure consists of four paragraphs per parent, describing prototypical parental behavior in each of the four child-parent attachment patterns (the fearful prototype, below, is the conceptual counterpart of disorganized/disoriented attachment):

Secure – She (He) was generally loving and understanding. She (He) was good at knowing when to be helpful and when to let me do things on my own

Dismissing – She (He) was generally fine but not very affectionate. She (He) taught me at an early age to be independent and self-sufficient.

Preoccupied – She (He) was generally loving but not as understanding as I would have liked. She (He) loved me, but didn't always show it in the best way.

Fearful – She (He) was generally unpredictable and sometimes even hurtful. She (He) had her (his) own problems and they sometimes got in the way of her (his) ability to take care of me.

Internal consistency for the Study III adaptation of Hazan and Shaver's (1986) measure was satisfactory. However, in terms of validity, one previous study (Crowell, Treboux, & Waters, 1999) failed to find any association between Hazan's (1990) revision and AAI state of mind classifications.

(2) Concerning self-report measures of romantic attachment orientation, such measures were only included in Studies III and IV. In Study III, Collins and Read's (1990) Adult Attachment Scale (AAS) was used. At the time of T1 measurement, Brennan et al.'s (1998) widely used Experiences in Close Relationships Scale (ECR) was not available to the author. However, when subjected to factor analysis, the AAS and ECR (as well as other similar instruments) have been shown to yield relatively similar factor solutions. A factor analysis (Varimax rotation) was run on the AAS. A two-factor solution yielded dimensions highly comparable in content to the ECR factors. In keeping with the current attachment research agenda, this two-factor solution, accounting for 44% of the total variance, was therefore chosen, and the factors were labeled *avoidance* ($\alpha = .82$) and *anxiety* ($\alpha = .81$), with high scores denoting avoidance of intimacy and emotional expression and anxiety about abandonment and insufficient love, respectively. Previous findings suggest that there is no latent typology in these factors, and that the raw dimensions are more precise and have higher explanatory value than categorical assessments of romantic attachment orientation (Brennan et al., 1998; Fraley & Waller, 1998). Therefore, the raw dimensions were used in subsequent analyses. The ECR was used in Study IV, yielding the raw dimensions *Avoidance* ($\alpha = .86$) and *Anxiety* ($\alpha = .89$). (See Introduction for reliability and validity estimates).

(3) *The Adult Attachment Interview* (George, Kaplan, & Main, 1996), translated to Swedish by Broberg, Ivarsson, and Hinde (1996), was included only in Study IV. Interviews were coded according to the Main and Goldwyn (1998) scoring and classification system. The transcripts are subjected to coding on three types of scales: probable experience, organized state of mind with regard to attachment, and unresolved/disorganized loss/abuse scales.

All five probable experience scales were used. A high score on the “Loving” scale refers to a parent who served as a reliable secure base for the child; high “Rejection” to a parent who frequently or severely turned down the child’s bids for attachment; high “Involving/role-reversing” to a parent who utilized the child for an own sense of protection or security; high “Pressuring to achieve” to a parent who pushed the child to achieve to an extent that risked being damaging for the child’s mental or physical health; and high “Neglect” to a parent who frequently neglected the child in favor of pursuing his or her own interests. It is important to note here that the coder, not the participant, assigns these ratings. In so doing, the coder does not take participant responses at face value, but partly relies on an evaluation of the coherence of attachment discourse. For instance, the mother of a participant who claims to have had only very loving experiences with her will not receive a high loving score unless this general portrayal is supported by the recounting of specific, overtly loving episodes.

Concerning the ”organized” state of mind with regard to attachment scales, a high score on “Idealization” refers to a structural inconsistency between positive or normal general portrayals of parents and the failure to support these portrayals in the recounting of specific episodes; high “Insistence on lack of memory” refers to frequent claims, which block attachment discourse, to not remember childhood events and/or relationships; and high “Derogation” refers to a brief, contemptuous dismissal of attachment figures and/or experiences. High scores on one or more of these scales characterize speakers with a dismissing (Ds) state of mind. A high score on “Involving anger” refers to such responses, leveled against attachment figures in the actual interview situation, that are indicative of preoccupying anger (e.g., directly addressing the parent in an angry context as if he/she was present, failure to license quotes of the accused, offending parent); and high “Passivity” refers to vagueness of mental processes concerning attachment as identified during the interview (e.g., self-parent misidentifications, child-like speech). Participants with high scores on at least one of these scales are said to possess a preoccupied (E) state of mind. The final ”organized” state of mind score is assigned to the overall “Coherence of transcript” scale, referring to the extent to which the speaker is collaborative, and the transcript provides a credible, internally consistent, and free-flowing picture of the speaker’s experiences, feelings, and viewpoints with regard to attachment. Participants with a moderate to high coherence score are classified as autonomous (F) with regard to attachment. Important to note is that high coherence can be present regardless of whether past experiences with parents have been primarily positive or negative. In the case of childhood adversities, high coherence often coincides with an implicit attempt at understanding and/or forgiving parental misdeeds.

The “Unresolved/disorganized loss/abuse” scale refers specifically to mental processes concerning experiences of loss and abuse. There are three subscales: lapses in the monitoring of reasoning (e.g., ”My mother still thinks highly of him”, referring to what a dead mother thinks in present tense); lapses in the monitoring of discourse (e.g., ”When he hit me that bad, I just ... [a 20 second pause] Math was a really bad subject”); and extreme and lingering behavioral reactions to the traumatic event (e.g., an ongoing, seriously debilitating depression, including suicide attempts, five years after the death of a father). The highest score assigned to any given loss and abuse incident is used as the overall unresolved/disorganized score. Participants with a high score on this scale are placed in a fourth category, unresolved/disorganized (U/d), which is superimposed on the other three categories.

Participants were finally classified into the AAI categories based on their state of mind and unresolved/disorganized loss/abuse scores. The three-way AAI-distribution was: F, $n = 51$ (61 %); Ds, $n = 23$ (27 %); E, $n = 6$ (7 %). The distribution for the four-way classifications (superimposing U/d on the three-way classifications) was: F, $n = 46$ (55 %); Ds, $n = 18$ (21 %); E, $n = 5$ (6 %); U/d, $n = 14$, (17 %). Four cases (5 %) and one case (1 %) were judged unclassifiable (CC) in the three-and four way classifications, respectively, due to mixed preoccupied and dismissing states of mind.

Codings and classifications have been shown to be relatively immune against the potential halo biases resulting from having the same person as interviewer and coder (Sagi, van IJzendoorn, Scharf et al., 1994). (See Introduction for other reliability and validity estimates).

Religiosity measures. (1) In Study I, each parent's level of religiousness (as perceived by the participant) during the participant's childhood was assessed with eight items on a continuous response scale. The scale consisted of statements concerning how often the parent prayed, read religious literature, attended church, and discussed religious questions with the participant, e.g., "I seldom or never discussed religious questions with my mother" (Reversed in coding[R]). Statements pertaining to each parent's religious beliefs, the importance of this belief for everyday life, negative subjective judgments towards religion (R), and the extent to which the participant received a religious upbringing were also included (e.g. "Religion was important for my father in his everyday life"). Three of the statements (church attendance, religious discussion, and the importance of religion in everyday life) were chosen from Kirkpatrick and Shaver's (1990) corresponding measures. Five of the statements were taken and elaborated from a factor analytically developed instrument for religious socialization (Pettersson, Geyer, & Wikström, 1994). The internal consistencies of the scales were high; α s = .92 and .93 for *Maternal* and *Paternal religiousness*, respectively.

In Study II, to save space, participants were simply asked to indicate on a continuous response scale the extent to which the following statement corresponded to their opinion: "My mother/father was religiously active during my childhood". In Study III, and again to save space, revised six-item versions of the Study I scales were used. On the basis of internal consistency considerations, the reversed items of the original scales were excluded (α s = .92 and .95 for the maternal and paternal scales, respectively).

(2) In Study I, eight statements corresponding to the Study I parental religiousness scales were used to assess the respondent's own *Level of religiousness*. The internal consistency was high ($\alpha = .94$).

(3) In Study I, participants' perceived *Relationship with God* was assessed by having them indicate on a 4-step scale how appropriate the statement "I feel that I have a personal relationship with Jesus Christ and/or God" was considered to be. This measure was taken and elaborated from Kirkpatrick and Shaver's (1990) corresponding categorical measure.

(4) In Study I, *Belief in God* was assessed by a single item, in which participants were asked "Which of the following alternatives best describes your current belief about God?", with response alternatives: a) "God is a living, personal being who is interested and involved in human lives and affairs", b) "God created the universe, but is no longer active or involved in human lives and affairs", c) "God is an impersonal, transcendental force in the universe", d) "I do not know if I believe in God", and e) "I do not believe in God". Category a) was considered as a belief in a personal God (or theism), b) as deism, c) as pantheism, d) as

agnosticism, and e) as atheism. Kirkpatrick and Shaver's (1990) corresponding measure contained only the three first response alternatives.

(5) In Study I, following Kirkpatrick and Shaver (1990), religious change and conversion were assessed separately for the youth period (13-22 years of age) and the adult period (>22 years of age). First, participants were asked to indicate on a 6-step response scale how important their religious beliefs became in the youth period, ranging from "I did not have a religious belief during this period" (1) to "much more important" (6). Secondly, participants who indicated a religious change (scored > 3 on the previous item) were asked to choose one of the following alternatives to describe the characteristics of the change: a) "An intense and sudden personal experience", b) "A slow, gradual change with one or more relatively intense experiences and changes", and c) "A slow, gradual change over a long period of time". Participants who indicated that their religious beliefs had become much more important on the former item were considered as having experienced a *Youth major change*. Those who also chose response alternative a) on the latter item were considered as having experienced a *Sudden youth conversion*. This measure of conversion corresponded to that used by Kirkpatrick and Shaver (1990). Religious change that did not meet the criteria for major change or sudden conversion was also investigated. To assess such *Youth religious change*, only the first of the above items was used. A parallel set of questions was used to assess *Adult major change*, *Sudden adult conversion*, and *Adult religious change*.

In Study I, participants for whom a major religious change had occurred, either during youth or adulthood, were asked in the questionnaire to write about the factors in life that they assumed to be important for understanding these changes. Kirkpatrick and Shaver (1990) used the same procedure, but only for respondents who met the criteria for a sudden religious conversion. First, the author derived specific themes from the narratives and classified the explicit statements about important life factors into the specific themes. Another observer then independently sorted the statements into the themes. On the basis of theoretical reasoning, the specific themes were next categorized into one of three global categories: themes of compensation, themes of correspondence, and other themes. Themes of compensation were found in statements indicating that the religious change filled an emotionally supportive function for a person in need. Emotional turmoil related to relationships was considered an especially important indicator for themes of compensation. Themes of correspondence were defined as themes indicating continuity between religiousness and a relationship, as well as themes related to socialization-based take-over of religiousness. Themes of correspondence did not describe a supportive function. Other themes were defined as any theme not meeting the definitions of the themes of compensation or correspondence. Interobserver agreement in sorting statements into the specific themes was then separately computed for each of the global categories. Percentages of agreement and kappa coefficients were the indices of interobserver agreement utilized. Observer discrepancies were resolved after discussion.

In Study II, *Religious change and sudden religious conversion* were assessed in a similar way as in Study I, with the exception that separate questions were not asked for the youth and adult periods. Instead, participants who had indicated religious change during any period in their lives 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. Also, the forced-choice item tapping the *Suddenness/intenseness* of change was used as a separate continuous variable (3=sudden/intense change). In addition, three groups of participants were formed

based on the responses to the religious change and suddenness/intenseness questions, one for those who had experienced a sudden religious conversion (see above), one for those who had experienced a gradual religious change (i.e., scored > 3 on the religious change item, but did not qualify for sudden religious conversion), and one for those who had not experienced a religious change (i.e., scored < 4 on the religious change item).

Based on the Study I list of life factors in relation to religious change, a checklist with 15 life themes was constructed in order to quantitatively tap themes of compensation and correspondence. Respondents for whom a religious change had occurred were asked to indicate on a continuous scale the extent to which each of the 10 compensation and 5 correspondence themes was descriptive of their life at the time the change occurred. Maximizing internal consistency ($\alpha = .78$) yielded 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 the following three-item *Themes of correspondence* scale: close friendships with believers, meetings or discussions with believers, and membership in religious youth association ($\alpha = .70$).

In Study III, at both T1 and T2, *Increased religiosity* and suddenness/intenseness of change were assessed with the religious change and suddenness/intenseness items, respectively, of Study II. At both T1 and T2, the Study II themes of compensation ($\alpha s = .75$) and themes of correspondence ($\alpha s = .73$ and $.43$, respectively) scales were also used. At T1, the scales above referred to the life period before T1, and at T2 the scales referred to the life period in-between T1 and T2. At both measurement occasions, *Decreased religiosity* was assessed with the following item, scored on a continuous scale: "I have experienced a change which meant that religion became less important to me during a period of my life".

In Study IV, religious change and suddenness/intenseness of change were assessed in the same ways as in Study II. Age at change was assessed by having participants write their approximate age at change in years. The themes of compensation scale ($\alpha = .79$) and a revised themes of correspondence scale ($\alpha = .67$) were also used. As evident above, the original themes of correspondence scale suffered from low internal consistency at T2 in Study III. Hence, the scale was revised, and the revised version consists of four items: experiences from confirmation was added as an item.

(6) In Study II, a scale was constructed to tap the affect regulating functions of turning to and maintaining contact with God and religion. A pool of 20 items on continuous scales was created, based on two general content areas. The first content area was Ainsworth's (1985) description of three defining features of attachment relations and the second consisted of the safe haven and secure base aspects of attachment, proposed by Bowlby (1969, 1973, 1980). The internal consistency was high ($\alpha = .98$) for the 20 item scale. On the bases of theoretical considerations, 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 APPENDIX 2. The scale was also used at T1 in Study III ($\alpha = .96$).

(7) In Study II, a scale was also 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 a continuous response scale, 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 participants). Internal consistencies for maternal and paternal socialization of religiousness were high (α s = .93 and .91, respectively). Dropping any item lowered consistencies; hence the final socialization-based religiosity scale, *SBR*S, consisted of 10 items for each parent. The maternal socialization of religiousness items are listed in APPENDIX 2 (item content was the same for the corresponding paternal items). This scale was also used in Studies III (T1) and IV (range of α s = .89-.95).

(8) In Study IV, God image was assessed with Benson and Spilka's (1973) semantic differential *Loving God* image scale, consisting of the adjectives rejecting-accepting (R), loving-hating, damning-saving (R), unforgiving-forgiving (R), and approving-disapproving. We also used Kirkpatrick and Shaver's (1990) semantic differential *Distant God* image scale, consisting of the adjectives distant-close, impersonal-personal, not comforting-comforting, not available-available, and not responsive-responsive. These scales have been shown to possess adequate internal consistency and test-retest reliability (Kirkpatrick, 1998b), as well as to be predictably related to self-report attachment measures (Kirkpatrick, 1998b; Kirkpatrick & Shaver, 1992). The internal consistencies were high also in the present study (α s = .82 and .92, respectively).

(9) In Study IV, two new continuous prototype measures were created to tap the aspects of religiosity that were assumed by the attachment hypotheses to be of most relevance to individual differences in attachment. First, the *correspondence prototype* was constructed to capture a stable religiosity, socially learned from parents and marked by a loving God image. Second, the *compensation prototype* was constructed to tap an unstable religiosity that is based on affect regulation strategies, and that is marked by an image of God as occasionally distant. The prototypes read accordingly (labels in parentheses were not included):

(I.A.) My religiosity or non-religiosity has not undergone any radical changes during the years. My mother's or father's attitude towards religious issues has been influential for me; I was born into a religious or non-religious home and I have, by and large, continued on the same track myself. (I.B.) Even if God can be distant or controlling, I mostly experience Him as loving. Like other close people in my life, God can be of help when I need it, but this help is not the most important aspect of my relationship with God (correspondence prototype).

(II.A.) My religiosity or non-religiosity has changed a lot during the years, often in conjunction with significant events in my life; in periods I've gone from personally significant faith to unfaith, or vice versa. My attitude towards religious issues diverges considerably from my parents' attitudes. (II.B.) An important aspect of my relationship with God is that I can turn to God or religion during difficult life situations (e.g., when I feel bad or experience relationship problems). God is occasionally loving and caring, but I've also often experienced Him as distant or controlling (compensation prototype).

Participants who answered affirmatively to the question: "Do you have a belief in God?" were asked to carefully read through the prototypes above (I.A. – II.B.) and to rate each prototype according to how descriptive it was to their religiosity/non-religiosity, yielding one dimensional score per prototype. Participants who answered negatively to the above question were given modified prototypes (only I.A. and II.A., above). The modified prototypes were

used to avoid the potential measurement error resulting from having non-religious participants make ratings that presume participant religiosity.

Study I - Religiousness and Perceived Childhood Attachment: On the Question of Compensation or Correspondence

Background and Aims

Only one study (Kirkpatrick & Shaver, 1990) had been conducted on religiousness and perceived attachment history with parents. This study was conducted in the U.S. and utilized a self-selected sample of newspaper advertisement readers. A second study was seen as necessary for a number of reasons. First, more controlled sampling procedures and partly different measures were considered as necessary in order to get an indication of the generalizability of the findings. Secondly, in order to further investigate the general applicability of attachment as applied to religiousness, the cultural stability of the findings needed to be ascertained. Thirdly, the supremacy of maternal variables over paternal variables in predicting the adult's religiousness needed to be confirmed, especially since this seems to contradict Freud's (1964a) notion of God as an exalted father figure. Finally, the validity of the compensation hypothesis needed to be further studied. This was deemed especially important since it appears to contradict the highly influential ego-psychological (e.g. Erikson, 1959, 1963) and parts of the object-relational (Rizzuto, 1979) thinking about the links between the quality of childhood relationships and the adult's religiousness.

The study sought to replicate and extend Kirkpatrick and Shaver's study. Hence, the main research question asked was whether connections could be observed between the perceived quality of the attachment relationships with mother and father in childhood and the adult's religiousness. It was asked whether such connections would support the original compensation or correspondence hypothesis. As implied by the results of Kirkpatrick and Shaver, the question also entailed an examination of interactive effects on religiousness of attachment quality and parental religiousness. A final purpose was to derive reliable indices of narrative themes concerning major religious changes.

Results and Comments

Only 6 and 14 participants classified themselves as having experienced avoidant attachment histories with mother and father, respectively. The avoidant and ambivalent attachment history groups were therefore aggregated, yielding one insecure and one secure attachment history group for each of the relationships with parents. This was deemed appropriate also on the basis of a similar pattern of links with religiosity for the two insecure attachment history groups. Furthermore, only seven respondents met the criteria for sudden religious conversion, either during youth or adulthood. Therefore, only major and continuous religious change during youth and adulthood were analyzed.

Main-effects of attachment on religiousness. Chi-square tests were performed to test main effects of attachment history on the categorical religiousness variables. The only significant result obtained showed that a higher proportion (16.3%) of participants who

reported an insecure attachment history with mother had experienced an Adult major change as compared to participants reporting a secure attachment history (6.5%), $p < .05$.

Multiple regression equations were constructed to test main effects of attachment history and interactive effects of attachment history and parental religiousness on the continuous religiousness variables. The predictor variables in each equation were standardized scores for maternal religiousness, attachment history with mother (scored secure = 1 and insecure = 0), and an interaction variable representing the cross-product of the two. Maternal religiousness and attachment history with mother were entered first, followed by the interaction variable. Corresponding analyses were conducted for the paternal variables. These analyses yielded no significant main effects of attachment history with mother. Attachment history with father had main effects, although modified by the interactions to be described, on Relationship with God and Youth religious change, $ps < .05$. In addition, there were significant main effects of parental religiousness, all $ps < .01$, on all continuous religiousness variables except Adult religious change.

Interaction of attachment and parental religiousness on the individual's religiousness. The multiple regression analyses described above also revealed significant interaction effects. The interaction of maternal religiousness and attachment history with mother significantly predicted Level of religiousness and Youth religious change and the corresponding interaction of the paternal variables predicted Level of religiousness and Relationship with God ($ps < .05$). Thus, parental religiousness had a moderating effect (Baron & Kenny, 1986) on associations between attachment history and participants' religiousness. These interactions can be described in two ways. First, associations between parental and participant religiousness were examined within attachment history groups (see Table 1).

Table 1

Correlations Between Participants' and Parents' Religiousness Within Secure and Insecure Attachment History Groups, and for the Total Sample

Religiousness variables	<i>Maternal religiousness</i>			<i>Paternal religiousness</i>		
	Attachment history – mother			Attachment history – father		
	Secure <i>n</i> = 153	Insecure <i>n</i> = 49	Total <i>n</i> = 202	Secure <i>n</i> = 120	Insecure <i>n</i> = 79	Total <i>n</i> = 199
Level of religiousness	.45**	.16	.39**	.50**	.02	.32**
Relationship with God	.38**	.15	.33**	.45**	.00	.27**
Youth religious change	.30**	.06	.24**	.32**	.10	.22**
Adult religious change	.19	-.01	.13	.24+	-.04	.11

+ $p < .10$ * $p < .05$ ** $p < .01$; two-tailed

As shown in Table 1, when attachment history was not considered (column Total), there were several positive correlations between participants' and parents' religiousness, indicating the main effect of parental religiousness. In the secure attachment history groups, these positive correlations remained significant and were somewhat strengthened. In the insecure attachment history groups, there were no significant correlations, showing the religiousness of participants reporting insecure attachment histories to be independent of parental religiousness. Note that the same pattern of results held with regard to both the maternal and paternal variables.

Another way of describing the interactions is to split parental religiousness at their scale means and examine differences between attachment history groups at low and high parental religiousness. *t* tests and chi square tests addressing these issues were conducted. Results with respect to the maternal variables were in all cases non-significant. However, with respect to the paternal variables, when paternal religiousness was perceived as low, participants reporting an insecure attachment history with father scored significantly higher on Level of religiousness, Relationship with God, and Adult religious change than did those reporting a secure attachment history, $ps < .05$. The former were also more likely to endorse Theism, and less likely to endorse Agnosticism, $ps < .05$. These findings support the compensation hypothesis. Remaining results for the low paternal religiousness groups were non-significant. However, at high paternal religiousness, participants reporting a secure attachment history scored higher on Level of religiousness and Relationship with God, and were also more likely to endorse Theism, $ps < .05$. In contrast, these findings support the correspondence hypothesis.

Narrative themes of religious change. Analyses of written themes were made, based on participants who had indicated a major religious change and who had provided narratives about factors in life that they assumed to be important for understanding these changes. A total of 50 respondents indicated such changes (38 during youth, 19 during adulthood, and 7 during both periods); 27 (54%) provided codable narratives. Themes related to compensation and correspondence hypothesis reasoning were of particular interest (see *Method* for definitions). The coding procedure resulted in a majority (63%) of the specific themes being categorized into one of the global categories of compensation or correspondence. Moreover, interobserver agreement for these two global categories were high: Proportional agreement and Cohen's *Kappa* for Themes of compensation = .80 and .77; corresponding figures for Themes of correspondence = .92 and .89.

Themes of compensation were more frequently mentioned than Themes of correspondence. Thirty nine (40%) out of a total of 98 statements were sorted into the former category. The most frequent specific themes within the Themes of compensation category concerned bereavement in relation to the death of a significant other (frequency [f]=9), relationship problems or divorce (f=7), and God's love, help, or support (f=7). Remaining themes concerned mental or physical illness (f=5), a first move from home (f=2), acceptance, security, or sense of belonging in a religious group (f=4), and other themes of crisis or support (f=5).

The most oft-mentioned specific themes within the correspondence category (f=23, 23% of the total statements) were meetings and relationships with believers (f=7), experiences from confirmation or membership in Christian youth associations (f=7), and meetings and relationships with others (not referred to as intimate others, nor believers; f=4). Additional sub-themes were therapy (f=3) and personal or intimate relationships (f=2).

Various forms of religious experiences (f=6) were classified within the Other themes category (f=36, 37%). Interesting to note is that these experiences were in three of the cases embedded in a context of other themes judged as themes of compensation, such as chaotic relationships and illness, longing for God and praying to Him for help, and after having been repeatedly molested as a child. Furthermore, common themes within the Other themes category were related to influences from divine service and various forms of Christian teachings (f=10), cognitive/existential reflections (f=5), and decisions to enter the clergy (f=5).

Conclusions. The results from the study generally showed that support for the original hypotheses depended on parents' level of religiousness; that is, parental religiousness had a moderating effect on associations between attachment history and participant religiousness. The compensation hypothesis was supported at low parental religiousness, replicating the findings from Kirkpatrick and Shaver (1990), and the correspondence hypothesis was supported at high parental religiousness. Another way to describe these findings, again in line with the Kirkpatrick and Shaver results, is that parental and participant religiousness were positively linked in secure attachment history dyads, but unrelated in insecure attachment history dyads. These interaction results held particularly well with respect to the paternal variables, whereas support for the maternal variables was more mixed, which was unlike the Kirkpatrick and Shaver results. The only religiosity variable on which a clear main-effect of attachment was obtained was on major religious change in adulthood, which supported the compensation hypothesis, and paralleled the conversion findings of Kirkpatrick and Shaver. The narrative themes concerning major religious change also converged with the Kirkpatrick and Shaver themes, with the important addition that correspondence themes were present as well.

It was tentatively concluded that there may be different pathways to religiosity depending on individual differences in perceived attachment history. The religiousness of persons reporting an insecure attachment history may have more of an emotional ontogenesis; that is, it may represent a compensation for insecure childhood attachment. The religiousness of persons reporting a secure attachment history may be originating more from social learning processes, and thereby correspond to parental religiousness. In any case, the original hypotheses should be revised to take the replicated moderating effect of parental religiousness into account. It was also concluded that it is possible to derive reliable themes of religious change from attachment theoretical reasoning, and that these themes should be studied in relation to individual differences in attachment.

Study II – Religiousness and Perceived Childhood Attachment: Profiling Socialized Correspondence and Emotional Compensation

Background and Aims

As noted above, the original hypotheses should be revised to take the replicated moderating effect of parental religiousness on associations between attachment history and religiousness into account. For this reason, the original correspondence hypothesis was revised. There were three additional reasons for the revision. First, and hypothetically, if one of the original hypotheses would be consistently corroborated by main effects of attachment history, there

would still be a need to explain why many individuals with a different attachment history are religious (cf. Noller, 1992), even if somewhat less so. Second, 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). Third, a revision of the correspondence hypothesis was considered theoretically motivated on the basis of a consensus in the attachment literature that secure offspring is more successfully socialized into, and internalized regarding, parental standards (e.g., Londerville & Main, 1981; Maccoby, 1984; Matas et al., 1978; Richters & Waters, 1991). Similarly, and paralleling the interaction findings of Study I and Kirkpatrick and Shaver (1990), several investigations (see Hood et al., 1996; Myers, 1996) in the psychology of religion have shown that the predictive power of parents' religiosity in predicting offspring religiosity is substantially increased when the warmth and quality of their relationship is taken into account

The revised version of the correspondence hypothesis stated that the religiousness of individuals with secure attachment histories 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 with insecure attachment histories. The revised hypothesis was labeled *socialized correspondence*. The compensation hypothesis was specified and stated that affect regulation, in a strategy for obtaining/maintaining a sense of felt security, is the mechanism underlying the religiosity of individuals with insecure attachment histories (*Emotional compensation*).

The purpose of Study II was to test the validity of four sets of predictions, each derived from the socialized correspondence and emotional compensation hypotheses. To accomplish this, new measurement instruments were created to tap socialization-based religiosity (SBRS) and religiosity as based on affect regulation (EBRS). Life theme checklists (Themes of compensation and correspondence) in relation to religious change were also constructed on the basis of the narrative themes of Study I. The predictions were as follows:

H₁: A secure attachment history is positively associated with socialization-based religiosity (the socialized correspondence hypothesis).

H₂: An insecure attachment history is positively associated with emotionally based religiosity (the emotional compensation hypothesis). H₁ and H₂ also entailed an examination of the potentially moderating effects of parental religiousness on the associations between attachment history and religiosity.

H₃: Sudden religious converts have a less secure / more insecure attachment history than those for whom a more gradual religious change has occurred and than those for whom no religious change has occurred (the emotional compensation hypothesis).

H₄: A secure attachment history is linked to gradual religious changes as characterized by early onset and themes of correspondence, whereas themes of compensation are uncharacteristic (the socialized correspondence hypothesis). In contrast, an insecure attachment history is linked to intense and sudden religious changes as characterized by late onset and themes of compensation, whereas themes of correspondence are uncharacteristic (the emotional compensation hypothesis).

Results and Comments

Attachment, emotionally based, and socialization-based religiosity. Correlations were computed to test the predictions of attachment history in relation to EBRS and SBRS. In line with the emotional compensation predictions, an avoidant attachment history with mother and father were positively associated with EBRS in the total sample, $r_s = .13$ and $.18$, $p_s < .05$; one-tailed, respectively. These connections were somewhat strengthened at low parental religiousness, $r_s = .28$ and $.30$, $p_s < .005$; one-tailed, respectively, and disappeared at high parental religiousness. No significant associations with EBRS were obtained for ambivalent or secure attachment histories. In line with the socialized correspondence predictions, an insecure (avoidant and ambivalent) attachment history was inversely related to SBRS in the total sample, whereas a secure history was directly related to SBRS, range of $r_s = \pm .22 - \pm .30$, all $p_s < .01$; one-tailed.

Attachment and sudden religious conversions. Planned t tests were performed to test the predictions of sudden religious converts (SRC; $n = 8$) having higher means on insecure (avoidant and ambivalent) attachment history and lower means on secure attachment history than participants who had experienced a gradual religious change (GRC; $n = 74$) and than those who had not experienced a religious change (NRC; $n = 74$).

As hypothesized, SRC participants had a significantly lower mean on secure history with mother, and higher means on ambivalent history with mother than GRC participants, $t_s = -2.49$ and 3.00 , $p_s < .01$; one-tailed. No differences between the SRC and GRC groups were obtained on avoidant history with mother, $t = .16$, $p > .10$. However, all predictions of differences in attachment history with mother means were confirmed in the comparisons of the SRC and NRC groups; the SRC group scored significantly higher on avoidant and ambivalent histories, and significantly lower on secure history than the NRC group, range of $t_s = 1.75 - 3.44$, range of $p_s < .05 - < .001$; one-tailed. The *Median* effect size (d ; computed with pooled standard deviations) from all of the analyses on attachment history with mother was large (Kirk, 1996), ± 1.02 . Virtually identical findings were obtained in the comparisons between the SRC, GRC, and NRC groups on attachment history with father; the *Median d* from these analyses was also large, $\pm .86$.

Attachment and two religious change profiles. Cluster analysis was employed to test the predictions of different religious change profiles in relation to security-insecurity of attachment history. The purpose with the cluster analysis in this context was to empirically establish different religious change groups among individuals who had experienced a religious change ($n = 82$), and to investigate whether these groups were differentially related to attachment history. The strategy for conducting the analyses was based on the procedures outlined by Hair, Anderson, Tatham, and Black (1995).

Standardized scores on suddenness/intenseness of change, age at change, themes of compensation, and themes of correspondence were included as internal variables in the analyses, whereas attachment variables were utilized as external variables. To determine an appropriate number of clusters, an agglomerative hierarchical cluster analysis, based on squared Euclidean distance measures and Ward's method for combining clusters, was performed, yielding a satisfactory solution of two clusters (percentage increase in the agglomeration coefficient = 161%; explained variance = 62%). A non-hierarchical (K-means) cluster analysis was performed to fine-tune the results from the hierarchical procedure.

Table 2

Standardized Cluster Means, Standard Deviations, F Ratios, and Effect Sizes for Two-Group Nonhierarchical Cluster Solution Based on Participants Who Had Indicated Religious Change

Cluster variables	Cluster 1 (n = 36)		Cluster 2 (n = 46)	
	Means (SD)	Means (SD)	F ratios	^a ds
Suddenness/intenseness	.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

Note. ^a computed with pooled standard deviations

** $p < .01$ *** $p < .005$ **** $p < .001$

The results of this analysis are presented in Table 2, which shows 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. Cluster 2 had the opposite pattern of scores.

Table 3

Planned *t* tests of Differences Between Clusters on Standardized Attachment Variable Means

Attachment history	Cluster 1 (n = 36)		Cluster 2 (n = 46)	
	Means (SD)	Means (SD)	^b <i>t</i> values	^a ds
<i>With mother</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>With father</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 with pooled standard deviations // ^b *t* tests were one-tailed

** $p < .01$ *** $p < .005$ **** $p < .001$

Planned *t* tests were then performed to investigate if the two clusters were related to attachment history in the hypothesized manner. Results from these analyses are presented in Table 3, which shows that the predictions were strongly supported. Cluster 1 members had higher scores on avoidant and ambivalent history with mother, whereas members of Cluster 2 scored higher on secure history with mother. Again, highly similar results were obtained for the comparisons between clusters on the attachment history with father variables, the only exception being a non-significant difference on ambivalent history.

Conclusions. The predictions of the study were, taken as a whole, strongly supported. A high degree of perceived insecurity of attachment history with parents was linked to emotionally based religiosity, sudden religious conversions, and religious changes marked by suddenness/intenseness, late onset, and themes of compensation. These findings are in line with the emotional compensation hypothesis, proposing that religiosity stems more from an affect regulation strategy to obtain/maintain felt security in the case of insecure attachment history. Perceived security of attachment history was linked to socialization-based religiosity, religious stability, and gradual religious changes marked by late onset and themes of correspondence. These results support the socialized correspondence hypothesis, suggesting that religiosity stems more from socialization processes in the case of secure attachment history.

The findings and interpretations of the study signify an important integration of the original compensation and correspondence hypotheses. Besides having been empirically supported, utilizing the socialized correspondence hypothesis leads to at least three important advantages as compared to using the original hypotheses: (1) it incorporates the previously, consistently documented moderating effect of parental religiosity; (2) it explains why many individuals with other than insecure attachment histories are religious; and (3) it leads attachment predictions to be refutable to a larger extent.

The socialized correspondence and emotional compensation hypotheses should also be tested in relation to current romantic attachment orientation. This was considered especially important since Kirkpatrick (1998b, 1999a) provided another suggestion for the integration of the original hypotheses (see Introduction). In addition, given that both attachment and religiosity are likely to undergo important changes during adolescence, prospective longitudinal studies should examine relations between attachment and religious change in adolescents.

Study III – Attachment and Religiosity in Adolescence: Cross-Sectional and Longitudinal Evaluations

Background and Aims

At the time of the study, it was an open question if the socialized correspondence and emotional compensation hypotheses are applicable to the links between romantic attachment and religiosity in adolescents. It was also an open question whether attachment history with parents, like romantic attachment (Kirkpatrick, 1997, 1998b), prospectively predicts fluctuations (both increases and decreases) in religiosity. In addition, previous studies had neglected to study the relative ability of attachment history and romantic attachment to predict unique variance in religiosity. Finally, no study on attachment and religiosity had been

conducted with participants in adolescence, despite the attachment and religious transitions known to take place during that developmental period.

Hence, the study provided the first investigation of associations between attachment and religiosity in adolescence. Its purpose was to shed light on the accuracy of Kirkpatrick’s and our attempts at resolving previous inconsistencies in results (see Figure 1) as well as to examine the ability of attachment history and romantic attachment to explain unique religiosity variance.

Predictions were derived from our socialized correspondence and emotional compensation hypotheses. For cross-sectional relations, the emotional compensation hypothesis predicted that insecure attachment history with parents and current romantic attachment at Time 1 (T1) would be related to emotionally based religiosity and religious fluctuations (both increases and decreases). For cross-sectional and longitudinal relations, and for participants who had experienced increased religiosity, either prior to T1 or in-between T1 and Time 2 (T2), insecure attachment history and current romantic attachment were expected to be linked to religious changes marked by suddenness and intenseness, and occurring during life situations of emotional turmoil (themes of compensation).

	Granqvist and Hagekull (1999)	Kirkpatrick (1998b, 1999a)
Secure attachment	<i>Socialized correspondence:</i> Religiosity reflecting social learning of parent’s religious standards	<i>Concurrent correspondence:</i> Correspondence between mental models of self/others and God at a given time
Insecure attachment	<i>Emotional compensation:</i> Religiosity reflecting affect regulation strategy to obtain/maintain felt security	<i>Longitudinal compensation:</i> Religiosity tied to attachment system dynamics; prone to increases over time

Figure 1. Description of Two Attempts to Clarify Previous Inconsistent Results on Attachment and Religiosity

The socialized correspondence hypothesis predicted that secure attachment history and current romantic attachment at T1 would be linked to socialization-based religiosity and religious stability. Insofar as increased religiosity had been experienced, either prior to T1 or in-between T1 and T2, secure attachment history and current romantic attachment were expected to be linked to gradual religious changes occurring during life situations pointing to the importance of socialization of significant others’ religious standards (themes of correspondence).

Due to its exploratory nature, no predictions were formulated for the question concerning the ability of attachment history and romantic attachment to explain unique variance in religiosity.

Results and Comments

Cross-sectional relations between attachment and religiousness at Time 1. Partial correlations, controlling for sex, were first computed to test the predictions of concurrent relations between each of the attachment and religiousness variables. Results from these analyses are presented in Table 4, showing (left panel) that an insecure attachment history

Table 4
 Time 1 Correlations Between Attachment and Religiousness for the Total Sample and for the Increased Religiosity Group, Controlling for Sex

Attachment variables	Total sample (N = 196)			Increased religiosity group (n = 78)			
	EBRS	SBRS ^a	Decreased religiosity	Increased religiosity	Sudden-/intensity of change	Themes of compensation	Themes of correspondence
Attachment history							
<i>Insecurity w. mother</i>	.16*	-.24***	.08	.22***	.16	.45****	.19
<i>Insecurity w. father</i>	.14	-.25****	-.04	.05	.05	.38****	.15
Romantic attachment							
<i>Avoidance</i>	.15*	-.11	-.08	.09	.03	.09	.02
<i>Anxiety</i>	.21***	-.23***	.05	.12	.02	.25*	.11

^a denotes maternal items for correlations with attachment history with mother, paternal items for correlations with attachment history with father, and combined parental items for correlations with romantic attachment; EBRS=Emotionally Based Religiosity Scale; SBRS=Socialization Based Religiosity Scale

* $p < .05$, ** $p < .005$, *** $p < .001$; two-tailed

with mother was directly related to EBRS and inversely to SBRS, which was in line with predictions. Also in line with predictions, insecure attachment history with mother was positively linked to increased religiosity as occurring prior to T1, but no association was obtained in relation to decreased religiosity.

Examining relations between attachment history with mother and characteristics of religious change, among participants who had experienced increased religiosity prior to T1 (right panel), showed an insecure history to be positively associated with themes of compensation but to be unrelated to suddenness/intenseness of change and themes of correspondence. The direction of results for attachment history with father was similar, although associations with EBRS and increased religiosity failed to reach significance. Results for romantic attachment orientation also pointed in the same direction, particularly for anxiety, which was directly linked to EBRS and themes of compensation, as well as inversely related to SBRS. Avoidance was positively associated with EBRS but was unrelated to the remaining religiosity variables.

To analyze the relative ability of attachment history and romantic attachment to explain unique variance in the outcome measures, standard multiple regression analyses were run on each of the religiosity measures that were significantly associated with at least two of the attachment dimensions. Besides sex, only the attachment dimensions that displayed significant associations with the religiosity variables in question were included as predictors in the regression equations. Results from these analyses showed that romantic attachment anxiety was the only (marginally) significant predictor that made a unique contribution in explaining variance on EBRS, partial $r = .14$, $p = .055$, and that only insecure attachment history with mother explained unique variance on SBRS, partial $r = -.19$, $p < .05$. Insecure attachment history with mother and father uniquely predicted themes of compensation, partial r s = $.35$ and $.26$, p s $< .001$ and $.05$, respectively.

Longitudinal predictions of religious change from Time 1 attachment. Partial correlations, controlling for sex, were first computed to test the predictions of longitudinal relations between the attachment variables at T1 and religious change variables at T2. Results from these analyses showed that insecure attachment history with mother was positively linked to decreased religiosity, partial $r = .26$, $p < .001$, which was in line with predictions, whereas increased religiosity was unrelated to attachment history with mother, $p > .10$. Examining relations between attachment history with mother and characteristics of religious change, among participants who had experienced an increased religiosity in-between T1 and T2 ($n = 23$), showed insecure history with mother to be positively linked to suddenness/intenseness of change, partial $r = .58$, $p < .01$, again in line with predictions, whereas no significant associations were obtained in relation to themes of compensation or themes of correspondence, p s $> .10$. Also, insecure history with father and romantic attachment avoidance were unrelated to all religious change variables investigated, p s $> .10$, whereas romantic attachment anxiety was positively related only to decreased religiosity, partial $r = .25$, $p < .001$.

A corresponding multiple regression analysis to those reported above with respect to cross-sectional relations was run on insecure history with mother and romantic attachment anxiety in relation to decreased religiosity. Results showed that insecure history with mother explained unique variance in decreased religiosity, partial $r = .19$, $p < .05$, whereas romantic attachment anxiety made a marginally significant contribution, partial $r = .17$, $p = .052$.

Conclusions. Results from the present study were, taken as a whole, generally in line with the hypotheses, which was true particularly in relation to the cross-sectional analyses, whereas support from the results of the longitudinal analyses was more mixed. Concerning the ability of attachment history and romantic attachment to explain unique variance in religiosity, attachment history made six significant contributions (five from attachment history with mother), whereas romantic attachment only made two marginally significant contributions (both from anxiety), highlighting the relative importance of attachment history, particularly with mother, in predicting adolescent religiosity. These findings seem to suggest that attachment history should constitute the primary frame of reference for the correspondence and compensation hypotheses. Before reaching such a conclusion, it is important to caution that the present results were based on participants in mid-adolescence, representing a life period during which attachment transition from parents to peers has generally been initiated but not concluded (e.g., Fraley & Davis, 1997; Friedlmeier & Granqvist, 2001; Hazan & Zeifman, 1999). Therefore, it is possible that reverse results will emerge in future studies based on adult samples.

In what follows, a brief discussion will be presented on weaknesses of our hypotheses of socialized correspondence and emotional compensation, as well as of Kirkpatrick's hypotheses of concurrent correspondence and longitudinal compensation. An integration of these hypotheses will finally be suggested. With respect to correspondence effects, the socialized correspondence hypothesis fails to account for some concurrent correspondence links between secure romantic attachment and religiosity, such as why people with a secure attachment orientation are in possession of a more loving and less distant God image than people with an insecure attachment orientation (Byrd & Boe, 2000; Granqvist & Hagekull, 2000; Hyde, 1999; Kirkpatrick, 1998b; Kirkpatrick & Shaver, 1992; cf. Rohner, 1986). One reason for this may be that the hypothesis of socialized correspondence fails to capture important content aspects of religiosity. Such aspects are tapped by the concurrent correspondence hypothesis, which states that there is a correspondence between mental models of God and self/other. However, two weaknesses with Kirkpatrick's concurrent correspondence hypothesis are that (1) it fails to make any other prediction regarding religious changes of secure people than that such changes ought not to occur, and (2) it fails to explain links between attachment security and the adoption of parental religious standards. For these reasons, it will henceforward be hypothesized that the religiosity of secure individuals originates from social learning and partial adoption of parental religious standards, potentiated by a secure attachment history, and creating a religiosity that is not prone to intense fluctuations over time as based on present affect regulation needs (socialized correspondence). In addition, the IWMs derived from the primary attachment relationship subsequently affect the individual's image of (a loving) God (IWM correspondence). Such an integrative hypothesis might be labeled "two-level correspondence", where the first level denotes a primary mechanism of social learning of parental standards in the context of a secure attachment relationship, and the second level denotes a secondary effect reflecting correspondence between mental models of self/other and God.

Concerning compensation effects, Kirkpatrick's longitudinal compensation hypothesis fails to account both for cross-sectional associations between attachment insecurity and some aspects of religiousness (e.g., EBRS), and for the results linking insecure attachment history with mother and anxious romantic attachment to decreased religiosity. These findings are in line with the emotional compensation predictions of religiosity as an

affect regulation strategy, implying general religious instability (i.e., both increases and decreases, depending on present affect regulation needs) in insecure individuals. Otherwise, ours and Kirkpatrick's interpretations of the compensation effects converge nicely in that both tie the religiosity of relatively insecure people to attachment system dynamics, although the hypothesis of emotional compensation adds affect regulation as the mechanism responsible for the compensation effects.

Study IV – Religiosity and The Adult Attachment Interview: Probable Experiences, States of Mind, and Two Religious Profiles

Background and Aims

A potentially serious methodological weakness with all studies on attachment and religion is that they have solely relied on self-report assessments of attachment. A number of caveats are therefore necessary. First, shared method variance may account for (parts of) the links observed. Second, although the attachment self-reports have been shown to be only modestly related to social desirability and moderately to negative affect (Carver, 1997; Fraley, Davis, & Shaver, 1998; Mikulincer & Orbach, 1995; Shaver & Brennan, 1992), it can not be ruled out that at least part of the shared variance between attachment self reports and religiosity is accounted for by these, or similar, unexamined parameters. Finally, although attachment self-reports have been validated against behavioral observations, psychophysiological assessments, peer reports, and responses to projective tests (see e.g., Crowell, Fraley, & Shaver, 1999; Shaver & Clark, 1994), the literature has shown a striking lack of correspondence between the self-reports and the extensively validated Adult Attachment Interview (AAI) (e.g., Crowell, Treboux, & Waters, 1999; De Haas, Bakermans-Kranenburg, & van IJzendoorn, 1994; Hesse, 1999; see, however, Bartholomew & Shaver, 1998).

The AAI methodology differs markedly from the self-reports in that, in assigning ratings and classifications, it does not take participant responses (content) at face value, but instead relies on an evaluation of the coherence (form) of attachment discourse. It is probably therefore more suited to tap the unconscious aspects of IWMs that are postulated by the theory of attachment (Bowlby, 1969, 1973, 1980). Perhaps consequently, the AAI, unlike the self-reports, has been validated against infant Strange Situation (Ainsworth et al., 1978) classifications, both across generations (i.e., in relation to the participants' own children) and prospectively within the individual (Hamilton, 2000; Main & Hesse, 1998; Waters, Merrick, Treboux, Crowell, & Alberstheim, 2000; van IJzendoorn, 1995). The AAI has also been found to be unrelated both to social desirability and negative affect (see Hesse, 1999).

Hence, an important task for testing the validity of the attachment and religion conceptualization is to study whether attachment, as captured with the AAI, is related to the two religiosity profiles that were delineated in Studies I to III. This was the general purpose of Study IV. An additional aim was to examine whether religiosity is best predicted by estimated attachment history with parents in childhood or by current state of mind with regard to attachment. Finally, two new prototype measures were constructed to tap the most central aspects of the two-level correspondence and emotional compensation aspects of religiosity, and it was tested if attachment is related to these measures in a hypothesized manner.

Based on the hypotheses, we expected autonomous state of mind and a secure attachment history to be related to socialization-based religiosity (socialized correspondence) and a loving, as opposed to a distant, God image (IWM correspondence). Insofar as religious changes have occurred, autonomous state of mind and a secure attachment history should be linked to slow changes, occurring at a relatively early age, and marked by life themes indicating the importance of relationships with religious significant others. Autonomous state of mind and a secure attachment history were also expected to be positively related to the correspondence and negatively to the compensation prototype measures, as devised for this study (see Method). Non-autonomous state of mind and an insecure attachment history should have correlates in the opposite direction. Results from corresponding analyses based on self-report assessments of attachment (retrospective reports of parenting and current romantic attachment orientation) are presented to examine whether similar patterns of results emerge from the two different modes of attachment measurement.

Results and Comments

Preliminary analyses. To achieve a parsimonious index of estimated attachment history with parents, the probable experience scales of the AAI were aggregated within parents. Pressuring to achieve by both parents were dropped from the indices because these scales lowered scale homogeneity. Hence, the *AAI attachment history with mother* and *father* indices were aggregates of the parent's loving, rejecting (R), involving (R), and neglecting (R) scale scores (α s = .87 and .80; average inter-item r s = .65 and .55 for the maternal and paternal indices, respectively), with high values denoting a secure attachment history. To answer the question of whether attachment history and/or current state of mind explains unique religiosity variance, a *Combined AAI attachment history* index was used in subsequent regression analyses. This index was an aggregate of AAI attachment history with mother and father ($r = .64$).

Similarly, the retrospective self-report ratings of parenting were aggregated within parents to yield indices of *self-reported attachment history with mother* and *father*. These aggregates consisted of the parent's secure, dismissing (R), preoccupied (R), and fearful (R) scores (α s = .67 and .70; average inter-item r s = .36 and .37 for the maternal and paternal indices, respectively), with a high value denoting a secure attachment history.

Finally, a procedure similar to that of Fyffe and Waters (1997) was used to obtain dimensional AAI state of mind scores for the three-way classifications. That is, based on the AAI classifications, participants were assigned to *a priori* F, Ds, and E groups (CC cases were excluded), and the state of mind scales were used as independent variables to form a variate from which group membership was predicted in a standard discriminant function analysis. The state of mind scales included in the analysis were idealization of both parents, involving anger against both parents, derogation of both parents, overall derogation of attachment, insistence on lack of memory, passivity, and coherence of transcript. As expected, the multivariate result was highly significant, $p < .00001$, as were results for both discriminant functions, $ps < .00001$. Results from post-hoc LSD tests showed that the first function primarily discriminated between F and non-F cases, $ps < .00001$, (although Ds cases scored somewhat higher than E cases, $p < .05$), and the second function discriminated between Ds and E cases, $p < .00001$, with F cases scoring in-between. Accordingly, the first function was labeled *F vs. non-F*, with high values denoting autonomous and low values representing non-

autonomous state of mind, and the second function was labeled *Ds vs. E*, with high values denoting dismissing and low values representing preoccupied state of mind. In total, 97.5 % of the *a priori* (observed) classifications were correctly reproduced by the two discriminant functions, which is much more than expected by chance, *Press's Q* = 148.2, $p < .00001$.

As a validity check, the two discriminant functions were finally correlated with each state of mind scale. As might be expected, the F vs non-F function was largely summarized by coherence of transcript ($r = .97$), and was also negatively related to most "negative" state of mind scales (range of r s = $-.14$ to $-.59$). The second function was positively linked to idealization of both parents (r s = $.67$ and $.46$; of mother and father, respectively) and to insistence on lack of memory ($r = .54$), and was negatively related to anger against both parents (r s = $-.80$ and $-.46$; against mother and father, respectively) and passivity ($r = -.46$). As in Fyffe and Waters' analysis (1997), the derogation scales failed to show the expected pattern, and even tended to be negatively related to the *Ds vs. E* function (range of r s = $-.05$ to $-.23$). However, overall the discriminant function analysis was successful in dimensionalizing the theoretically postulated states of mind of F, DS, and E cases.

Attachment and two levels of correspondence. Correlations between AAI dimensions on the one hand and SBRS (the level of social learning) and God image (the IWM-level) on the other, were run as an initial AAI-based test of the two levels of the correspondence hypothesis. Results from these analyses are presented in Table 5. As can be seen in the left-most column, the probable experience scales were related to socialization-based religiosity in the predicted manner with respect to experiences with both parents. None of the state of mind dimensions were significantly related to socialization-based religiosity.

The second level of the correspondence hypothesis was supported in correlations between God images and probable experiences with mother (Table 5). Participants with an estimated secure attachment history with mother held an image of God as loving and not distant. Results with respect to probable experiences with father pointed in the same direction, but were weaker, and failed to reach significance. None of the state of mind dimensions were significantly related to God image.

The attachment self-reports were also correlated with the socialization-based religiosity and loving and distant God image scales. Results from these analyses showed striking similarities to the results obtained from the AAI dimensions. Secure attachment history with mother and father were again related to SBRS in the direction predicted by the first level of the correspondence hypothesis (r s = $.47$ and $.46$, respectively, $ps < .001$). Concerning romantic attachment, neither avoidance, nor anxiety, was significantly related to socialization-based religiosity, $ps > .05$. With respect to the second level of the correspondence hypothesis, the predicted pattern of results was again obtained in the correlations between God image and self-reported attachment history with mother; high security scores were associated with high Loving God scores ($r = .36$, $p < .001$) and with low Distant God scores ($r = -.34$, $p < .005$). Again, attachment history with father was unrelated to God image, as were the dimensions of romantic attachment, $ps > .05$.

Attachment and characteristics of religious change. To test the predictions of religious change, correlations were first computed between the AAI dimensions and characteristics of religious change for participants who had indicated increased importance of their religious beliefs during some period in their lives. Results from these analyses are shown in the right panel of Table 5.

Table 5
Correlations Between AAI Dimensions and Religiosity Variables for the Total Sample and for the Religious Change Group

AAI-dimensions	Religiosity variables					
	Total sample (<i>N</i> = 84)			Religious change group (<i>n</i> = 66)		
	SBRs	Loving God	Distant God	Suddenness of change	Age at change	Themes of compensation correspondence
Probable experiences						
Secure history - mother	.45****	.39****	-.40****	.31**	-.57****	.34***
Secure history - father	.58****	.12	-.19+	.08	-.39****	.17
States of mind						
F vs non-F function	.11	.15	-.15	.06	-.18	.16
Ds vs E function	.08	.14	-.17	.18	-.18	.19
U/d loss/abuse/abuse	-.22+	-.04	.01	-.09	.46****	-.13

Note. SBRs = Socialization-based religiosity; denotes maternal items in correlations with attachment history with mother, paternal items in correlations with attachment history with father, and aggregated items in correlations with states of mind.
 + $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .005$ **** $p < .001$; two-tailed

With respect to probable experiences with parents, most predictions were supported, particularly in relation to attachment history with mother. Estimated security was associated with early changes, low scores on themes of compensation, and high scores on themes of correspondence. Estimated secure attachment history with father was related to age at change and themes of compensation in the same directions, but was unrelated to themes of correspondence.

Predictions were not supported for suddenness of change; in fact, it was related to estimated attachment history with mother in the opposite direction of the hypotheses, and was unrelated to attachment history with father. Concerning state of mind, low scores on the Ds function (characteristic of highly preoccupied participants) were associated with high scores on themes of compensation, as were high unresolved/disorganized loss/abuse scores. Also, unresolved/disorganized loss/abuse was linked to late religious changes. However, the F vs non-F function was unrelated to all characteristics of change, and associations with suddenness of change and themes of correspondence were in all cases non-significant.

Two forward stepwise multiple regression analyses were run to test if attachment history and/or state of mind predicted unique variance in characteristics of religious change. In the first analysis, AAI combined attachment history and unresolved/disorganized loss/abuse were used to predict age at change. Results showed that both estimated insecure attachment history and unresolved/disorganized loss/abuse made unique contributions, partial $r_s = -.41$ and $.30$, $p_s < .001$ and $.05$, respectively. In the second analysis, combined attachment history, the DS vs. E function, and unresolved/disorganized loss/abuse were used to predict themes of compensation. High attachment history insecurity and high preoccupation were both related to high scores on themes of compensation, partial $r_s = -.35$ and $-.27$, $p_s < .01$ and $.05$, whereas unresolved/disorganized loss/abuse failed to enter the equation, $p > .10$.

Correlations between attachment self-reports and characteristics of religious change showed that secure attachment history with mother was linked to early changes and low scores on themes of compensation, $r_s = -.52$ and $-.50$, respectively, $p_s < .001$, but failed to display the predicted pattern in relation to themes of correspondence and suddenness of change, $p_s > .05$. Also, attachment history with father was unrelated to all characteristics of change variables, $p_s > .05$. Concerning self-reported romantic attachment, no significant associations between either avoidance or anxiety and characteristics of religious change were observed, $p_s > .05$.

Attachment and two profiles of religiosity. As a final set of hypotheses tests, AAI-dimensions were correlated with the new correspondence and compensation prototypes. Results again supported predictions in relation to the probable experience scales. Estimated secure attachment history with mother and father were associated with high scores on the correspondence prototype, $r_s = .39$ and $.52$, respectively, $p_s < .001$, and with low scores on the compensation prototype, $r_s = -.24$ and $-.29$, $p_s < .05$ and $.01$, respectively. The only state of mind dimension that was significantly related to the correspondence prototype was unresolved/disorganized loss/abuse, with high unresolved scores associated with low correspondence scores, $r = -.23$, $p < .05$. Results for the compensation prototype were in all cases non-significant, $p_s > .10$. A forward stepwise multiple regression analysis was run to test if combined attachment history and/or unresolved/disorganized loss/abuse predicted unique variance on the correspondence prototype. Secure attachment history made a unique

contribution, partial $r = .51$, $p < .001$, whereas unresolved loss/abuse failed to enter the equation, $p > .10$.

Correlations between self-reported attachment history and the two religiosity prototypes also followed the predicted pattern. Reports of secure histories with mother and father were related to high correspondence scores, $r_s = .39$ and $.43$, respectively, $p_s < .001$, and to low compensation scores, $r_s = -.23$ and $-.41$, $p_s < .05$ and $.001$, respectively. Once again, neither the avoidance nor the anxiety romantic attachment dimension were associated with any of the prototypes, $p_s > .10$.

Conclusions. Overall, results of the study successfully replicated and extended previous questionnaire-based findings with a well-validated method of measuring attachment, namely the AAI. In so doing, the emotional compensation hypothesis was further corroborated and the two-level correspondence hypothesis was shown to hold promise. In addition, results converge with the Study III suggestion that childhood experiences with parents, as compared to current adult attachment organization, are more consistently linked to religiosity.

Similar relations between childhood experiences and adult religiosity were found when retrospective participant ratings of parenting were used, but, regardless of attachment method, current attachment organization was not consistently linked to religiosity. In practice, this means that, even though current attachment organization is to some degree expected to be based on past attachment experiences, these past experiences supposedly shape the individual's religiosity independently of current attachment organization. Although the direction of effects is unknown given the cross-sectional design, these findings could suggest that religion is an arena in which the individual can mentally integrate and reconcile past experiences so that, even though these past experiences have been adverse, the individual can coherently process information with respect to those adversities.

Although the interpretation is speculative at this point, it makes theoretical sense if the perceived relationship with God actually functions as a compensatory attachment relationship, in the full sense of these words. It would also be theologically plausible, given the portrayal of God as benevolent, loving, forgiving, and in possession of other sensitivity related attributes, which are not only theological constructions but congruent also with many religious individuals' experiences (see Kirkpatrick, 1992, 1994, 1995, 1999a). In attachment terms, religiosity would in that case help promote "earned security" (Main & Goldwyn, 1998) in the formerly insecure individual. To this date, attachment researchers have mainly theorized about earned security as resulting from reparative relationship experiences with a therapist, a secure love partner, a grandparent or sibling, or from contextual changes leading to increased parental sensitivity (e.g., maternal recovery from depression) (e.g., Bowlby, 1988; Lichtenstein Phelps, Belsky, & Crnic, 1998; Pearson, Cohn, Cowan, & Cowan, 1994). It is possible that experiences with God may serve a similar function for some previously insecure individuals, although other reparative factors in this context (e.g., supportive affiliative relationships in the religious communion, experiences from pastoral care) are likely to at least contribute and potentially to mediate this presumed link between religiosity and earned attachment security.

GENERAL DISCUSSION

In what follows, results from the four studies will be briefly summarized, and tentative conclusions will be drawn. Critical questions raised by the studies will then be dealt with, followed by a section attempting to examine the integrative capacity of attachment theory for research in the psychology of religion. Limitations and future directions will be suggested in the final section of the Discussion.

Summary and Conclusion

Results from the four studies have shown that attachment theory can be fruitfully applied to religiosity. More specifically, two religiosity profiles have been delineated in relation to individual differences in attachment.

First, the religiosity/non-religiosity of individuals in the two-level correspondence profile is similar to the religiosity/non-religiosity of their parents. It is also likely to be relatively stable over time. Insofar as religious changes have been experienced, these changes are likely to have been relatively gradual, to have occurred relatively early in life, and in a context pointing to the importance of relationships with religious significant others, whereas life themes pointing to an emotionally supportive function for religion are likely to have been uncharacteristic. The God image of these individuals is likely to be relatively loving, and not distant. This religiosity profile presumably stems from experiences with sensitive parents in childhood. It is suggested that such experiences with parents have promoted social learning and partial adoption of the parents' religious standards/non-standards, and, in the case of parental religiosity, that the inner working models resulting from the favorable experiences are responsible for a corresponding relationship with a God that is perceived as loving.

Second, the religiosity/non-religiosity of individuals in the emotional compensation profile is independent of the religiosity/non-religiosity of their parents. It is also likely to fluctuate (increase and decrease) over time. Their religious changes are likely to have been relatively sudden and intense, to have occurred relatively later in life, and in a context pointing to an emotionally supportive function for religion, whereas life themes pointing to the importance of relationships with religious significant others are likely to have been uncharacteristic. The God image of these individuals is likely to be relatively distant, and not loving. The religious characteristics of such individuals presumably stem from experiences with insensitive parents in childhood. It is suggested that their religiosity reflects an affect regulation strategy to obtain/maintain a sense of felt security, and that God is utilized as a compensatory attachment-like figure in this regard.

In general, findings pertaining to the two profiles emerged regardless of whether the design was cross-sectional (Studies I-IV) or longitudinal (Study III), whether participants were adults (Studies I, II, and IV) or adolescents (Study III), and whether the mode of measuring attachment was with self-report questionnaires (Studies I-IV) or independent ratings based on a semi-structured interview (Study IV).

Critical Questions Raised by the Empirical Studies

Three questions raised by the studies will be discussed, namely whether (1) attachment history with mother or father and whether (2) child-parent attachment or romantic attachment are more important for understanding the development of individual differences in religiosity. In answering these questions, a suggestion (3) will be made which may help further explain the previously observed longitudinal compensation and concurrent correspondence effects.

Is Attachment History With Mother or Father More Important for Understanding Religious Development?

Study I documented more consistent connections between religiosity and attachment history with father, as compared to mother, although they pointed in the same direction with respect to attachment history with mother. Also, only attachment history with mother displayed a significant main effect on major religious change. In Study II, highly similar results were obtained across parents, and in Study III, results were consistently stronger for attachment history with mother, and particularly the compensation effects pertaining to religious changes. Studies I-III were based on previous hypotheses that failed to make an operational distinction between the two levels (the social learning and IWM levels) of correspondence postulated by the two-level correspondence hypothesis. When such a distinction was made, in Study IV, an interesting pattern of results was obtained (see Table 5). Socialization-based religiosity was linked to estimated attachment histories with both parents. Similar findings were obtained in relation to self-reported attachment history across Studies II-IV. However, only estimated attachment history with mother was linked to God image in the direction proposed by the hypotheses.

The reason for these discrepancies may be clarified if one distinguishes between the two aspects of the correspondence hypothesis. Socialization-based religiosity refers to the level of social learning. Finding that socialization-based religiosity is related also to the relationship with father seems to have ecological validity in that fathers have been speculated to be at least as important as mothers in defining the central values of the family that are to be transmitted to the next generation (cf. Hagekull & Bohlin, 1998). In contrast, God image refers to the IWM-level of correspondence. Given that mother is the primary attachment figure for most children, the relationship with her should be more powerful than the paternal relationship in shaping the individual's IWMs; hence, the IWM-correspondence effects should be more evident in relation to attachment history with mother. Thus, it appears as if the social learning level of correspondence is true with respect to both parents, and that the IWM-level of correspondence is true primarily with respect to attachment history with mother.

Concerning compensation effects, similar results emerged across parents, although findings pertaining to religious change were more consistent for the relationship with mother, as compared to that with father, which converges with the Kirkpatrick and Shaver (1990) results. Hence, it appears as if the emotional compensation hypothesis is applicable to relationships with both parents, but that characteristics of the relationship history with mother are more important for understanding religious change.

Is Child-Parent or Romantic Attachment More Important for Understanding Religious Development?

To answer this question, there are empirical, attachment theoretical, and historical arguments that need to be taken into consideration. Concerning empirical factors, the results from the studies that utilized assessments of both attachment targets uniformly suggest that attachment history with parents should constitute the primary frame of reference for the correspondence and compensation hypotheses, regardless of whether results are based on adolescents (Study III) or adults (Study IV). Also, although results from other studies have not made direct comparisons between the two attachment targets, and although romantic attachment has been repeatedly linked to religiosity (at small effect-size levels), the findings on attachment history with parents have generally yielded stronger effects.

Concerning attachment theoretical arguments, and following Kirkpatrick's (1998a) line of reasoning, the child-parent relationship represents a purer exemplar of attachment than does the romantic love relationship in that the former, among other things, is asymmetrical (i.e., the attachment figure is stronger and wiser) and has proximity/protection, and thereby survival of the offspring, as the predictable evolutionary outcome, whereas the romantic relationship is symmetrical and has reproduction as the most central evolutionary outcome. With respect to the individual's relationship with God, two inevitable conclusions from a reading of religious literature and of research in the psychology of religion are that it more clearly resembles child-parent than romantic attachment in that it is asymmetrical (i.e., God is perceived as stronger and wiser) and more closely tied to an experience of protection than to reproduction.

Regarding historical precursors to the attachment analysis of religion, classic psychoanalytic writers (e.g., Freud, 1964a), ego psychologists (e.g., Erikson, 1958, 1959, 1963), and object relationists (e.g., Rizzuto, 1979, 1991) alike have all delved into the functional and structural similarities between the individual's childhood relationship with (one of) the parent(s) and his/her relationship with God. In other words, despite the reservations raised against these perspectives in the Introduction, their main emphasis on the relations between child-parent and adult-God relationships converges with the above empirical and attachment theoretical arguments.

How Are the Longitudinal Compensation and Concurrent Correspondence Effects Explainable?

Although effects have been small, as noted above, previous prospective studies (Kirkpatrick, 1997, 1998b) on romantic attachment and religiosity have documented a link between insecurity of attachment and increased religiosity over time (longitudinal compensation) and between security of attachment and higher religiosity at a given time (concurrent correspondence). It is possible that the results from Study IV may help further conceptually explain these findings. More specifically, a bidirectional relation between attachment and religiosity is suggested. Insecurity of past attachment leads to increased religiosity over time, due to religiosity reflecting an affect regulation strategy that helps the individual regulate states of insecurity (hence, the longitudinal compensation effects). With the establishment/intensification of religiosity, and via the potentially reparative factors embedded therein, the individual is helped to "earn security" (hence, the concurrent

correspondence effects). In other words, it is suggested that insecurity drives increases in religiosity over time, and once established, the individual is more likely to obtain security.

Attachment Theory as an Integrative Developmental Framework for the Psychology of Religion

In this section a sketch will be outlined to show that attachment theory, and the hypotheses of two-level correspondence and emotional compensation, may function as a fruitful integrative framework for some of the principal, ground-bearing findings and perspectives in the psychology of religion. An attempt will also be made to show that some of the controversies in the field may be resolvable on the basis of the results of this thesis.

To begin with, and as noted in the Introduction, claims have been made that two "paradigms" on religious conversion co-exist in the behavioral sciences of religion (Richardson, 1985; see also Hood et al., 1996). The results of this thesis suggest that the chasm between these paradigms may be an artifact, due to a failure to consider important individual differences. More specifically, differences in attachment history may help resolve the controversies between these claimed to be paradigms (see also Granqvist & Kirkpatrick, 2000).

First, and given the differing definitions and operationalizations of conversion, researchers in these two traditions have probably studied different forms of religious conversions (Zinnbauer & Pargament, 1998). Second, and by doing so, they are likely to have focused on two different profiles of religious individuals. The "classic paradigm", as described by Richardson, is likely to have focused more on those (previously) insecure in attachment, whose religiosity is based on affect regulation strategies, and the contemporary paradigm is likely to have focused more on those (continuously) secure in attachment, whose religiosity is based on socialization processes. Hence, seen in the light of the results of the present thesis, it is not so surprising that the classic account has emphasized precipitating crises and the dramatic nature of the conversion, whereas the contemporary account has de-emphasized these same things. Another implication of the results of the thesis is that the non-determinism favored by the contemporary conversion account may be questionable; the socialization of religious standards from sensitive and responsive caregivers in the past may be one important predispositional factor, and the influence of relationships with religious significant others prior to the conversion may be an important situational factor. Also, the radical change in well-being and of the self in the (formerly insecure) convert of the classic paradigm may have its explanation in a new sense of felt security, and even, over time, earned attachment security. In attachment terms, this may be accomplished by the convert finding God as a safe haven during the distress precipitating the conversion and by the establishment of an attachment-like relationship in which God functions as a secure base for the convert.

Just as a consideration of individual differences in attachment helps resolve the chasm between the classic and contemporary conversion research traditions, as these were described by Richardson (1985), it may help explain at least part of the differences between the first-born religiosity of healthy minded individuals and the twice-born religiosity of sick souls, as described by James (1902). The distal attachment agent is suggested to be differences between the sick souls and healthy minded individuals in experienced parental sensitivity, with the former having had less favorable experiences than the latter. This

signifies an important explanatory attempt, given how influential and replicable (e.g., Shaver, Lennauer, & Sadd, 1980) James's descriptions have been in the psychology of religion, and given that no causally sound attempt has been presented to explain the two profiles (see Wulff, 1991).

Intimately tied to the research on religious change and conversion, as well as on apostasy, is the emphasis on adolescence and early adulthood as religious transitional periods (Hood et al., 1996). As noted above, agreed upon explanations for why these religious processes so frequently occur during these life periods have not been established. Viewed from an attachment perspective, however, and in so far as the believer-God relationship often is an attachment-like relationship, these findings make theoretical sense. Not only are these life periods characterized by religious transitions, but important maturational processes with respect to attachment seem to co-occur, most notably the relocation of attachment figures in the individual's life (e.g., Hazan & Zeifman, 1999). Hence, it is proposed that adolescence and early adulthood are marked by religious transitions because these are the major periods of attachment transition in the individual's life.

The proposed attachment framework also helps explain findings reported in the literature on the social learning of religion, which is an important part of the religion as habit tradition, namely that offspring with high quality relationships with parents are more prone to adopt their parents' religious standards than are those whose relationships have been less favorable. This is likely to be so, not only because parental sensitivity promotes compliance and internalization of parental values, but also because it fosters successful offspring identification with parents (see Richters & Waters, 1991). Hence, the attachment framework helps assimilate effects on religiosity proposed to stem "from without" (i.e., socialization; see Batson et al., 1993), or, in Rizzuto's (1979) terms, the "public origins" of religion.

Another prominent theoretical framework in the religion as habit tradition, which may be of particular interest for Scandinavian psychologists of religion, is Sundén's role theory (1959). For purposes of saving space, this theory has not been discussed so far. Some brief comments are nevertheless in order. First, instead of lining up with Erikson's non-operationalizable theory and Jung's obscure and seemingly Lamarckian thoughts on archetypes, as drawn from the "collective unconscious", it would be of clear theoretical advantage for Sundén's theory were it to be, in its attempt to find "deep" psychological structures, lined up with Bowlby's attachment theory instead. In that case, God would not be constructed as an "archetype" but as a figure deriving its psychological significance from being construed as an attachment-like figure. The deep structure, attachment, would hence make biological sense, and the biologically dubious concept of archetypes could be replaced. It is also of interest to note that some of Sundén's (1959) concepts, most notably "the general role of God" and "the general role of God's partner", refer to highly attachment-relevant issues (e.g., internalized secure base, inner working models of self and others).

Also, attachment theory makes a good partner to one of the currently most popular theoretical approaches in the psychology of religion, namely that of coping theory (Pargament, 1997). Research undertaken within this theory has often documented how religious individuals turn to God as a highly personal relational partner in times of stress, particularly such stress as is related to threats (e.g., danger) and loss (e.g., death of a loved one) (Bjorck & Cohen, 1993; McCrae, 1984). These are of course the very types of situations that should activate the individual's attachment system, further attesting to the fact that God is used as an attachment-like figure. Furthermore, such coping use of God seems to work over

and above the effects provided by affiliative relationships in the religious communion and elsewhere (e.g., Rokach & Brock, 1998). In fact, McCrae and Costa (1986) found that faith was the one "coping mechanism" ranked as most effective for alleviating distress. Although by no means replacing the utility of coping theory itself, attachment theory provides an important explanatory account of why religious coping is used particularly in some situations (i.e., they are attachment relevant) and of why God is perceived as so helpful in these situations (i.e., He is used as an attachment-like figure). It also provides complementary explanations of a more distal type, both in that it is grounded in the theory of natural selection (phylogenetic origins) and in that it may help account for the dispositional individual differences in religious coping that are described, but not explained, by Pargament (1997) (ontogenetic origins) (see also Granqvist 2002a).

Enough has been said in the Introduction about theoretical, methodological, and empirical shortcomings with the traditional psychodynamic accounts in general, and their applications to religion in particular. It is suggested that the proposed attachment framework is well suited to explain many of the observations made within those accounts. This particularly includes the protective function of religiosity (i.e., religiosity as stemming "from within"; Batson et al., 1993), which is postulated by Freud, Erikson, and Rizzuto alike. This protective function is proposed by the emotional compensation hypothesis to reflect an affect regulation strategy that helps the individual obtain/maintain a sense of felt security in view of past attachment adversities. The empirically supported IWM-level of correspondence also converges with Erikson's speculation about basic trust as the foundation for later faith and with Rizzuto's reasoning concerning continuity between the object God and other object representations. There are, however, many reasons why to favor an attachment conceptualization in comparison to the traditional psychodynamic accounts. Not only is the former more parsimonious, encompassing operationalizable constructs, and able to make falsifiable predictions, which have hitherto generally been demonstrably supported in empirical trials, but is also highly consonant with, indeed based on, modern theory of natural selection.

As we have seen, the proposed framework assimilates many of the important observations made in the religion as habit and protective/defensive traditions (Hood et al., 1996). In so doing, it also integrates within one framework some of the key psychological and social origins of religiosity, which are otherwise usually studied from the viewpoint of different theoretical perspectives. What about observations made in the growth/realization tradition?

It was noted in the Introduction that the growth/realization tradition encompasses, above all, cognitive and humanist accounts, and that it is little devoted to studying individual differences, being instead more focused on normative and maturational processes, which makes the attachment account less relevant. However, with respect to "growth", and in so far as the "compensation" postulated by the emotional compensation hypothesis actually works, individual differences may be relevant in that religion may help those individuals who have suffered past adversities to obtain mental integration, and thus progression. As described in the introduction, such a line of reasoning has been suggested both by Erikson (1963), in noting that religion is a symbolic arena in which the individual may be helped to continually resolve the crisis of trust vs. mistrust, and Rizzuto, in claiming that the God representation "remains a potentially available representation for the continuous

process of psychic integration.” (1979, p. 180). Guntrip has probably put it most optimistically, suggesting that:

Since religion is preeminently an experience of personal relationship, ..., to embrace both man and his (sic.) universe in one meaningful whole, the integrating nature of fully developed personal relationship experience, is our most solid clue to the nature of religious experience ... integration is a product of personal relationship, and ... human love and religious experience are two levels of this same phenomenon.” (1969, p. 325)

However, each of these propositions emanates from a suboptimal explanatory framework, as has been repeatedly noted, and is based on unsystematic empirical support. In terms of attachment, this mentally integrative function of religiosity may be empirically documented among the Study IV participants who are ”earned secure”, that is, among participants who have suffered past attachment adversities but who are nevertheless autonomously organized with respect to attachment. Such participants possessed a religiosity that was generally linked to emotional compensation characteristics (see also Granqvist, 2002b), suggesting that the compensation may serve mentally integrative functions. This postulated mental integration function of religion for previously insecure believers is in line with findings of positive effects from some relational religiosity aspects on self-integration and mental health (e.g., Batson et al., 1993; Bergin, 1983; Hinde, 1999), and may also have implications for the psychology *by* religion (see above).

Thus, attachment theory seems to have promise as an integrative developmental framework for the psychology of religion. Having said this, proponents of Tradition II, as characterized in the section *A discipline in need of remedy?*, may feel that too much emphasis has been placed on the empirical sub-discipline (Tradition I) of the psychology of religion. This is partly true, and by necessity so, given the emphasis on operationalizability and empirical research in the attachment research tradition. However, the final reason, to be noted, as to why attachment theory should be used as a framework is because it also makes understanding, not only explanation and prediction, possible. The potential for understanding stems from an emphasis on the organization, or pattern, or even ”meaning” of behavior (Sroufe & Waters, 1977a) and thought processes (Main, 1993, 1991). This emphasis is particularly evident in AAI coding, which primarily relies on an examination of coherence (e.g., internal consistency) of discourse, and not on its empirical referents as occurring outside of the interview context. Hence, Main (1993) explicitly acknowledges that the coding process is hermeneutical, resting on the principles of the coherence theory of truth, rather than empirical in nature and resting on the assumptions of the correspondence theory of truth. However, after having made the classifications, the researcher moves out of the internal restraints embedded in the hermeneutical circle, or the world of the humanist scholar, and into the natural scientist’s real world of empirical events and regularities. The ability to utilize ”the best of both worlds”, and to move flexibly between the two, is, in essence, one of the principal strengths of attachment theory.

Limitations and Future Directions

In spite of the fact that attachment theory seems to hold considerable promise as a theoretical framework applied to religion, there are nevertheless some important limitations that need to be addressed. Some implications of these limitations for future studies will be suggested as well.

First, there is some degree of circularity between the two-level correspondence and emotional compensation hypotheses. Individuals who have experienced a secure attachment history are likely to possess a religiosity or non-religiosity that is modeled on parental (lack of) religiousness (socialized correspondence), and in so far as the individual is religious, he/she is expected to hold an image of God as loving and caring (IWM correspondence). Logically, individuals whose childhood experiences have been the opposite are likely not to have been successfully socialized into religion, nor to possess an image of God as loving and caring. If the matters were left here, then there would be total circularity between the two hypotheses. However, there is still a need to explain why individuals with insecure attachment histories sometimes become religious, why they experience sudden religious conversions to a disproportionately high extent, why their religiosity fluctuates more over time, and why their religious changes tend to occur during stressful life circumstances. Here, the emotional compensation hypothesis provides an explanation, in terms of affect regulation strategies, that is not circular to the two-level correspondence hypothesis.

Second, there are some inconsistencies in results between the studies. This particularly holds for the characteristics of religious change variables. Whereas results from Studies I and II showed attachment insecurity to be linked as hypothesized to the occurrence of sudden and intense religious changes, results were somewhat weaker in Studies III and IV, in the latter case in fact pointing in the opposite direction; that is, insecure histories tended to be associated with more gradual religious changes. Also, whereas results from Studies II and IV supported the predicted pattern of relations between attachment and themes of correspondence, results from Study III did not. It is difficult to explain these anomalies. Parts of them may be understood as differences between the samples. As noted, Study III, being the only study conducted on adolescents, stood out with respect to links with both suddenness/intenseness of change and themes of correspondence. One reason why the predicted pattern of relations between attachment and these characteristics of change did not hold for adolescents may be clarified if one considers the results from Studies II and IV, which linked insecure histories to a higher age at change. In the adolescent sample, the young age of the participants may have restricted both the occurrence of religious changes and their correlates for the participants with insecure histories. Had they been older, the anticipated pattern of results could, hence, have been obtained. Needless to say, future studies should look for reoccurrence of such anomalies.

Due to the high degree of secularization present in Sweden (Pettersson, 1994), all studies in the dissertation utilized samples of convenience rather than, for instance, random selection or stratified sampling. This may have restricted the external validity of the findings as well as introduced uncertainties concerning exactly which population inferences are made to. Therefore, future studies conducted in less secularized countries should utilize a more controlled sample recruitment strategy. Note, however, that results from the studies on attachment and religion generally form a coherent whole, regardless of whether participants have been drawn from populations of Swedish adolescents or Swedish young adult university

students (see also Granqvist, 2002a; Granqvist & Hagekull, 2000, 2002), Swedish "new agers" (Granqvist & Hagekull, 2001), U.S. college students (Kirkpatrick, 1998b; Hyde, 2000), or Denver Post newspaper advertisement readers of mixed (Kirkpatrick & Shaver, 1990, 1992) or female (Kirkpatrick, 1997) sex.

Another potential limitation related to external validity derives from the fact that only Western, pre-dominantly Christian samples have been used in the attachment and religion studies published to date, including those of the present thesis. Whether the attachment conceptualization holds merit also outside of the Western Judeo-Christian world is in part an empirical question for future cross-cultural research to consider. However, this also needs to be addressed as a theoretical and phenomenology of religion question pending on cultural differences in the construction of the deity, and the believer's relationship with it, with the monotheistic versions probably representing the purest attachment constructions (see Kirkpatrick, 1995).

Tied to this external validity issue is the question of how to define religion and religiosity (see Appendix I). The present dissertation is based on a rather narrow substantial definition, centered on a personal relationship with a personal supernatural being. Future attachment and religion studies should also examine associations between attachment and religion when religion is less narrowly defined. This is particularly important seen in the light of the decline in traditional monotheistic religiosity that is present in many Western societies. Such investigative efforts could throw light on whether new religion-like phenomena capitalize on similar psychological predispositions and processes as the traditional religions do. One such investigation, on self-reported attachment and new age orientation (Granqvist & Hagekull, 2001), has been published to date. Results from this study not only showed that new age orientation is much more empirically homogeneous than what is commonly thought, but also that it is tied to virtually all of the emotional compensation characteristics that have been linked to insecurity of attachment when study participants have been drawn from more traditional religious circumstances. These findings have been replicated in the AAI-study (Granqvist, 2002c), which also showed that new age orientation, unlike more traditional religiosity estimates, is linked to such non-autonomous states of mind as unresolved/disorganized loss and abuse, passivity, derogation, and involving anger.

With respect to internal validity, all studies on attachment and religion published to date have been based on correlational designs. Although the longitudinal prospective studies (i.e., Study III of the present thesis; see also, Granqvist & Hagekull, 2002; Kirkpatrick 1997, 1998b) allow for real-time investigations of religious change as well as control over the direction of change (e.g., by holding religiosity at Time 1 constant), the prospective design does not permit sufficient control over potential extraneous influences to allow for causal inferences. Hence, experimental studies are necessary. Two such experiments have recently been conducted (Birgegård & Granqvist, 2002). Results from these studies supported the predictions that participant religiosity (e.g., emotionally based religiosity and a new "state" scale intended to tap a wish to be close to God) would increase as a function of attachment activating experimental separation stimuli (i.e., "GOD HAS FORSAKEN ME", "MOMMY IS GONE"). To avoid the operation of defensive maneuvers, these stimuli were delivered by means of a subliminal psychodynamic activation technique. Religiosity increased from pre- to posttest among participants in the experimental conditions relative to participants in the control condition, who were exposed to a control phrase, "PEOPLE ARE WALKING", the intention of which was to leave the attachment systems unaffected. Hence, although the cross-

sectional attachment and religion studies leave the question of causal direction unanswered, the combined results from prospective longitudinal and experimental studies show that attachment does predict real-time religious change and that such can be caused by experimental attachment activation.

In view of the conclusion that experiences from attachment to parents should constitute the primary frame of reference for the compensation and correspondence hypotheses, it is of vital importance that future studies utilize well-validated measures of attachment to parents. The research on attachment and religiosity, including the studies in the present dissertation, has either used retrospective self-report measures, which are amenable to all sorts of response biases, or the probable experience scales of the AAI. Although there are reasons to have more confidence in the probable experience than the self-report scales, the primary purpose with the AAI is not to tap childhood experiences but to delineate current state of mind; hence, it is not primarily a retrospective method. Accordingly, the well-documented validity of the AAI (see above) concerns current state of mind, rather than past attachment experiences. A suggestion for future studies on attachment and religiosity is therefore to use the SS procedure, or some other mode of well-validated attachment measurement that is appropriate for older children, such as the (adapted) Separation Anxiety Test (Main et al., 1985). Such longitudinal studies as already have been initiated could easily include some of the religiosity measures that have been found to be related to attachment in previous studies. Not only would such investigative efforts provide important validity clues for the attachment and religion conceptualization, but they would also bring the study of attachment and religion closer to the domain of child developmental psychology, which is the home and heart of attachment theory.

Another limitation with the attachment and religion research, as indeed with attachment research in general, is that it has, with few exceptions, been based on the individual differences perspective, as pioneered by Ainsworth, whereas its normative aspects, as described by Bowlby, have been neglected. That is, few explicit attachment studies have been undertaken to examine associations between religiosity and aspects of attachment other than individual differences in attachment organization. This is so although much relevant research, that has either been atheoretic or undertaken within the frame of other theoretical perspectives, has been described *post hoc* in normative attachment terms (Kirkpatrick, 1992, 1994, 1995, 1999a). Apart from the experimental studies described above (Birgegård & Granqvist, 2002), only two attachment studies (Granqvist & Hagekull, 2000, 2002) have looked at associations between religiosity and normative attachment processes, which in both cases consisted of presumed effects on religiosity from the formation of and/or separation from love relationships. The first of these studies suggested that the absence of a close love relationship is associated with a higher degree of relationship with God. The second study, however, showed interactive effects between individual differences in attachment and romantic relationship processes that were in line with the emotional compensation and two-level correspondence hypotheses. Separation was linked to real-time religiosity increases for those who are relatively insecure in attachment, whereas the formation of a love relationship predicted increases in religiosity for relatively secure individuals.

The normative attachment framework is a potentially fruitful area for future research. One example would be to study sequential aspects associated with the individual's formation of an attachment relationship with God. If the attachment conceptualization is a valid one, this formation may follow the same, or a similar, sequence as has been documented

in both infant-parent and lover-lover attachment relationships (see Hazan & Zeifman, 1999), namely that the establishment of the proximity seeking and safe haven aspects precede those of the secure base and separation anxiety components. Two other suggestions, which could be undertaken in developmental and gerontological research, respectively, is to examine effects on religiosity from separation from parents and from spousal bereavement.

In the section *Attachment theory as an integrative developmental framework for the psychology of religion*, an attempt was made show how attachment theory can integrate several of the principal findings and perspectives in the psychology of religion within a heuristically valuable, parsimonious, and falsifiable theoretical framework. However, an equally important task is to consider what implications the attachment and religion research may have for attachment theory itself, and for the mainstream psychological research undertaken within it. The potentially most important contribution in this regard pertains to whether the compensatory strategies actually do function, for instance, in bringing about earned attachment security (see Granqvist, 2002b). The reason why this is important is evident in the robust intergenerational transmission findings showing that those who are earned secure are likely to behave in such a manner as to produce security also in their offspring (e.g., Lichtenstein Phelps et al., 1998; Pearson et al., 1994). Such an earned security function is suggested by the Study IV results. However, since that study was cross-sectional, the suggestion needs to be corroborated by longitudinal trials. Future research on attachment and earned security in the context of religion also needs to address the question of why religiosity may lead to earned security for some, but not all, individuals, and what can be done in the context of religion to bring about earned security also in those latter. Such investigative efforts may be of much clinical importance, especially in the work with religious clients.

APPENDIX 1

Definitional Issues

The central concepts of the psychology of religion need to be defined, the most obvious being religion itself. As with any complex phenomenon, problems and controversies immediately arise. There are two principal ways of defining religion, one in terms of its *function* (e.g., helping the individual come to grips with such ultimate concerns of existence as meaning of life and death; e.g., Batson et al., 1993) and one in terms of its *content* (or "substance") (e.g., a metaphysical belief system, prescribed rituals, holy texts, a collective with which these things are shared; e.g., Glock & Stark, 1965). In view of folk conceptions of religion, the former tends to be overly inclusive, e.g., does not generally require the postulate of God's existence, and may include naturalist movements such as existentialism and marxism, and the latter may become overly exclusive, e.g., fails to include classic Buddhism (Geels & Wikström, 1993).

A pragmatic orientation towards definitions is probably helpful, which in this context means to formulate a working definition that guides subsequent operationalizations. This obviously requires that there is some degree of exclusion to the definition. In the present thesis, the main topic of inquiry is that of a belief in and a personal relationship with a supernatural being, God. Hence, for pragmatic reasons, a substantial definition may be appropriate. Moberg's (1970) definition of religion forms the wall against which subsequent operationalizations in this thesis lean: "the personal beliefs, values, and activities pertinent to that which is supernatural, mysterious, and awesome, which transcends immediate situations, and which pertains to questions of final causes and ultimate ends of man and the universe" (in Koenig, Kvale, & Ferrel, 1988, p. 18). The terms "religiousness" and "religiosity" will be used interchangeably to refer to the individual's orientation towards religion.

Another concept, which is of relevance to the present thesis, and which has been surrounded by considerable controversy, is that of religious conversion (e.g., Hood et al., 1996; Paloutzian, Richardson, & Rambo, 1999; Richardson, 1985). Researchers in the behavioral sciences of religion generally refer either to, on the one hand, denominational switching or the individual's incorporation into a new religious group (common for sociologists of religion), or, on the other hand, a process in which the individual goes from unfaith or a low degree of faith to a personally significant faith, often via an experience of having experienced contact with the divine (typical of psychologists of religion). It is this latter concept of conversion that will be used in the present thesis.

Finally, the term "psychodynamic" will be used in reference to theoretical perspectives encompassing each of the following five postulates (Westen, 1998): (1) much of mental life is unconscious; (2) mental processes operate in parallel so that people can have conflicting feelings that motivate them in opposing ways; (3) stable personality patterns begin to form in childhood, and childhood experiences play an important role in the developing personality, particularly in shaping social relationships; (4) mental representations of the self, others, and relationships guide people's interactions with others and influence psychological symptomatology; and (5) personality development involves learning to regulate sexual and aggressive feelings but also the move from an immature, socially dependent state to a mature, interdependent one. According to this relatively broad definition, attachment theory will be subsumed under the general psychodynamic umbrella term (even though it usually has little to say about such drives of sexual and aggressive nature as may be relevant in the fifth

postulate). The term "traditional psychodynamic" will refer to perspectives that encompass not only all of the above elements, but also theorizing that includes one or more of the following concepts: Id, ego, superego, libido, Eros, Thanatos, oedipal conflict, psychosexual stages, fixation, penis envy, castration anxiety, object representation, and the traditional defense mechanisms (e.g., splitting, repression, regression [in the service of the ego], projection, reaction formation, identification with the aggressor, sublimation). Attachment theory will not be subsumed under the traditional psychodynamic label (see above, for the reasons for this). The term "psychoanalysis" will be used in reference to perspectives that encompass all elements of the general and traditional psychodynamic labels, that is, in practice, orthodox Freudianism.

APPENDIX 2

Items of Emotionally Based Religiosity Scale and Socialization-Based Religiosity Scale

Emotionally Based Religiosity Scale:

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

Socialization-Based Religiosity Scale:

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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