

## Attachment Predicts Adolescent Conversions at Young Life Religious Summer Camps

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The correspondence hypothesis maintains that people with secure parental attachments will experience gradual religious conversions, with internal working models of childhood attachment figures forming the basis of attachment to God. The compensation hypothesis predicts that people with insecure attachments will experience sudden and dramatic conversions as they seek a relationship with God to compensate for insecure attachment relationships. In Study 1, faith narratives from 162 adolescents were analyzed; associations between parental attachment and the type of conversion reflected in the narrative support both hypotheses. In Study 2, data were prospectively collected from 240 adolescents attending religious summer camps; after camp, 138 participants reported a gradual conversion and 21 reported a sudden conversion. Participants who rated themselves securely attached to their parents before camp were more likely to report a gradual conversion, supporting the correspondence hypothesis. Precamp insecure parental attachment did not predict the subsequent incidence of a sudden religious conversion.

Attachment system dynamics have been helpful in explaining the psychology of religious conversions. The compensation and correspondence hypotheses have received the most attention

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in explaining the association between attachment, religiosity, and conversions (Kirkpatrick & Shaver, 1992). The compensation hypothesis holds that people seek a relationship with God to compensate for insecure attachment relationships with their parents. This compensatory relationship with God sometimes begins with a sudden conversion, which is preceded by emotional turmoil and characterized by dramatic changes in religious practices and beliefs. The correspondence hypothesis maintains that internal working models of childhood attachment figures form the basis of adolescent and adult attachment to God. The correspondence hypothesis predicts gradual conversions of steadily increasing commitment to religious views and practices, which are characterized as more rational than emotional and are not preceded by a personal crisis (Granqvist & Kirkpatrick, 2004). We briefly summarize evidence supporting the two hypotheses.

### COMPENSATION HYPOTHESIS

The compensation hypothesis posits that people with insecure primary attachments to early caregivers seek out compensatory relationships to provide a secure base and regulate distress. God(s) and other religious agents may readily serve as objects of such compensatory relationships, especially when people feel socially disconnected or lonely (Epley, Akalis, Waytz, & Cacioppo, 2008). Some postulate that, for believers, God is an ideal compensatory attachment figure because of his ascribed qualities of perfection and immutability (Kirkpatrick, 2005).<sup>1</sup>

Initial evidence for the compensation hypothesis came from Kirkpatrick and Shaver's (1990) cross-sectional study on perceived childhood attachments and religious conversion. Participants completed questionnaires about their religious beliefs, as well as a retrospective childhood attachment measure classifying individuals as securely attached, insecure-anxious/ambivalent, or insecure-avoidant (Hazan & Shaver, 1987). Insecure-avoidant attachment predicted sudden religious conversion in that 44% of those with avoidant attachment had a sudden religious conversion compared to 8% and 9% of those with secure and anxious/ambivalent attachments, respectively. The link between insecure attachment and sudden religious change has been replicated in other self-report studies (Granqvist, 1998; Granqvist & Hagekull, 1999). A meta-analysis comprising 11 cross-sectional questionnaire studies ( $N = 1,465$ ) found that the rate of sudden conversion was significantly higher in insecurely attached individuals (Granqvist & Kirkpatrick, 2004).

Studies using longitudinal designs and more sophisticated measures (e.g., the Adult Attachment Interview) have also garnered evidence supporting the compensation hypothesis. Granqvist, Ivarsson, Broberg, and Hagekull (2007) interviewed participants and found that independent interview coders' estimates of parental rejection and role reversal was associated with more sudden and intense increases in religiosity, which were often precipitated by emotional turmoil. In a longitudinal study with adolescents, Granqvist (2002) found that peer and, to a larger extent, parental insecurity predicted increased fluctuations in religiosity at time one and at a 15-month follow-up.

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<sup>1</sup>Note that whether or not a god can serve well as a compensatory attachment figure is variable across religious traditions. Many gods are not immutable, perfect, or even interested in a personal relationship with a human.

Similarly, insecure romantic attachment in adulthood prospectively predicted a new relationship with God and a highly salient religious experience (e.g., speaking in tongues or being “born again”) in a sample of women over a 4-year period (Kirkpatrick, 1997) and in a sample of both men and women over a period of 5 months (Kirkpatrick, 1998).

### CORRESPONDENCE HYPOTHESIS

The correspondence hypothesis theorizes that people who have experienced secure childhood attachment relationships will adopt the religious beliefs and practices of their attachment figures, but those with insecure childhood attachments will be more likely to deviate from caregiver religiosity (or nonreligiosity; Granqvist & Hagekull, 1999). Moreover, the correspondence hypothesis maintains that early childhood attachment relationships provide the foundations for internal working models (IWMs) for a person’s later relationship with God (e.g., a person with a secure parental attachment will have a secure relationship with God; Granqvist, 2002). IWMs are a person’s internalized core beliefs and meanings about relationships, the self, and the dependability of attachment partners. Although IWMs are theoretically malleable, research suggests that there is a large degree of continuity of these over the lifespan (Kirkpatrick, 2005).

The correspondence hypothesis aligns with the finding that children with a positive parental relationship are more likely to adopt parents’ general religious and moral standards (Hood, Hill, & Spilka, 2009; Kochanska, Aksan, Knaack, & Rhines, 2004). Looking specifically at attachment, securely attached participants with religious parents score higher on religiosity measures than do insecurely attached participants with religious parents (Granqvist, 1998, 2002; Granqvist & Hagekull, 1999; Kirkpatrick & Shaver, 1990). Similarly, experiences with loving parents (measured via the Adult Attachment Interview) predict religious engagement similar to parental religiosity and a loving God image (Granqvist, Ivarsson, et al., 2007).

Experimental evidence also supports the correspondence hypothesis. Birgegard and Granqvist (2004) found that participants with secure parental attachments turned to God when their attachment systems were subliminally activated (i.e., they strived to maintain/obtain contact with God to regulate emotions), but individuals with insecure parental attachments turned away from God under subliminal threat. It seems that the IWMs of parents and God overlapped considerably, leading participants with secure parental relationships to use God as a source of support under threat. In a study with 5- to 7-year-old children (Granqvist, Ljungdahl, et al., 2007), securely attached children placed a God symbol closer to a fictional child when they were told a story that should activate the attachment system of the fictional child compared to a story that should not activate the system. In contrast, insecurely attached children placed God no closer or farther to the fictional child in the attachment-activation condition than the neutral condition.

Evidence supports the hypothesis that securely attached people experience conversions of a different quality than those with insecure attachments. Whereas insecurely attached people experience sudden conversions to regulate distress, securely attached people are more likely to experience gradual religious change through socialization-based acquisition of parental religiosity. In a meta-analysis of 11 questionnaire studies, Granqvist and Kirkpatrick (2004) found that nonsudden conversions were related to secure attachment and higher scores on a socialization-based religiosity scale, but sudden religious conversions were related to insecure

attachment and high scores on an emotionally based religiosity scale. In a prospective 15-month study, Granqvist and Hagekull (2003) found that securely attached adolescents were more likely to experience a gradual increase in religiousness upon the establishment of a new romantic relationship and a decrease in religiousness at the dissolution of a relationship. In contrast, insecurely attached individuals were more likely to experience a dramatic conversion upon the termination of a romantic relationship and decreased religiousness upon the formation of a new romantic relationship.

### LITERATURE EVALUATION

Overall, the correspondence hypothesis finds more empirical support than the compensation hypothesis (Granqvist & Kirkpatrick, 2008). This, in part, may be a function of the rarity of compensatory relationships rather than the falsity of the compensation hypothesis. Moreover, the compensation and correspondence hypotheses may both be operating at the population level even though they are competing at the individual level. Theoretically, people with secure parental attachments should transfer their secure IWMs to God by the correspondence hypothesis. However, there are two possible outcomes for insecurely attached people: They can continue to view God in the same way they view their parents (i.e., as an untrustworthy authority figure), or they can transfer their attachment needs to God as an ideal attachment figure who can meet their needs. If they take the former route, the correspondence hypothesis is supported, but if they take the latter, the compensation hypothesis is supported. One question that remains, then, is: Why do some insecurely attached people continue to view God as they do their parents but others turn to God as a more perfect attachment figure?

Although the present literature presents impressive empirical evidence in support of the correspondence and compensation hypotheses, the contexts and populations used in prospective, longitudinal studies is limited. In particular, only one prospective study with adolescent participants is frequently cited in the literature (reported in Granqvist, 2002; Granqvist & Hagekull, 2003). Adolescence is a developmentally rich time to investigate religious conversion and attachment, as this period is associated with religious changes and conversions (Granqvist & Hagekull, 2003; Smith, Denton, Faris, & Regnerus, 2002). Some even argue that significant religious changes and conversion crest at ages 15 and 16 (Hood, Spilka, Hunsberger, & Gorsuch, 1996 as cited in Granqvist, 2002). Also, adolescence is a period of transition between attachment figures, in which teens may distance themselves from parents and seek attachments to peers, romantic partners, other adults, or God (Granqvist & Hagekull, 2003; Granqvist & Kirkpatrick, 2008; Luthar, 2006). The combination of these developmental features means that adolescents are (a) especially receptive to religion and (b) actively developing attachment relationships with individuals other than their parents.

Thus, it is vital to specifically study attachment and religious conversion in adolescent samples. However, the only prospective study on adolescent conversion and attachment in the literature (Granqvist, 2002; Granqvist & Hagekull, 2003) exclusively sampled adolescents living in Sweden, which is considered a highly secularized country (although 90% of the population are members of the Lutheran Church of Sweden, less than 10% of the population are professing Christians; Pettersson, 1994). We seek to extend this work with adolescents living in a highly religious country, namely, the United States. National polls consistently report that more than

90% of Americans believe in God, and nearly three fourths of Americans endorse the statement that “my whole approach to life is based on my religion” (Bergin & Jensen, 1990, p. 4). We aim to see if findings are consistent across vastly different religious cultural-contexts.

## ATTACHMENT AND CONVERSION IN ADOLESCENTS ATTENDING RELIGIOUS SUMMER CAMPS

We aim to further test the compensation and correspondence hypotheses by examining the relation between parental attachment and religious conversion in adolescents attending religious summer camps. The current project uses a prospective design to examine the relation between attachment to parents and the incidence of either a sudden or gradual conversion at Young Life camp. Young Life is a nondenominational evangelical Christian youth program active in all U.S. states and in 45 countries. Every summer, more than 90,000 adolescents attend one of Young Life’s camps. In addition to fun, group-building activities (e.g., high ropes course, obstacle course, parasailing, horseback riding), Young Life camps feature considerable time for teens to build meaningful relationships as they play and talk to each other and their adult leaders. Campers also participate in large group “club” events, which feature singing, skits, and games, as well as evangelistic messages focused on the life and teachings of Jesus. These messages are meant to be relevant and theologically simple. At the conclusion of camp, adolescents are invited to make a commitment or recommitment to the Christian faith. Many adolescents colloquially report experiencing meaningful religious transformations and conversions at camp.

The Young Life population presents a unique research opportunity to examine spiritual development *in vivo*, as it provides a sample that is sensitive to spiritual transformation/religious conversion during the camp week. We aim to test two specific hypotheses in this population:

- H1: Secure attachment will predict an increased likelihood of a gradual religious conversion at camp.
- H2: Insecure attachment will predict an increased likelihood of a sudden religious conversion at camp.

Moreover, we examine if there are any programmatic variables of the religious camps that affect the incidence and quality of conversions.

### STUDY 1

Many Young Life adolescent campers who experience a spiritual transformation at summer camp later volunteer as camp Summer Staff after graduating from high school. As an initial test of our hypotheses, we analyzed narrative responses to the request for a personal faith history on Summer Staff applications (“Please include an autobiography of your Christian experience”). Ostensibly, the Summer Staff applicants maintain a strong commitment to their Christian faith, demonstrated by their willingness to complete Summer Staff jobs, which are emotionally and physically grueling, for no pay. The typical volunteer position includes a 12-hr

workday with only a half day off each week and one full day off during each month. Summer Staffers tend to see this service as an extension of their faith, so we take this generosity and self-sacrifice to demonstrate a strong faith commitment, which has arisen through sudden or gradual spiritual conversions. By comparing the faith backgrounds of those with secure and insecure parental attachments, we can explore the possible pathways that brought the sudden and gradual converts to their current faith commitments.

## Method

### *Informants*

Young Life headquarters, based in Colorado Springs, Colorado, provided our research team with the complete set of U.S. Summer Staff applications for 2006. These applications were completed in late 2005 or early 2006 for the summer 2006 camping season and were electronically submitted using web-based forms. The researchers given access to these databases were required by Young Life to sign a legally binding nondisclosure form. There were 1,659 records, but as some were duplicate records and samples were used for devising a reliable coding scheme, the total number of unique applications analyzed numbered 890. A subset of 162 narratives that contained some mention of parents was analyzed for this study. Henceforth, we refer to those applicants supplying data as informants rather than participants.

The subset of 162 informants was 19 years old on average ( $SD = 1.5$ ), and 41% were male. All were American residents, and 87.1% had some type of Christian upbringing (56.2% practicing, 7.4% nominal, 6.8% inconsistent, and 16.7% unspecified). Upon submitting the application, all informants were Christians from various denominations.

### *Design and Procedures*

Two independent, hypothesis-blind coders classified the number of transformations and lifetime spiritual trajectory described by each Summer Staff applicant, the family religious background, and factors contributing to the conversion/spiritual growth. The coding scheme for the spiritual trajectory curves is listed in the appendix. Of particular interest were the trajectories that depicted sudden or distinct conversion (19.4%; Curve A) and gradual and steady spiritual growth (62.1%; Curve C). For family religious background, seven categories were utilized. The majority of informants were classified as coming from a practicing-Christian background (56.2%; e.g., "I grew up in a Christian family, and we went to church together"). Other family background categories include unspecified Christian (16.7%; e.g., "I was born in a Christian home, and always believed"), nominal Christian (7.4%; "I was baptized Catholic but never went to mass"), inconsistent Christian (6.8%; "I was in a Christian home, but when Dad ran away I kinda quit going to church"), non-Christian religious (0.6%; "I was raised in a Hindu family"), nonreligious (7.4%; "Having no church experience as a child I did not know anything about who Jesus was"), and unspecified (4.9%). Factors contributing to conversion were classified under five overarching factors: church influence, Young Life influence, other organizational influence, nonorganizational relationships, and hard times/mystical experiences/trauma. Coders also marked if parents were specifically mentioned as a transformative factor.

The coding scheme was applied to a random sample of 139 testimonies for the sake of establishing intercoder reliability. Because the cross-tabs tables were not symmetric, a

contingency coefficient was calculated to determine the rate of agreement. The coding scheme was modified until intercoder agreement reached sufficient levels based on standard practice (Dormer & Zou, 2002). For instance, the average contingency coefficient of the three main descriptive variables (family background .86, number of transformations .68, and curve type .84) was .79, indicating strong intercoder agreement.

A different set of coders classified the parental attachment (62% secure, 33% insecure, and 5% unclear) reflected in these narratives ( $\kappa = .83, p < .001$ ). Initially, coders were given a categorical coding scheme consisting of five single item descriptors of parental attachment. Parental attachment was coded as secure (i.e., "Parent is attentive, available, reliable, accessible, warm, loving, affectionate or supportive. Writer expresses satisfaction with parental relationship"), insecure-avoidant (i.e., "Parent is cold, rejecting, unavailable, unsupportive, inattentive, or abusive"), insecure-anxious (i.e., "Parent at times is cold, rejecting, unavailable, unsupportive, inattentive or abusive but at other times is loving and available. Parental behavior is inconsistent"), insecure-unclear (i.e., "Parent is cold, rejecting, unavailable, unsupportive, inattentive or abusive, writer is not satisfied with the parental relationship. It is unclear if the parent's behavior is consistent or inconsistent"), and unclear (i.e., "There is not enough information to decide if the relationship falls into one of the other categories").

The coding scheme was adapted from Hazan and Shaver's (1987) descriptors of different attachment types. Changes in the original descriptors were made to accommodate this data set and study design (e.g., our informants often did not delineate between mother and father when describing their relationship with their parents, so our descriptors are toward parents generally). Interrater agreement for the five-type coding scheme was unsatisfactory ( $\kappa = .529, p < .001$ ). Testimonies were often too general to distinguish between the different types of insecure attachment, so, the three insecure types (avoidant, anxious, and unclear) were collapsed to create a general insecure-attachment category ( $\kappa = .75, p < .001$ ).

## Results

Looking first at the faith trajectories of insecurely attached informants, 37.9% reported a sudden or distinct conversion, and 34.5% reported gradual and steady spiritual growth. In contrast, only 10.1% of those with secure parental attachments reported a sudden conversion, whereas the majority of the securely attached (75.4%) reported gradual and steady spiritual growth ( $p = .001$ , Fisher's exact test). These findings support the correspondence hypothesis of gradual conversion for the securely attached. There seems to be support for the compensation hypothesis of sudden and dramatic conversion for many of the insecurely attached, but another significant proportion of insecurely attached informants experienced gradual spiritual growth.

Analyses of family religious background provide further support for the correspondence hypothesis. An omnibus statistical analysis of the six family background categories by the three attachment classifications (secure, insecure, and unclear) showed that informants' religious backgrounds differ significantly depending on their attachment type ( $p = .014$ , Fisher's exact test). Of the 101 informants with secure parental attachment, 66.3% reported a practicing-Christian family upbringing, whereas only 37.7% of the 53 insecure informants reported a practicing-Christian upbringing ( $\chi^2 = 6.84, p = .009$ ). Similarly, 18.8% of securely attached informants reported a Christian upbringing with the level of practice unspecified compared to

only 13.2% of insecurely attached informants ( $p = .036$ , Fisher's exact test). Only 6.9% of informants with secure parental attachment reported a nominal/inconsistent Christian upbringing compared to 26.4% of informants with insecure attachment ( $\chi^2 = 9.49$ ,  $p = .002$ ). It may be that these individuals with insecure attachments and nominal Christian backgrounds became highly committed to their Christian faith to compensate for insecure parental attachment.

In contrast, there were no differences between secure and insecure informants in regard to nonreligious family background: 7.9% of the informants with secure parental attachment reported a nonreligious family background, and 7.5% of informants with insecure parental attachment reported a nonreligious family background ( $\chi^2 = 0.280$ ,  $p = .597$ ). There were also no differences between secure and insecure informants in regard to a practicing non-Christian religious family background: 0.0% of the informants with secure parental attachment reported a practicing non-Christian religious family background, and 1.9% of informants with insecure parental attachment reported a nonreligious family background ( $\chi^2 = 0.025$ ,  $p = .874$ ).

We also looked at the factors informants mentioned as contributing toward their conversions and spiritual transformations. An omnibus statistical analysis was run with the five overarching factors of change from the coding scheme (transformations related to church, Young Life, other organizations, nonorganizational relationships, and hard times/mystical experiences/trauma) by the three attachment classifications (secure, insecure, and unclear). A significant effect was found such that factors differed by attachment type ( $\chi^2$  Likelihood-Ratio = 25.813,  $p = .004$ ; Likelihood-ratio chi-square is used instead of Pearson's chi-square because several cells had expected counts less than five). Planned comparisons were tested for presence versus absence of each of the five overarching factors by secure versus insecure attachment. There was a significant effect for the nonorganizational relationships factor ( $p = .030$ , Fisher's exact test), such that 37.1% of secure informants cited nonorganizational relationships as contributing to their transformation versus only 8.7% of insecure informants.

In addition, a planned comparison of secure versus insecure informants by whether they mentioned parents as a factor in their transformation was tested. Although not statistically significant ( $p = .137$ , Fisher's exact test), 19.5% of the informants with secure parental attachment specifically mentioned the relationship with their parents as an essential facet of their conversion or spiritual development, but only one of the informants with insecure attachment (1.9%) cited the parental relationship as impacting his or her conversion or spiritual development.

## STUDY 2

Analysis of the Young Life faith narratives provides initial support for both compensatory and correspondence processes operating in youth. Study 1 findings, however, are based on retrospective reflections that were written as staff application essays; thus, they are likely subject to memory biases and social desirability effects. Some narratives did not contain information pertaining to parents, and narratives that did were occasionally too vague to reliably code for different types of attachment. Thus, coders could not reliably distinguish between different insecure attachment styles. Study 2 addresses some of these methodological limitations by prospectively measuring attachment in youth before they experience a conversion.

## Method

### *Participants*

Participants were recruited from several Young Life regional groups in the United States (in Illinois, Florida, and Michigan). Two-hundred forty Young Life campers (ages 11–19;  $M$  age = 15.3; 169 female) completed the pre- and postcamp surveys. Participants were primarily Caucasian (191), though some were ethnic minorities (10 Latino, 25 African American, 8 Asian American, 6 Other Minority).

### *Design and Procedures*

Participants were tracked from their registration for Young Life camp, through their camping experience, and for 12 months following the camping experience. They completed a precamp survey before attending Young Life summer camp (Time 1, or T1), a postcamp survey immediately following camp (Time 2, or T2), and a follow-up survey 9–12 months after camp (Time 3, or T3). T1 and T2 surveys were typically administered on the bus ride to/from camp under the supervision of the Young Life area director. T3 data were collected online; participants were sent a link to the survey on the PsychData survey platform. Paper-and-pencil surveys were made available for T3 participants lacking Internet access. The present analyses focus on T1 and T2 data; T3 data ( $N = 97$ ) are only briefly discussed.

### *Measures*

*Conversion.* Conversion during camp was measured by participant responses to two questions in the T2 survey (“Did you make a decision to commit your life to God for the first time at camp?” and “Did you make a decision to recommit your life to God at camp?”) and one question in the T1 survey (“Has there been a turning point in your life when you made a new and personal commitment to live your life for God?”). The T2 questions were worded to specifically follow the language used to denote religious change within the cultural context of Young Life. Participant endorsement of recommitment to God was used as a proxy for gradual religious change, whereas a first commitment was used as a proxy for more sudden conversions. Participants were only counted as experiencing a sudden conversion at T2 if they answered “no” to the T1 question about a previous commitment, and they were only counted as experiencing a gradual conversion at T2 if they answered “yes” to this question at T1. Hence, gradual conversion here refers to campers who already regarded themselves as committed to God and yet through the camping experience regarded a new, higher degree of commitment as necessary. Please note that a conversion does not require a switching from one religion to another by these definitions. Participants were also asked about their spiritual experiences of worship, prayer, and witnessing miracles at camp.

Our measurement of gradual and sudden conversion differs from the typical procedure used in most attachment and conversion research, which asks participants if they have ever experienced a religious change and if that change was (a) “a slow, gradual change over a long period of time,” (b) “a slow, gradual change with one or more relatively intense experiences and changes,” or (c) “an intense and sudden personal experience” (Granqvist, 2002; Granqvist & Hagekull, 1999, 2000; Granqvist, Ivarsson, et al., 2007). The primary reason for our modification of the standard measurement method is that we attempted to quantify religious

conversion in vivo. We sought to capture the experiences of the participants as they occurred rather than relying on possibly reconstructed memories.<sup>2</sup>

*Attachment.* Participants completed measures of general attachment style and present attachment to parents at T1. General attachment style was measured with 29 items from the Attachment Style Questionnaire (Feeney, Noller, & Hanrahan, 1994). Rated on a 7-point Likert scale, ranging 1 (*disagree strongly*) to 7 (*agree strongly*), general insecure-avoidant attachment was measured with items such as “I find it difficult to depend on others” and “I prefer to keep to myself” ( $M = 3.41$ ,  $SD = 0.79$ ; Cronbach’s  $\alpha = .78$ ). Items such as “I worry a lot about my relationships” and “I find that others are reluctant to get as close as I would like” measure general insecure-anxious/ambivalent attachment (succeedingly referred to as insecure-anxious;  $M = 3.67$ ,  $SD = 0.88$ ; Cronbach’s  $\alpha = .81$ ). An index of secure general attachment, ranging from 0 (*completely insecure*) to 14 (*completely secure*), was computed by subtracting mean avoidance and anxiety scores from 14 ( $M = 6.91$ ,  $SD = 1.41$ ). We looked at this index of secure attachment in addition to the separate insecure-avoidant and insecure-anxious subscales to test for the possibility that overall security of attachment, rather than any one of the two insecure styles, would best predict conversion.

Parental attachment was measured with 10 items from a parent-focused version of the Revised Experiences in Close Relationships Scale (Fraley, Waller, & Brennan, 2000). Rated on a 7-point Likert scale, from 1 (*disagree strongly*) to 7 (*agree strongly*), items such as “I prefer not to show my parents how I feel deep down” and “I find it easy to depend on my parents” (reverse-scored) measure insecure-avoidant parental attachment ( $M = 3.56$ ,  $SD = 1.48$ ; Cronbach’s  $\alpha = .81$ ). Items such as “I’m afraid that I will lose the love of my parents” and “I find that my parent(s) don’t want to get as close as I would like” measure insecure-anxious parental attachment ( $M = 2.23$ ,  $SD = 1.19$ ; Cronbach’s  $\alpha = .79$ ). An index of secure parental attachment was computed by subtracting mean parental-insecure-avoidant and parental-insecure-anxious scores from 14 ( $M = 8.22$ ,  $SD = 2.34$ ).

*Parental religiosity.* At T3, participants were asked to indicate their mothers’ and fathers’ religious affiliation (Christian/Protestant, Christian/Catholic, Muslim, Hindu, Buddhist, Other). They also were asked to indicate the level of religious devotion of each parent by responding to the question, How religious is your mother (father)? (1 = *not at all religious* to 5 = *extremely religious*).

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<sup>2</sup>Many of the religious commitments or recommitments at camp take place or culminate during an “altar-call” type invitation from a speaker at the end of the camp week. Participants fill out the T2 questionnaire on the bus ride home from camp (typically the next day), so we are measuring the religious change nearly immediately after it occurs at camp. This is a strength of our study in that participants are directly reporting on their experiences before they have much opportunity to reconstruct them to fit normative scripts of the religious community. However, the immediacy of the religious change makes it difficult for participants to reflect on the qualities and nature of the change, which is why we refrain from asking if the change was sudden, gradual, slow, and/or intense. In addition, most participants would probably endorse their camp experience as intense and personal because of the intensive nature of the camping environment. Thus, we have modified the standard measurement procedure to increase its applicability to our participant sample and reflect the language actually used in the Young Life context.

TABLE 1  
Means, Standard Deviations, and One-Way Analysis of Variance Results for Differences  
in T1 Attachment Scores for Participants Reporting Gradual, Sudden, or No Conversions at T2

		Camp Conversion Experience (T2)				Min- Max	F	p
		Total <sup>a</sup>	Gradual Conversion <sup>b</sup>	Sudden Conversion <sup>c</sup>	No Conversion <sup>d</sup>			
General Attachment (T1)								
Secure	<i>M</i>	6.92	7.00	6.69	6.82	0–14	0.69	.50
	<i>SD</i>	1.41	1.36	1.41	1.51			
Insecure-Anxious	<i>M</i>	3.67	3.64	3.75	3.69	0–7	0.19	.83
	<i>SD</i>	0.88	0.85	0.91	0.94			
Insecure-Avoidant	<i>M</i>	3.41	3.35	3.55	3.48	0–7	1.00	.37
	<i>SD</i>	0.79	0.76	0.63	0.87			
Parental Attachment (T1)								
Secure	<i>M</i>	8.22	8.59	7.93	7.66	0–14	4.37	.01
	<i>SD</i>	2.34	2.30	1.75	2.43			
Insecure-Anxious	<i>M</i>	2.23	2.10	2.25	2.43	0–7	1.98	.14
	<i>SD</i>	1.19	1.19	0.97	1.24			
Insecure-Avoidant	<i>M</i>	3.56	3.31	3.82	3.91	0–7	4.78	.01
	<i>SD</i>	1.48	1.47	1.05	1.51			

Note. T1 = Time 1; T2 = Time 2.

<sup>a</sup>*N* = 240. <sup>b</sup>*n* = 138. <sup>c</sup>*n* = 21. <sup>d</sup>*n* = 81.

*Young Life program variables.* Participants were asked to answer questions assessing their involvement in the various aspects of Young Life's program. Questions asked about frequency of attendance to events, the duration of involvement with the group, participation in small-group Bible studies, number of friends involved in Young Life, relationship to group leaders (including the amount and quality of interaction), and prior attendance to camp or other trips.

## Results

One hundred thirty-eight of the participants (58%) experienced a gradual religious conversion at camp, and 21 participants (9%) were classified as experiencing a sudden religious conversion. Table 1 displays average scores on T1 attachment measures for people who reported sudden, gradual, or no conversions.

## Gender and Age

Gender differences were examined for incidence of camp conversions and attachment. There were no gender differences for sudden or gradual conversions. There were differences in T1 attachment, such that female participants were higher in both general ( $M_{male} = 6.64$ ,  $M_{female} = 7.04$ ),  $F(1, 238) = 4.04$ ,  $p = .046$ ,  $d = .29$ , and parent specific ( $M_{male} = 7.45$ ,  $M_{female} = 8.54$ ),  $F(1, 238) = 11.44$ ,  $p = .001$ ,  $d = .49$ , secure attachment. Male participants were higher in both general ( $M_{male} = 3.73$ ,  $M_{female} = 3.28$ ),  $F(1, 238) = 17.69$ ,  $p < .001$ ,  $d = .61$ , and parent-specific ( $M_{male} = 4.03$ ,  $M_{female} = 3.36$ ),  $F(1, 238) = 10.60$ ,  $p = .001$ ,  $d = .48$ ,

insecure-avoidant attachment. They were also higher in parental insecure-anxious attachment ( $M_{male} = 2.53, M_{female} = 2.10$ ),  $F(1, 238) = 6.57, p = .011, d = .36$ . In all subsequent analyses, moderating effects of gender were tested, but no significant results were found. Thus, the effects of attachment on conversion are regarded as comparable for male and female participants.

Age was also examined as a correlate of attachment and conversion. There were no significant age differences for those who reported a gradual or sudden conversion, but age was correlated with attachment. General ( $r = .25, p < .001$ ) and parent-specific ( $r = .19, p = .004$ ) insecure-avoidant attachment, as well as general ( $r = .15, p = .025$ ) and parent-specific ( $r = .15, p = .017$ ) insecure-anxious attachment were all positively correlated with age. In all subsequent analyses, moderating effects of age were tested, but no significant results were found. It seems that the effects of attachment on the incidence of conversion are consistent across adolescence.

### Testing the Correspondence Hypothesis

A series of binary logistic regressions of gradual conversion (recommitment to God) on attachment were performed to examine if participants' general and/or parental attachment at T1 predicted the incidence of a gradual religious conversion at camp.

First, gradual conversion was regressed on general and parental attachment security. As can be seen in Table 2, secure parental attachment ( $\beta = .14, SE = .06$ ),  $\text{Exp}(\beta) = 1.15, p = .02$ , but not secure general attachment ( $\beta = -.03, SE = .10$ ),  $\text{Exp}(\beta) = .97, p = .77$ , predicted increased odds of a gradual conversion or recommitment to God.

Gradual conversion was then regressed on the two types of insecure parental attachment to see if either was driving the relation between attachment security and gradual conversion. Insecure-avoidant parental attachment ( $\beta = -.24, SE = .11$ ),  $\text{Exp}(\beta) = .79, p = .03$ , but not insecure-anxious parental attachment ( $\beta = -.04, SE = .13$ ),  $\text{Exp}(\beta) = .96, p = .73$ , predicted decreased odds of a gradual conversion. This finding not only supports the correspondence hypothesis but also aligns with the compensation hypothesis. Consistent with general attachment security, when gradual conversion was regressed on insecure-anxious and insecure-avoidant general attachment, neither attachment style significantly predicted the incidence of a gradual conversion.

TABLE 2  
Binary Logistic Regressions of (a) Gradual Religious Conversion and (b) Sudden Religious Conversion on Secure Parental Attachment and Secure General Attachment

	<i>Gradual Conversion<sup>a</sup></i> ( <i>Recommitment to God</i> )				<i>Sudden Conversion<sup>b</sup></i> ( <i>First-Time Commitment to God</i> )			
	$\beta$	<i>SE</i>	<i>Exp</i> ( $\beta$ )	<i>p</i>	$\beta$	<i>SE</i>	<i>Exp</i> ( $\beta$ )	<i>p</i>
Constant	-0.73	0.64	0.48	.26	-0.99	1.03	0.37	.33
Secure Parental Attachment	0.14	0.06	1.15	.02	-0.04	0.10	0.96	.65
Secure General Attachment	-0.03	0.10	0.97	.77	-0.15	1.03	0.86	.35

*Note.* <sup>a</sup>Najelkerke  $R^2 = .03$ ;  $-2$  Log-likelihood = 364.13; Cox & Snell  $R^2 = .02$ . <sup>b</sup>Najelkerke  $R^2 = .01$ ;  $-2$  Log-likelihood = 168.38; Cox & Snell  $R^2 = .01$ .

Analogous results were found from group mean comparisons between sudden, gradual, or no conversion groups. As can be seen in Table 1, a one-way analysis of variance (ANOVA) indicated a main effect for secure attachment to parents,  $F(2, 237) = 4.37, p = .01$ , and Bonferroni post hoc comparisons showed a mean difference in secure attachment between those who experienced a gradual conversion and those who experienced no conversion at camp ( $p = .01, d = .40$ ). Gradual converts scored higher in parental security than nonconverts. Similarly, a one-way ANOVA indicated a main effect for avoidant attachment to parents,  $F(2, 237) = 4.78, p = .01$ , and Bonferroni post hoc comparisons showed a mean difference in avoidant attachment between those who experienced a gradual conversion and those who experienced no conversion at camp ( $p = .01, d = .40$ ). Gradual converts scored lower in parental insecure-avoidant attachment than those who did not experience a conversion at camp.

### Testing the Compensation Hypothesis

Similar to tests of the correspondence hypothesis, a series of binary logistic regressions of sudden conversion (first-time commitment to God) on attachment were performed to examine if participants' general and/or parental attachment at T1 predicted the incidence of a sudden religious conversion at camp.

Sudden conversion was regressed on general and parental attachment security. As can be seen in Table 2, neither secure parental attachment ( $\beta = -.04, SE = .10, \text{Exp}(\beta) = .96, p = .65$ , nor secure general attachment ( $\beta = -.15, SE = 1.03, \text{Exp}(\beta) = .86, p = .35$ , predicted increased odds of a sudden conversion or first-time commitment to God. None of the specific insecure attachment styles (insecure-anxious and insecure-avoidant attachment for either parental or general attachment) individually predicted a sudden conversion.

As can be seen in Table 1, a one-way ANOVA indicated a main effect of conversion for secure attachment to parents,  $F(2, 237) = 4.37, p = .01$ , but Bonferroni post hoc comparisons showed no mean differences in parental security for sudden converts compared to gradual converts ( $p = .67, d = .35$ ) or nonconverts ( $p = 1.00, d = .11$ ). Similarly, a one-way ANOVA indicated a main effect for insecure-avoidant attachment to parents,  $F(2, 237) = 4.78, p = .01$ , but Bonferroni post hoc comparisons showed no mean differences in insecure-avoidant attachment between those who experienced a sudden conversion compared to gradual converts ( $p = .40, d = .35$ ) or nonconverts ( $p = 1.00, d = .02$ ).

### Parent Religiosity

Under the theoretical orientation for the correspondence and compensation hypotheses, parental religious commitments are the launching point from which children either emulate or deviate depending on the attachment security of the relationship. Therefore, parent religiosity partially defines what should be considered a sudden or gradual spiritual conversion/transformation. In our sample, most participants had a Christian background, with 100% of participants reporting at least one parent who identified as Protestant or Catholic and 86% reporting both parents as Protestant or Catholic. In ratings of the intensity of parental religious devotion at T3, there was more variability in participants' scores ( $M = 3.11, SD = 0.94, \text{range} = 1.00\text{--}5.00$ ). Unfortunately, only 39% of participants completed measures of parental religiosity, because of participant attrition at T3.

Moderation of the relation between attachment security and gradual/sudden religious conversion by parental religious affiliation and devotion (as perceived by the adolescent) was tested. Neither parental religious affiliation nor intensity of devotion reached significance in moderation analyses, but low power from the reduced sample size at T3, as well as the possibility of nonrandom subject attrition, prevents us from making any conclusions about the moderating role of parental religiosity.

### Other Predictors of Conversion

In addition to attachment style, eight Young Life program variables (e.g., previous Young Life event attendance, duration of Young Life involvement, number of friends in Young Life, leader one-on-one time) were examined as predictors of gradual and sudden conversions. Leader one-on-one time was the only significant predictor of conversion among the Young Life program variables. A binary logistic regression of gradual conversion (recommitment to God) on leader one-on-one time found that more time spent with the Young Life leader at T1 predicted increased odds of a gradual conversion at camp ( $\beta = .44$ ,  $SE = .15$ ),  $\text{Exp}(\beta) = 1.55$ ,  $p = .003$  (as measured at T2). In contrast, a binary logistic regression of sudden conversion (first-time commitment to God) on leader one-on-one time found that more time spent with the Young Life leader predicted decreased odds of a sudden conversion at camp ( $\beta = -.80$ ,  $SE = .33$ ),  $\text{Exp}(\beta) = .45$ ,  $p = .017$ .

## GENERAL DISCUSSION

Our aim for these two studies was to test the correspondence and compensation hypotheses in relation to parental attachment and the incidence and quality of religious conversions. Analyses of both studies' data supported the correspondence hypothesis. Adolescents who described a secure attachment to their parents were more likely to report a gradual religious conversion than those who were less securely attached. In Study 2, adolescents who had lower levels of insecure-avoidant attachment to their parents showed an increased propensity to experience a gradual religious conversion, or stated another way, adolescents high in insecure-avoidant attachment were less likely to have a gradual conversion.

Support for the compensation hypothesis was less conclusive. Analysis of the faith history narratives in Study 1 supported the compensation hypothesis: Informants who reported an insecure parental attachment were more likely to report a dramatic and sudden religious conversion trajectory. However, support for the compensation hypothesis was more mixed in the prospective camp study: Insecure parental attachment did not predict the likelihood of experiencing a sudden, first-time conversion at Young Life camp, but those with insecure-avoidant attachment were less likely to experience a gradual conversion.

Although we were unable to collect information on parental religiosity from all of our adolescent participants in Study 2, the limited data we do have on parental religiosity suggest that participants primarily came from Christian backgrounds. Thus, recommitments to God at camp are most likely an extension of faith upbringings. This aligns with the social aspect of the correspondence hypothesis whereby securely attached youth adopt the religious commitments of their parents. It is also possible that insecurely attached adolescents are using an internal

working model that tells them to avoid all authority figures—including Young Life leaders. Thus, they avoid the one-on-one time with leaders that positively predicts the incidence of a gradual conversion. On the other hand, we are less confident in Study 2's null results for the compensation hypothesis. It may be that the study design in this particular sample was inadequate to test the compensation hypothesis with so few participants coming from non-Christian religious backgrounds. When we attempted to examine parental religious devotion as a moderator of the relation between attachment and sudden conversion, we lacked the power to adequately test the effect. Alternatively, the religious atmosphere of Young Life may generate a normative socialization pressure for our study participants to experience a spiritual transformation at summer camps (akin to glossolalia debut among Pentecostal adolescents). If this is the case, the spontaneous tendency of insecure adolescents to have sudden conversions may be obscured by the receptivity of secure adolescents to normative socialization pressures, resulting in null results for insecurity on sudden conversion.

Moreover, previous researchers have found differing time frames for the correspondence and compensation hypotheses in relation to religious changes and conversions (Granqvist & Hagekull, 1999; Granqvist, Ivarsson, et al., 2007). Although secure attachment predicts gradual religious changes in adolescence, insecure attachment typically predicts religious changes relatively later in life (i.e., in adulthood). Given our adolescent sample, it may be that we were unable to capture the relation between insecure parental attachment and sudden religious conversion because our participants were too young. We did find that secure attachment was negatively correlated with age, which may indicate that those who are drawn to Young Life camp at a relatively older age are more insecure. Similarly, insecure attachment predicts sudden conversion during periods of turmoil and stress (Granqvist, Ivarsson, et al., 2007). Without precipitating stress and turmoil, we would not expect to see a compensatory conversion. It may be that the Young Life camping experience is not producing the magnitude of stress needed to trigger a sudden conversion.

It is also important to note that our measurement of parental attachment differs from many of the previous studies testing the correspondence and compensation hypotheses. Most studies have asked participants to rate their parental attachment from when they were children; in our study, we asked adolescent participants to rate their current relationship to their parents. We chose to ask for current ratings to avoid memory distortions and biases. It may be, however, that current ratings are more subject to fluctuations in parental relationships, and they may not account for the possible resources and coping mechanisms adolescents might have adopted to compensate for insensitive caregiving. Issues such as this could partially explain our null results for the compensation hypothesis.

We also created indices of attachment security (both general and parent specific) by subtracting mean avoidance and anxiety scores from 14, a score that would index highest secure attachment. Although not standard practice in the attachment literature, calculating this type of index allows us to look at the more general effects of overall attachment security (or lack of security). However, this index of attachment security is limited in that anxiety and avoidance do not provide an exhaustive list of insecurity dimensions. We do not account for other styles of insecure attachment (i.e., disorganized), so the security index should be interpreted as a proxy, rather than absolute, measure of attachment security.

In addition, there are limitations to our attachment security measure in Study 1. Unlike many attachment studies that utilize the Adult Attachment Interview or self-report surveys

to measure parental attachment by asking participants to explicitly or implicitly reflect upon their attachment-related experience, we sought to capture spontaneous inferences to parental attachment in conversion narratives. Although we demonstrate good reliability for our coding system, evidence supporting the validity of our coding scheme is scarce at this point in time; we hope that future studies will provide additional evidence of validity.

One final limitation of this research is the operationalization of sudden and gradual religious conversions in Study 2. Although a strength in other regards (see footnote 2), the close proximity of conversion experiences with the participants' reporting the conversions makes it difficult for participants to reflect on the nature of their religious change as it is typically assessed in attachment and conversion studies (i.e., indicating if the change was sudden, gradual, intense, and/or slow; Granqvist, 2002; Granqvist & Hagekull, 1999, 2000; Granqvist, Ivarsson, et al., 2007). Thus, we use first-time commitment and recommitment to God as proxy measures for sudden and gradual conversions at camp. However, there are several potential pitfalls of this approach. It could be that adolescents making first-time commitments are actually culminating or commencing a gradual conversion process, or participants expressing recommitments are actually experiencing a sudden and dramatic conversion (which, perhaps, they express as a recommitment because of commitments made to God in early childhood). In addition, those who express neither a commitment nor recommitment to God at camp should not be conceptualized as a nonreligious group; instead, this group is composed of those who have always seen themselves as Christians and see no reason to recommit in addition to those who are not Christians and have never had a conversion. Despite these limitations, first-time commitment and recommitment to God were useful for classifying religious conversions *in vivo* and avoiding possible memory reconstruction biases.

## CONCLUSION

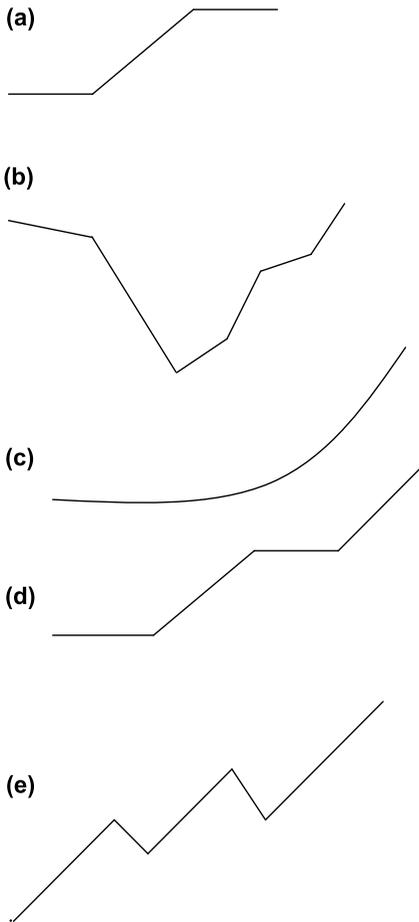
Our analyses showed support for the correspondence hypothesis and mixed support for the compensation hypothesis. The majority of adolescents in both studies had a Christian upbringing, a secure parental attachment, and a gradual spiritual development in their parents' religious tradition. Adolescents' attachment to parents appears to be more predictive of conversion than general attachment style, especially for those with secure attachments. Further study is needed to determine what predicts and describes conversion in adolescents with less secure parental attachments. Investigation of potential mediators and moderators of the relationship between conversion and attachment is also needed. These variables might include life adversity, culture, ethnicity, peer and sibling relationships, and religious norms.

Young Life camp speakers and leaders characteristically present God (Jesus) with a decidedly relational emphasis: God is someone who wants to have a loving, personal relationship with teens; can heal the wounds of broken relationships; and will not abandon or betray them. God, then, is presented as an ideal attachment figure. Given this characterization of God and the presentation strategy common in Young Life, it may come as little surprise that the correspondence hypothesis received support from the studies presented here, which drew upon Young Life samples. Nevertheless, it might be that different gods or characterizations of God would be less felicitous for attachment dynamics to play a role in religious or spiritual conversion—a topic for future research.

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**APPENDIX**  
**Spiritual Development Curve Coding Scheme**



Variable background, one distinct transformation, steady growth

Christian background, fell away or dipped in “walk” and experienced two or more transformations that brought them to a higher plane of faith

Christian background, steady growth, one or no transformation

Variable background, two or more transformations, steady growth in between transformations

Non Christian background, two or more transformations but drastic growth and regression

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