

SPIRITUAL DISCIPLINES, SPIRITUAL COMMUNITY, AND SPIRITUAL GROWTH IN A SAMPLE OF U.S. COLLEGE STUDENTS

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ABSTRACT

Following Hall (2002), we proposed a structural model identifying two key factors that contribute to spiritual transformation: 1) intentionality in one's spiritual practices (Willard, 1991, 1998); and 2) emotionally significant relationships within a spiritual community. In the current project, the focus was on the "fruits" of changed dispositions or habits (James, 1902, p. 262). Specifically, we hypothesized that spiritual transformation would be manifested in attributes classically described through the theological virtues of faith, hope, and love or agape.

Multiple waves of data were collected at a Christian university in the U.S.A. to evaluate this model. Factor analyses helped refine the measures of the predictors (spiritual practices and community) and outcomes (faith, hope, and love or agape) in our structural model. The model fit the data reasonably well, with spiritual practices being a better predictor of outcomes than spiritual community. The longitudinal study, involving a sample of over 400 students and four waves of data analyzed using hierarchical linear modeling, assessed change over the first two years of college in these spiritual practices and virtues. Small but significant linear declines over the two years were observed in spiritual practices and community and in faith and hope. Within-subject associations indicated that increases (or decreases) over time in spiritual practices and community were predictive of increases (or decreases) over time in faith and hope. Implications of these results for religiously oriented universities are suggested.

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A critical component of the religious or spiritual dimension of human experience is its potential transformative power over the lives of individuals. William James' preference, evident in his classic tome *Varieties of Religious Experience* (James, 1902), was to note the unusual in religious experience. Indeed, the "Pauline experience" of a sudden and radical change remains a primary exemplar of transformative experience. Other models of religious conversion (e.g., Richardson, 1985) suggest that transformation can also involve a gradual change of interest and values, often including a pilgrimatic search for meaning and purpose (James' "educational variety"). Regardless of whether the process is sudden or gradual, within a religious context or outside of religion, the experience involves a transformation of the self—change is its primary feature. As James put it: religion and spirituality become "the hot place in a man's consciousness, the group of ideas to which he devotes himself, and from which he works" (p. 193); that is, spirituality becomes one's "habitual centre of personal energy" (p. 193).

The current project investigated spiritual transformation experiences of students at a private religiously oriented university in southern California (Biola University). We chose to focus on beginning freshman students, who as late adolescents/young adults are developmentally at a transitional point in life where spiritual questing and crises might be expected to occur with somewhat greater frequency (Clydesdale, 2007; Regnerus & Uecker, 2006).

In addition to the dramatic, sudden changes emphasized by James (1902) and a century later by Miller and C'de Baca (1993, 2001), many experience more gradual spiritual transformations, which involve an ongoing, deepening process that can be just as important: a spiritual maturing, solidifying, or actualization. Gradual spiritual transformation is fundamentally a developmental process requiring longitudinal research to study spiritual change over time. Yet research in this area has been predominantly cross-sectional. Our longitudinal study at Biola involved collecting four waves of data over a two-year period to allow use of hierarchical linear modeling to describe how spiritual transformation variables change over time within individuals. Once we determined how spiritual formation variables change reliably over time, we could then attempt to predict differences between individuals on these growth trajectories.

While it is well known that the vast majority of Americans believe in God (92% according to a recent survey, Gallup Organization, 2011), it may be more surprising that over 80% in the early 2000s said that they wanted to experience spiritual growth (an all time high in the U.S.) (Gallup, 2002; cf. Benner, 2002).

Although the long term trend since 1965 has been for entering college students to give lower and lower priority to developing a meaningful philosophy of life and higher priority to being very well off financially (Dey, Astin & Korn, 1991; cf. Myers, 2000, p. 126ff.), nonetheless according to a recent national survey over half of college students now say they place a high value on integrating spirituality into their lives (Astin, 2004). This immediately prompts several questions, including what does it mean to be spiritually mature, and how might spiritual growth be fostered? Some, such as Maslow, have argued that the conception of the spiritually mature person in various religious traditions is rather similar to the ideal self of humanistic psychology. As Maslow observed, “the actual characteristics of self-actualizing people parallels at many points the ideals urged by the religions, e.g., the transcendence of self, the fusion of the true, the good and the beautiful, contribution to others, wisdom, honesty and naturalness, the giving up of ‘lower’ desires in favor of ‘higher’ ones, the easy differentiation between ends (tranquility, serenity, peace) and means (money, power, status), the decrease of hostility, cruelty and destructiveness and the increase of friendliness, gentleness and kindness, etc.” (Maslow, 1970, p. 128). The rich life of the spiritually mature—one filled with peace and joy, one free from anger, envy, lust, and covetousness, and one concerned about the needs of others rather than needing the praise and approval of others—can be readily sketched. Yet this is far from the experience of most—perhaps most especially from the experience of the self-preoccupied population of American teenagers from which the participants in this project were drawn. Nonetheless, it is our view that the goal of spiritual maturity is that we should experience the abundant life characterized by faith, hope, and love, attributes termed “the theological virtues” in traditional Christian spirituality (McGrath, 1995). How can one take steps in transforming the inner life toward this end? That is, how might one move toward the goal of the healthy, self-actualized persons about whom Maslow wrote, “They spontaneously tend to do right because that is what they want to do, what they need to do, what they enjoy, what they approve of doing, and what they will continue to enjoy” (Maslow, 1970, p. 129).

CONCEPTUAL FRAMEWORK

It can be argued that the psychology of religion, beginning with James (1902), is fundamentally about spiritual transformation. Yet, this raises the question as to the nature and underlying processes of spiritual transformation. What are the outcomes of spiritual transformation? Moreover, what are the antecedents and processes that facilitate and hinder spiritual transformation? Such questions are at the very heart of the psychology of religion and spirituality.

Despite the centrality of these questions, a number of theorists, including members of our research team, have asserted over the last decade that the field lacks a broad, organizing conceptual framework to facilitate

theory-testing and to integrate disparate findings (e.g., Kirkpatrick, 1992; Hall, 2002; & Hill, 2002). There are a few notable exceptions such as James Fowler's (1981; 1996) work on faith development. Through intensive interviews, Fowler developed a theory of the spiritual transformation process, which he calls faith development theory. Building primarily on Piaget's cognitive development and Kohlberg's (1984) theory of moral development, Fowler's theory asserts that faith has to do with ultimate meaning, ultimate concerns, and ultimate reality: "the most transcendent centers of value and power to which our faith gives allegiance." In other words, the content of faith for Fowler is the deep structure of an internalized, felt sense of ultimate meaning. Faith development theory is essentially a psychology of meaning. According to Fowler, faith development progresses through a series of stages, which sequentially emphasize one's capacity to critically examine, and to individuate one's ultimate beliefs, and to be increasingly open or vulnerable regarding (mediated and therefore partial) truths and claims from traditions other than one's own. As such, Fowler's theory emphasizes cognitive aspects of development, applied to the domain of ultimate meaning, or as Fowler refers to this, "faith."

Hall (2002, 2004) and Hill (2002) have both developed broad conceptual frameworks of gradual spiritual transformation that emphasize the role of relationship and affect in the meaning-making and spiritual transformation process. For William James (1902), spiritual transformation involves shifting one's sense of meaning from an autonomous centeredness to a sacred mooring. As Pargament (1997) noted, that new center of energy devotes itself to the "search for significance in relation to the sacred" (p. 32). Building on James (1902) and Pargament (1997), Hill (2002) defines (gradual) spiritual transformation as "a process of change within the self, frequently accompanied by strong feeling, toward an identity with something sacred through which meaning is discovered" (p. 89).

Hall (2002, 2004) developed the concept of "relational spirituality" in addressing the lack of a coherent theoretical framework for integrating rational and experiential processes in spiritual transformation. He argued that there is a theoretical, and growing empirical, foundation for such a framework in object relations and attachment theories, and that these theories can be conceived of as a broad relational metapsychology. Hall demonstrated how recent advances in emotional information processing (Bucci, 1997) and the neurobiology of attachment and emotion (Siegel, 1999) provide strong converging evidence for, and further refinement of, our understanding of the intimate connection between cognitive and emotional processes in an interpersonal context. This perspective then provides a foundation for understanding a) how emotional and spiritual meaning is determined, and b) the psychological processes underlying spiritual transformation.

Any conceptual framework regarding spiritual transformation must identify the factors believed to promote and hinder spiritual transformation: its antecedent factors. Hall (2002) identified two key factors that contribute to spiritual transformation: 1) intentionality in one's spiritual practices, manifested in contemplative practices and disciplines designed to stimulate spiritual transformation (Willard, 1991, 1998); and 2) emotionally-significant relationships within a spiritual community. It is proposed here, consistent with the advice and experience of many over the centuries (e.g. Pascal, 1662/1965, p. 74), that one's spiritual character can be transformed by intentionally engaging in spiritual practices. To put this in the terminology of current psychology, intentionality is the way in which an individual gains access to, and some control over, implicit spiritual processes (Hall, 2002). Spiritual practices create repeated experiences coded in explicit autobiographical memory, which is filtered through implicit memory, and yet because it is connected to the implicit system, has the power to transform it. Repeated new experiences create new implicit memories; at the neurobiological level this implies an increased likelihood for a particular neural network to fire in the future. These new implicit memories then begin to influence the automatic appraisal of events, thereby transforming one's spiritual character at an experiential level. Put differently, we have very little direct control over implicit spiritual processes; however, we do have indirect control over them through spiritual practices. The purpose of a spiritual discipline is to do something we can do (e.g., explicit processes such as meditation and prayer) in order to develop the capacity to do something that we are currently unable to do (e.g., implicitly considering others as more important than ourselves) (Willard, 1991).

Gradual spiritual transformation requires willpower and intentionality (cf. Baumeister, 2005), and yet for many (especially in a religious population) it is exercised in the context of relationship and community. Within many religious traditions, relationships "are conduits through which people express their spirituality and come to know the transcendent" (Hill & Pargament, 2003, p. 69). The sample of young American students studied in the present investigation is no exception. Therefore, at least for this population, our conceptual framework also emphasizes the predictive importance of emotionally-significant relationships in spiritual community.

What, then, are the implications of such a conceptual model of spiritual transformation that can be empirically tested? From the perspective outlined here, the outcomes of spiritual transformation involve structural changes in the psychospiritual self. As indicated in Figure 1, we expect that as individuals experience spiritual transformation, this will lead to transformation in three key aspects of spiritual character: faith, hope, and agape. We conceptualize faith as an internalized, yet open set of spiritual values that are associated with a sense of hope, or meaning and purpose in life, which are intentionally lived out in agape, or other-centered love, in relation to others and the divine.

A primary objective of our project concerned modeling the growth trajectories of spirituality and character. In order to assess these we first have to derive a satisfactory measurement model of the constructs of faith, hope, and agape, and of the variables we hypothesize will mediate their growth, namely, spiritual practices and spiritual community.

Toward this end, factor analyses were conducted on data from the initial assessment.

SPIRITUALITY IN COLLEGE STUDENTS

College students, typically used in research due to convenience, are here the intended population of interest, as noted previously, because of their appropriateness for testing our model of spiritual transformation. The specific social, developmental, and spiritual needs of college students must be taken into account in order to understand how spirituality changes during the traditional college years. A longitudinal study of religious predictors of young adults ages 17-22 (Gunnoe & Moore, 2002) found that social variables, such as peer religiosity and religious role models, were important predictors of religiousness. It seems that social relationships play a vital role in religiousness for college students.

Another longitudinal study on college students (Bryant, Choi & Yasuno, 2003) sought to investigate the extent to which students were involved in religious activities or considered themselves spiritual during their first year of college. They conducted their survey on 3,680 students from 50 four-year colleges and universities nationwide. They distinguished religiousness from spirituality and found that students overall became less religiously involved over their first year in college. However, attending a protestant university acted as a buffer against this effect. Four experiences positively predicted spirituality after one year of college: hours per week praying/meditating, attending religious services, discussing religion, and spending time with family. Despite what has recently become a popular distinction (see Hill et al., 2000), the results of this study suggested a considerable overlap between religiousness and spirituality, which corroborates Zinnbauer, Pargament, and Scott's (1999) finding that the majority of people studied considered themselves both religious and spiritual and make little distinction between the two.

Revealing data about the spiritual growth of college students at Christian universities came from a study conducted on 20 campuses and over 900 students (Ma, 2003). This study sought to discover what aspects of the college experience were most influential on the students' spiritual formation. Of the ten significant factors, eight were non-academic. The five most influential items were: peer relationships, working through crises while at

college, personal spiritual disciplines, praise and worship sessions, and Bible or theology classes. Results also demonstrated significant differences between gender and residential status. Females placed greater emphasis on academic factors, while students living on campus emphasized the experiential aspects as a whole more than those living off-campus, suggesting the importance of community to the spiritual experience of college students. Given that the college years are often marked with an exploration of one's identity and a search for one's values apart from parents (Erikson, 1994), these data are valuable in that they suggest particular ways in which relational spirituality among college students is manifested.

HYPOTHESES

Our structural model (see Figure 1) was designed to explain intentional and relational aspects of spirituality that mediate the growth of specific virtues, representing spiritual transformation. Relationships in this context can be conceptualized as including both the horizontal relationship between members within a spiritual community, and the vertical relationship between an individual and God. Spiritual practices are the relational avenues through which an individual intentionally engages in a relationship with God. Spiritual community provides the context for relationships that are intentional about spirituality, while fostering support, encouragement, modeling and teaching through which individuals also grow in their spiritual maturity. It is hypothesized that initial levels of spiritual practices and spiritual community will predict initial levels of faith, hope and agape. Further, it is hypothesized that the growth in both spiritual practices and spiritual community will predict growth in the virtues of faith, hope and agape.

1. METHODS

Participants

This study was conducted at Biola University, a private, evangelical Christian, liberal arts institution in Southern California. The 442 participants consisted of 31% males and 69% females. The mean age was 18.0 years, with a range from 16-21. This sample consisted of predominantly Caucasians (82.6%). Other represented ethnicities include: Asian Americans (10%), American Indian (3.2%), and Hispanic (3.4%). The largest denomination represented was non-denominational (39.6%). Subjects completed the initial questionnaire as a part of class participation in a required freshman course. Participants were informed of the confidential and voluntary aspects of their participation. Students were asked to complete the assessment battery at the beginning of their freshman year in Fall of 2003, and then again in each of the next three regular academic year semesters (Spring, 2004; Fall, 2004; Spring, 2005).

Measures

The Spiritual Experiences Questionnaire (SEQ). In order to assess the relationships among a number of spirituality components, the SEQ, which consists of several previously validated measures, was compiled. An initial factor analysis on the Time 1 sample was reported by Hall, Halcrow, Hill, and Delaney (2005). Each of the measures comprising the SEQ are presented below.

Spiritual Assessment Inventory (SAI; Hall & Edwards, 1996, 2002) The four subscales from the SAI are designed to measure: 1) disappointment with God (Disappointment), 2) instability in relationship with God (Instability), 3) awareness of God's presence and communication (Awareness), and 4) capacity to work through difficult experiences with God (Realistic Acceptance). For the first three scales, coefficient alphas of .89, .71, .82, respectively, demonstrated good internal consistency. For the fourth scale, the coefficient alpha was slightly low at .61. Factorial and construct validity has been demonstrated in numerous studies (Hall & Edwards, 1996, 2002).

Transgression-Related Interpersonal Motivations Inventor (TRIM; McCullough, Rachal, Sandage, Worthington, Brown & Hight, 1998). The TRIM is most accurately described as a measure of unforgiveness. It consists of 12 items on a 5-point Likert scale. Two factors emerged with 5 items comprising Factor 1--Revenge and 7 items making up Avoidance. Coefficient alphas for our study were .84 for Revenge and .85 for Avoidance.

Tendency to Forgive (TTF; Brown, 2003). All 4 items on this 5-point Likert scale loaded on a single factor. The alpha coefficient was .80 in our sample, demonstrating good internal consistency. This measure focuses on the tendency to ruminate or hold grudges. When combined with the TRIM, it remained a separate factor, thereby producing three forgiveness factors: Revenge, Avoidance, and Rumination.

Purpose in Life (PIL; Crumbaugh & Maholick, 1964). This 20-item, 7-point Likert measure of the degree to which a person possesses meaning and purpose in life was retained as a single factor, though five items did not load at the .30 level. Due to its wide use, all 20 items were used, producing a moderately high alpha coefficient of .81 in our sample.

Attachment to God Inventory (AGI; Beck & McDonald, 2004). This scale resulted in a two-factor structure that exactly replicated the two theoretically-derived factors of Anxious and Avoidant attachment to God. The alpha coefficients in our sample were .86 for Anxious and .83 for Avoidant attachment to God, demonstrating good internal consistency.

Congregational Items (Fetzer Institute/National Institute of Aging Working Group, 1999). Two items from this multidimensional measure were used to assess perceived level of congregational support, resulting in

one factor. This brief Congregational Support factor demonstrated good internal consistency in our sample with an alpha coefficient of .81.

Spiritual Community Scale (SCS). This eight-item scale was developed for this study and resulted in two factors: a six-item Spiritual Friendship factor (coefficient alpha = .73) and a three-item Spiritual Participation factor. Only the Spiritual Friendship factor loaded clearly in the higher order factor analysis and was used in the study. Items included “There is at least one person who is a spiritual mentor in my life.”

Religious Commitment Inventory (RCI-10; Worthington et al., 2003). A two factor solution emerged from the 10-item Religious Commitment Inventory: a three-item Religious Centrality factor (RC) and a three-item Reflection on Faith (RF) factor. Adequate internal consistency was demonstrated in the coefficients alphas (.75 for religious centrality and .70 for reflection on faith).

Spiritual Practices Scale (SPS). This 6-point Likert scale was created for this study and consists of a six-item Spiritual Comfort Seeking subscale and a four-item Spiritual Practices Frequency subscale. These two subscales emerged as independent factors. Only the Spiritual Practices Frequency subscale was used in this study because the Spiritual Comfort Seeking subscale did not load in the higher order factor analysis of all the scales. The coefficient alpha for Spiritual Practices Frequency was .68. Items included “I pray with the purpose of communing with God” with responses ranging from 1= More than once daily to 6=Once a month or less.

Faith Maturity Scale (Benson, Donahue & Erickson, 1993). This 10-item scale has two subscales, a Vertical subscale assessing one’s relationship with God and a Horizontal subscale assessing one’s commitment to social justice and service.

Second order factors. In order to reduce the number of dependent variables and to create more robust and empirically distinct criterion measures, we conducted a second order factor analysis on all the subscales, using a principal axis factoring extraction, and an oblique (oblimin) rotation method. Based on the Scree Test, applied to the eigenvalues and the interpretability of the factor structure, seven factors were extracted. The cutoff for pattern loadings used was .30. The seven factors accounted for 52.04 percent of the total variance.

The first factor, labeled Faith, consists of SAI--Awareness, Fetzer’s Spiritual Well-being, Attachment to God Inventory--Avoidance, SAI--Realistic Acceptance, and Faith Not Blind Leap. Factor Two, Quest, consists of Spiritual Openness, Value Doubt, and Quest Ultimate Goal. Factor Three, called Hope, is made up of Attachment to God Inventory--Anxious, Tendency to Forgive--Rumination, Fetzer Forgiveness, Transgression-Related Interpersonal Motivations--Avoidance, Purpose in Life, SAI--Instability,

and SAI--Disappointment. Factor Four, named Spiritual Practices, consisted of Spiritual Practices Scale Frequency, Reflection on Faith, Fetzer Spiritual Practices Scale, and Religious Centrality. Factor Five, labeled Spiritual Community, consists of Spiritual Participation, Congregational Support, Faith Development and Spiritual Friendship. Factor Six, Agape, is made up of Faith Maturity Scale--Horizontal, Transgression-Related Interpersonal Motivations--Revenge, Service, Empathy--Perspective Taking and Empathic Concern. Finally, Factor Seven, Grandiosity, consists of SAI Grandiosity, Congregational Demands, and Spiritual Practices--Motivation. For the purposes of this model, factors two and seven were not used.

RESULTS

Comparison of Students at Biola with National Norms on Spiritual Transformations

Because the questionnaires administered at Biola included many of the items from the Fetzer Brief Multidimensional Measure of Religion and Spirituality, we were able to compare our sample with the national results obtained when these items were included in the 2004 General Social Survey (GSS). Of particular interest were the responses to the question about a life-changing religious or spiritual experience. As shown in Figure 2, approximately twice as many of the participants at Biola at Time 1 endorsed this item as did the general population. Just over a third (35.7%) of the national sample reported having had such a life-changing experience (Smith, 2005), whereas this was reported by over three-fourths (77%) of the Biola sample.

Bivariate Relationships between Spiritual Predictors and Spiritual Outcomes

As expected, the overall levels of an individual's spiritual community and spiritual practices were each significantly correlated with the individual's levels of faith, hope, and agape at each of the four assessment times, with the sole exception that the correlation between spiritual community and agape at time 3 failed to reach significance. The mean correlations over time periods for spiritual community with the outcomes were .437 for faith, .313 for hope, and .196 for agape; the comparable values for spiritual practices were .460 for faith, .334 for hope, and .339 for agape.

Fitting Measurement and Structural Models

Measurement and structural models were fit using the data from Time 1 when sample sizes exceeded 400 on all variables. The factor loadings of each measured variable with its corresponding latent variable are presented in Table 1. Of the 25 measured variables, 22 had loadings above .3

and 11 had loadings above .5. These results provide supportive evidence for the factor structure of the latent variables and coincide with an earlier factor analyses with samples from the same population (Fujikawa, Hall, Hill & Delaney, 2005; Hall, Halcrow, Hill & Delaney, 2005).

The relationships among the five factors hypothesized in the structural model shown in Figure 1 was assessed with structural equation modeling with maximum-likelihood estimation using EQS Version (6.1). A number of fit indices were examined to assess how well the model fit the data for the 442 participants assessed at Time 1. To assess absolute fit, Root Mean Square Error of Approximation (RMSEA) and Lisrel Goodness of Fit Index (GFI) were examined. To evaluate incremental fit, the Comparative Fit Index (CFI) was examined. RMSEA values below .06 and GFI and CFI values above .95 have been generally agreed upon as the acceptable to indicate a good fit (Hu & Bentler, 1999). Resulting values for the fit indices, RMSEA = .077, GFI = .836 and CFI = .754 were reasonably good but slightly above (RMSEA) and below (GFI and CFI) the desired cut off values.

Examining the standardized path coefficients (see Figure 3) within the structural model including both predictors shows that spiritual community moderately predicted faith ($\beta = .159$) and hope ($\beta = .176$) but exhibited virtually no relationship with agape ($\beta = -.002$). Spiritual practices, on the other hand, proved to have a reasonably strong relationship with all three of the spiritual character variables: faith ($\beta = .739$), hope ($\beta = .722$), and agape ($\beta = .575$). Spiritual community and spiritual practices were strongly positively correlated ($r = .649$).

Growth Curve Modeling

The primary characterization of the longitudinal study was accomplished by analyzing the four waves of data using Hierarchical Linear Modeling (HLM). Summary statistics for both the spiritual predictors and spiritual outcome variables for all four time points are shown in Table 2 below. Because of difficulties getting students to return for the assessments after the one done at the beginning of their freshman year, there were substantial missing data; 29% completed only the initial assessment, 38% completed 2 assessments, 26% completed 3 assessments, and 7% completed all four. To more accurately portray the trends over time, the means shown in Table 2 are the least squares estimates of the means (obtained by SAS's Proc Mixed) that would have been obtained in a balanced design with no missing data. Fortunately, having missing data does not pose a problem for the HLM analyses. The assumption of normality was examined by performing Kolmogorov-Smirnov tests on each of the six variables shown in Table 2 at each of the four time points. In 21 of the 24 cases, the results indicated no significant difference from a normal distribution. Even in the three exceptions, distributions were

unimodal and generally symmetric, e.g. Spiritual Community at Time 1 was significantly negatively skewed but the skewness statistic was only $-.66$; thus data were regarded as sufficiently approximating a normal distribution to permit conventional parametric analyses.

Change coefficients indicating the pattern of change over time are reported in Table 3, and within-subjects associations are reported in Table 4. These tables include data for the Quest variable, which we added due the importance of this construct during the college years. The basic pattern of change suggested by examination of the means in Table 2 is confirmed by significance tests of trends across the four waves of data reported in Table 3: that is, spiritual community, spiritual practices, faith, and hope all showed a statistically significant linear decline over the first two years of college. Faith, however, also exhibited a marginally significant curvilinear trend, such that students' scores decline rapidly from time 1 to time 2, but then level off and show something of a rebound at time 4. Agape did not show systematic change over time. The magnitudes of the changes overall, however, were not large. For example, expressing the change in the estimated mean from time 1 to time 4 in terms of standard deviation units using Cohen's d , as shown in the last column of Table 2, the only variable showing more than a small ($d = .2$) decline was spiritual community where $d = -.29$. The other variables that showed a significant linear decline (see Table 3) had considerably smaller within-subject effect sizes in the change from time 1 to time 4: spiritual practices, $d = -.10$; faith, $d = -.04$; hope, $d = -.15$. The increases in Quest ($d = .03$) and agape ($d = .02$) were even smaller.

We found further support for our structural model in the within-subjects associations (see Table 4 below). The same basic pattern that we found in cross-sectional analyses held in the within-subjects associations. Changes in spiritual community, practices, and quest all significantly predict changes in faith and hope over time, though increases in quest predicted decreases in faith and hope. In other words, as spiritual community and spiritual practices increase over time, on average, faith and hope also increase over time for students. Only changes in spiritual community significantly predicted changes in agape over time.

We also found that spiritual community, spiritual practices, faith, and hope were all significant random effects; that is, the slopes of changes in these variables over time vary significantly from person to person. This allowed us to then treat these linear (declining) slopes as dependent variables and predict them with the initial status of our predictor variables (see Table 5 below). Only two findings were significant here. The initial level of spiritual practices is negatively associated with the slope of the change in faith and hope. In other words, students with higher initial levels of spiritual practices tend to show steeper decline in faith and hope over time.

This may reflect the fact that students who start out at higher levels of spiritual practices have more room to decline on related spirituality outcome variables. The initial high levels of spiritual practices may also identify a particular cluster of students who decline more rapidly as they are faced with the many developmental challenges of college life.

DISCUSSION

This study sought to assess the applicability of our model for growth in spiritual character. To date, no general model or theory exists that attempts to explain the dynamics at work in the transformative role of religion. Using Structural Equation Modeling, we were able to investigate a theoretical framework for understanding spirituality as a transformative agent in the lives of individuals. Though the results of fit indices fell slightly below conventional cut-off points, the fit values provide some substantive support for the utility of the model for explicating the mechanisms underlying spiritual transformation.

The high standardized regression coefficients for spiritual practices with faith, hope, and agape demonstrate a strong relationship between these variables and provide some confirmatory evidence for the model. Spiritual disciplines such as prayer and meditation provide the relational avenues through which an individual comes in contact with the divine and may engage many aspects of the self that are open for transformation.

The somewhat weaker relationship between spiritual community and the spiritual character variables is perhaps due, in retrospect, to unique characteristics associated with first semester college freshmen at a religiously affiliated institution. Freshmen may for the first time find themselves separated from their previously established church and/or youth group. However, within this population, there was clearly a restriction of range, given all students at Biola are necessarily involved in a religious community to some extent. In addition, spiritual community in a residential Christian college is sometimes created not inside the walls of the local church, but rather in the halls of dormitories, on the fields with sports teams, and in the classroom with peers. As was found in Ma's (2003) research, peers were found to be influential in college students' spiritual formation, but the instruments used here may not adequately measure the unique aspects of spiritual community for college freshmen in this setting. Modifying current measures or even constructing a new measure may be necessary. Yet another option is to use the current instruments on different populations as a test of this structural model. At the very least, it is clear that the meaning of spiritual community for a particular group is nuanced and requires significant study to adequately measure.

A significant linear decline was observed over the two years students were followed in both predictor variables of spiritual community and spiritual practices, as well as in faith and hope. A similar trend was reported recently in a national sample of over 10,000 U.S. college students whose religious commitment was assessed in their freshman and junior years in a study conducted by the Higher Education Research Institute at the University of California, Los Angeles (Scheitle, 2011; cf., Astin & Astin, 2010). The mean decline across all students in the religious commitment latent variable in that study, which appears similar to our measure of faith, amounted to only $d = -.02$ over two years, though it was considerably larger for students in the “arts & humanities” group of majors, $d = -.23$. The latent variable of spiritual quest, in contrast, showed an increase over all students of $d = .31$ (Scheitle, 2011).

The current data indicate that college students’ involvements in spiritual community and spiritual practices are associated cross-sectionally with higher levels of faith, hope, and love, and that changes within an individual in levels of these spiritual disciplines are associated with changes in these theological virtues over time. At the same time, it is clear that college students, even at religiously oriented institutions, face challenges in maintaining spiritual disciplines that will be conducive to spiritual growth. As Glanzer (2012) recently argued, Christian universities have a distinctive role and responsibility to help foster students’ spiritual growth, by providing their students not only with disciplinary expertise in a field of study but with spiritual mentoring and guidance as well. The current study suggests that encouraging students to be involved in a spiritual community and to engage in spiritual practices may indeed help them cultivate virtuous character traits.

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VARIABLE	SPIRITUAL PRACTICES	SPIRITUAL COMMUNITY	FAITH	HOPE	AGAPE
Reflection	0.691				
Religious Centrality	0.691				
Spiritual Practices Frequency	0.660				
Fetzer Spiritual Practices Scale	0.480				
Spiritual Community Participation		0.773			
Spiritual Friendship		0.746			
Fetzer Congregational Support Scale		0.521			
Faith Development		0.252			
SAI- Awareness			0.758		
SAI_ Realistic Acceptance			0.390		
Fetzer Spiritual Well Being			0.738		
Attachment to God- Close			0.435		
Faith Not Blind Leap			0.438		
Tendency to Forgive- Rumination				0.391	
Meaning/Purpose PIL				0.642	
Attach to God- Anxious				0.588	
Fetzer Forgiveness Scale				0.451	
SAI- Instability				0.283	
SAI- Disappointment				0.300	
TRIM Avoidance				0.350	
Service					0.220
Empathy- Empathic Concern					0.555
Empathy- Perspective Taking					0.543
TRIM- Revenge					0.492
Social Justice (Faith Maturity Scale Horizontal)					0.456

Table 1. Variable Factor Loadings

			TIME 1	TIME 2	TIME 3	TIME 4	<i>d</i>
COHORT N			441	174	165	153	
SPIRITUAL PREDICTORS	Spiritual Community	Mean	4.18	4.06	3.93	3.99	-0.29
		SD	0.63	0.64	0.63	0.68	
	Spiritual Practices	Mean	4.58	4.55	4.56	4.51	-0.1
		SD	0.74	0.65	0.94	0.65	
	Quest	Mean	3.41	3.47	3.37	3.43	0.03
		SD	0.79	0.81	0.83	0.74	
SPIRITUAL OUTCOMES	Faith	Mean	4.76	4.71	4.7	4.74	-0.04
		SD	0.46	0.49	0.53	0.54	
	Hope	Mean	4.17	4.1	4.12	4.09	-0.15
		SD	0.54	0.52	0.5	0.54	
	Agape	Mean	2.84	2.84	2.86	2.85	0.02
		SD	0.48	0.46	0.42	0.43	

Table 2. Means and standard deviations of second order spiritual predictors and outcomes for freshman 2003 cohort across two years

Note Means shown are least squares estimates of means that would be obtained in a balanced design. *d*=Effect size of change from Time 1 to 4

MEASURE	INTERCEPT COEFFICIENT (T1)	LINEAR TREND COEFFICIENT	T-RATIO FOR SLOPE	QUADRATIC TREND COEFFICIENT	F-RATIO FOR QUADRATIC COEFFICIENT
SPIRITUAL PREDICTORS					
Spiritual Community	4.19	-0.08	-3.34***	0.03	1.13
Spiritual Practices	4.61	-0.04	-1.92*	0.003	0.13
Quest	3.44	0.02	1.09	-0	-0.002
SPIRITUAL OUTCOMES					
Faith	4.76	-0.1	-2.03*	0.03	1.65
Hope	4.17	-0.04	-2.47**	0.02	1.09
Agape	2.79	0.02	0.52	-0.003	-0.22

Table 3. Within-subject models of change over time for second order spiritual predictors and outcomes across two years.

Note * = p<.05; ** = p<.01; *** = p<.001. For t-tests, linear trend df = 252; quadratic df = 521
 Bold coefficients are significant random effects based on model comparison Chi-square tests

PREDICTOR	COEFFICIENT	<i>t</i>	<i>p</i> -VALUE
CRITERION: FAITH			
Spiritual Community	0.28	5.39	p<.001
Spiritual Practices	0.24	3.95	p<.001
Quest	-0.07	-1.97	p<.05
CRITERION: HOPE			
Spiritual Community	0.23	4.39	p<.001
Spiritual Practices	0.15	3.38	p<.001
Quest	-0.12	-3.11	p<.01
CRITERION: AGAPE			
Spiritual Community	0.12	3.06	p<.01
Spiritual Practices	0.05	1.04	ns
Quest	0.04	1.23	ns

Table 4. Within-subject models of change over time for second order spiritual predictors and outcomes across two years.

Note Bold coefficients are statistically significant.

PREDICTOR	COEFFICIENT	<i>t</i>	<i>p</i> -VALUE
CRITERION: FAITH LINEAR GROWTH CURVE			
Initial Spiritual Community	0.004	0.15	ns
Initial Spiritual Practices	-0.04	-2.59	0.01
Initial Quest	-0.01	-0.51	ns
CRITERION: FAITH QUADRATIC GROWTH CURVE			
Initial Spiritual Community	-0.03	-0.73	ns
Initial Spiritual Practices	0.005	0.21	ns
Initial Quest	0.03	1.33	ns
CRITERION: HOPE LINEAR GROWTH CURVE			
Initial Spiritual Community	-0.01	-0.318	ns
Initial Spiritual Practices	-0.04	-2.02	0.04
Initial Quest	0.03	1.36	ns

Table 5. Within-subject associations between initial level of spiritual predictors and growth curve of outcomes

Note Bold coefficients are statistically significant.

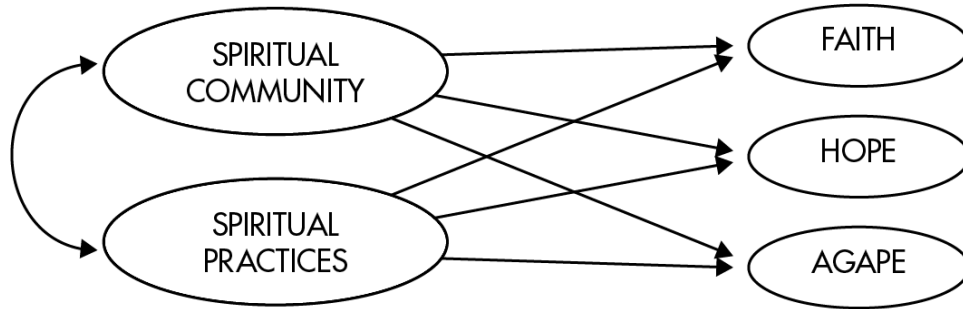


Figure 1. Structural model of spiritual transformation, indicating that outcomes of *faith*, *hope* and *agape* will be predicted by levels of involvements in spiritual practices and spiritual community.

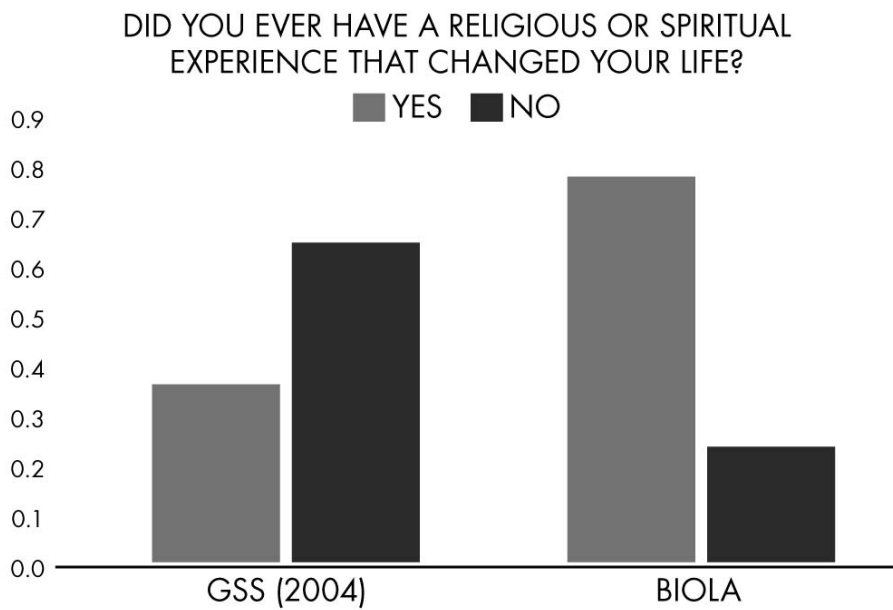


Figure 2. Comparison of Biola students with the General Social Survey of 2004 on prevalence of life-changing religious or spiritual experiences.

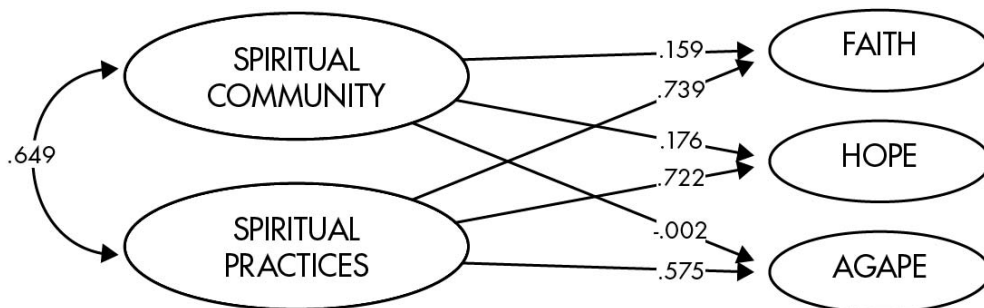


Figure 3. Standardized path coefficients within the structural model