

2013

## Building Construct Validity for a New Measure of Christian Spiritual Maturity

Edward W. Watson  
*Oral Roberts University*

Angela L. Watson  
*Oklahoma Wesleyan University*

Follow this and additional works at: [http://digitalshowcase.oru.edu/sotl\\_ched](http://digitalshowcase.oru.edu/sotl_ched)

 Part of the [Christianity Commons](#), and the [Scholarship of Teaching and Learning Commons](#)

---

### Recommended Citation

Watson, E. W., & Watson, A. L. (2013). Building construct validity for a new measure of Christian spiritual maturity. *Journal of the Scholarship of Teaching and Learning for Christians in Higher Education*, 6(1), 18-28. <https://doi.org/10.31380/sotlched.6.1.18>

This Article is brought to you for free and open access by Digital Showcase. It has been accepted for inclusion in Journal of the Scholarship of Teaching and Learning for Christians in Higher Education by an authorized editor of Digital Showcase. For more information, please contact [mroberts@oru.edu](mailto:mroberts@oru.edu).

## **Building Construct Validity for a New Measure of Christian Spiritual Maturity**

by  
Edward W. Watson, Ph.D.  
and  
Angela L. Watson, Ph.D.

### **Abstract**

This study ( $N = 672$ ) develops further a model of Christian spiritual maturity based upon two dimensions of Bernard of Clairvaux's staircase of godly love: Step 2 (Loving God for Self's Sake) ( $\alpha \geq .89$ ) and Step 3 (Loving God for God's Sake) ( $\alpha \geq .88$ ). Data were collected in two waves: (a) undergraduates at a private Christian university in the Midwest (Watson, 2011) and (b) undergraduate theology majors, graduate students, and graduate professors from the same university. Principal axis factor analysis supported a two factor solution with low inter-factor correlations ( $r = .08$ ). While mature volunteers were under-represented, significant differences by academic major were detected between groups when controlling for unequal variances. Brown's Forsythe ANOVA and Tukey's HSD post hoc tests indicated that undergraduate theology majors scored lower on Step 2 than undergraduate non-majors ( $p = .000$ ) and the graduate non-major group ( $p = .007$ ). Further, the graduate theology group scored higher on Step 3 than undergraduate non-majors ( $p = .009$ ) and undergraduate majors ( $p = .040$ ). Mean scores suggested that all participants scored lower on Step 2 than Step 3, reflecting an intrinsically motivated devotion to God over an extrinsic focus on benefits derived from God. Moreover, the graduate group's scores were higher than undergraduates' scores on both scales, providing tentative support for an interpretation based on Object Relations Development and Attachment theories, postulating that the more mature dimension of Step 3 is built upon secure attachment to God reflected in the less mature dimension of Step 2.

### **Introduction**

Attempting to bridge secular psychological theoretical frameworks of development and evangelical Christian understandings of spiritual development is a daunting task. Yet, the contributions of such an endeavor offer fruitful service to those seeking to facilitate healthy spiritual development for Christians, including practitioners treating Christian clients, schools serving Christian populations, and Christian individuals striving to understand their own spiritual progress. Christian workers and participants often have different goals for their own lives and spiritual development than those that secular psychologists may presume to be important. For example, Christians may believe that it is important to develop godly character through facing trials (e.g., James 1:2-3). On the other hand, psychologists may believe that Christians' behavioral health depends upon feelings of subjective well-being (e.g., Diener, Emmons, Larsen, & Griffin, 1985), perhaps without taking into account the value participants place on testing their faith through trials to develop endurance. Many researchers have studied the relationship between spirituality and behavioral health, but seldom are participants' spiritual values given consideration in conceptualizing the research design (Slater, Hall, & Edwards, 2001). The present study seeks to make this connection utilizing a Biblical framework as its point of

reference. A review of the literature frames the study's theoretical orientation to describe a Biblically-based conceptualization of Christian spiritual maturity.

### **Conceptual Framework**

The multi-dimensional relationship between behavioral health and spirituality has been well-documented. For example, numerous studies have indicated that spirituality is positively related to subjective well-being, healthy interpersonal relationships, and psychosocial maturity (Pargament et al., 1988). Other studies, however, have linked spirituality with negative outcomes such as emotional distress (e.g., Salsman & Carlson, 2005). One challenge to understanding the nuances of relationship between spirituality and behavioral health derives from studies drawing from the ponderous number of instruments designed to measure spirituality without differentiating which particular aspect of spirituality they are correlating with other variables (Slater et al., 2001).

For example, Hill and Hood (1999) have compiled an impressive collection of spiritual measures that purports to assess a myriad of indicators including but not limited to behaviors, beliefs, and affects. Moreover, these varied instruments reflect very different theoretical orientations. For instance, The Christian Orthodoxy Scale (Kirkpatrick, 1993) measures how closely participants' beliefs are aligned with the teachings of the Early Church as expressed through the Apostle's Creed. The Quest Scale (Batson & Schoenrade, 1991), on the other hand, measures participants' levels of self-reported doubt and questioning, assessing spiritual uncertainty as indicative of higher levels of spiritual maturity. Other instruments assess spirituality in terms of behaviors such as frequency of church attendance, prayer, and participation in service activities (e.g., Sethi & Seligman, 1989).

To understand healthy spiritual development, more precise measures are needed. Many researchers (e.g., Pargament et al., Simpson, Newman, & Fuqua, 2008; 1998; Slater et al., 2001) have called for research designs that consider contextual elements of participants' faith when attempting to understand and to describe spiritual development accurately. For instance, Newport and Carroll (2005) reported for Gallup that approximately 40% of Americans describe themselves as evangelical Christians. Moreover, Berger (2009) estimates there are between 60-80 million American evangelicals and at least 500 million additional evangelicals outside the U.S. Both sources refer to the evangelical emphasis upon Biblically-based doctrine. Thus, it seems tenable to conclude that measures of spiritual maturity for the evangelical Christian should be consistent with the tenets of Scripture.

Hall and Edwards (1996; 2002) have constructed a theistic model. The researchers have conceptualized spiritual development from the perspectives of Attachment and Object Relations Development Theory. They have posited that individuals can experience healthy attachment to God reflected in higher levels of spiritual development and better relationships with others. The Spiritual Assessment Inventory (Hall & Edwards, 1996) elegantly extends contemporary developmental theory to apply to spiritual development in terms of one's relationship with God. Few studies, however, have explored the developmental nature of Christian spiritual maturity from within a Biblical context.

## Biblically-Based Spiritual Maturity

In the New Testament, Jesus' ethical teachings drew upon Jewish understandings of God and humanity's relationship with the Divine (Watson & Watson, *In press*). For instance, in Matthew's Gospel, Christ reiterated the Torah when He stated that the greatest commandment was to love God and the second greatest was like it: to love your neighbor as yourself (22:37-40; Deuteronomy 6:5; Leviticus 19:18). Jesus further developed these commands elsewhere in the synoptic Gospels when He maintained that Christians not only are to love their neighbors but also are to love their enemies (Matthew 5:43-48; Mark 12:30-31). John's Gospel extends these commands further still with the notion that Christian love should be modeled after the love of Christ Himself, who sacrificed Himself for others through His death on the cross (1 John 3:16, John 15:12-15).

In the Johannine Gospel and Epistles, the apostle articulates a love ethic that he maintained should guide human attitudes and behaviors (Watson & Watson, *In press*). John's conceptualization of love as a marker of Christianity extends the framework for the greatest commandments articulated in the synoptic Gospels. That is, believers are not only to love God but, in doing so, are also to believe in His Son, Jesus Christ, whom God sent to the world (1 John 3:16; 4:9; 5:1-5). Moreover, true children of God are to love one another according to the measure by which Christ Himself has loved them (1 John 3:11, 14, 18; 4:7-8, 19-21). Indeed, John posits that it is not possible to love God whom Christians cannot see without also loving people, the creation of God, whom Christians can see (1 John 4:20).

Working from such a Biblical framework, one of the authors created a new measure of Christian spiritual maturity based on the writings of a twelfth century abbot, St. Bernard of Clairvaux, which presupposes that love is the marker of those who are born of God. Clairvaux posited that as believers grow more mature in Christ, their love for God and for others will also continue to increase as they are being transformed into the image of Christ. Clairvaux's construct through which people learn to give and receive God's love can be conceptualized as a staircase. Upon this figurative staircase, Christians could move to progressively more mature manifestations of love in their relationships with God and others. Clairvaux's staircase of spiritual development contained the following four steps:

- **Step One—The Love of Self for Self's Sake:** On this step, egocentric individuals enjoy God's love without being aware of God as the source of this love.
- **Step Two—The Love of God for Self's Sake:** On this step, individuals become aware that God is the source of love and thus begin to value God for the sake of that love, which they enjoy.
- **Step Three—The Love of God for God's Sake:** On this step, individuals begin to love God as their appreciation for Him grows and they recognize God as an entity worthy of love even apart from the love that He provides for the individuals.
- **Step Four—The Love of Self for God's Sake:** On step four, individuals have grown to love God so completely that they take on God's love for His creation and love self for God's sake (with the self being redefined as the community of creation). On this step, individuals' appreciation for God has grown to the extent that they identify with God's own love for the whole of creation, even loving the redefined self for God's sake. (Watson & Watson, *In press*)

Using Clairvaux's staircase as the basis and building upon the work of Hall and Edwards (1996; 2002) and Hall, Brokaw, Edwards, and Pike (1998), one of the authors (Watson, 2011) theorized that from an Object Relations Perspective, higher levels of Christian spiritual maturity would be reflected in higher scores not only at the highest step of maturity achieved, but also at the lower steps, as healthy development would logically proceed by building upon the motivations salient at the lower steps. For example, an adult child who shares a mature, reciprocally loving and giving relationship with parents has presumably developed this interpersonal maturity from a foundation of secure attachment as a child when those parents met the egocentric needs of their offspring. Thus, the author postulated that higher scores on a higher step would presume to be correlated with high scores on the preceding steps as well (Watson, 2011).

To empirically investigate this hypothesis, the author sought to develop and test a new scale borrowing from the conceptual framework outlined by St. Bernard of Clairvaux's staircase of Christian love (Watson, 2011). Constructing the new measure of Christian spiritual maturity involved multiple steps. Sample statements were written to reflect each of the four levels of love development. Next, the author discussed Clairvaux's theory with subject matter experts including five graduate theology students and two professors with graduate degrees in theology. These experts were then provided with brief descriptions of Clairvaux's four steps along with the sample items and asked to help construct additional items appropriate to the proposed developmental framework. The author then examined these statements and revised them to improve clarity.

A second panel of subject matter experts was recruited to further refine the new items, including two professors with Ph.D. degrees in Biblical Literature, a professor with a doctorate in missiology, and a professor with a graduate degree in Christian education. The subject matter experts evaluated the developing statements that reflected the second and third steps of Christian love by examining the revised items in light of brief statements describing the second and third steps of maturing Christian love. The experts then identified each statement by indicating whether or not it most accurately reflected either the second step, Loving God for Self's Sake, or the third step, Loving God for God's Sake. Only the 42 statements that were correctly identified by each expert were retained for further analysis.

### **Previous Analysis and the Purpose of the Present Study**

In 2010, one of the authors conducted an exploratory factor analysis of the new measure of Christian spiritual maturity with a sample of 541 undergraduate students at a private Christian university in the Midwest (Watson, 2011). In this study, the author found that despite a relatively homogenous sample (87% of respondents were between 18-25 years of age; 27% of respondents were theology majors), the results showed some differences in maturity among groups. There were no differences among groups on the scale Loving God for God's Sake. That is, all scores were higher at this level. On the other hand, theology majors' scores were significantly lower than non-majors' scores on the scale Loving God for Self's Sake, although all scores were much lower at this level (Watson, 2011).

Perhaps most interesting, the results of the study yielded two relatively uncorrelated scales ( $r = .06$ ) that both demonstrated good internal consistency ( $\alpha \geq .82$ ). The author was surprised that the scales were uncorrelated and was uncertain if the resulting statistics were attributable to two truly orthogonal dimensions of Christian spirituality or to a lack of variability

in the maturity levels among the young sample. The latter cause could explain the lack of correlation in terms of a classic restriction of range within the sample, thereby reducing the magnitude of the correlation

In 2012, an additional sample was drawn with a two-fold purpose in mind: First, the authors sought to increase the variability in the original sample by purposively selecting more participants presumed to yield potentially higher Christian spiritual maturity scores. Specifically, undergraduate theology majors were added to the sample to address differences by major. Moreover, graduate students of education and religion and their professors were added to address differences by age and educational level. Second, the authors sought to evaluate the new findings in light of the original study's theoretical framework based on an Object Relations Developmental Perspective (Meier, 1959; Hall & Edwards, 1996, 2002; Hall et al., 1998). The subsequent analysis that included both waves of data collection yielded some meaningful findings.

## Methods

### Participants

This research employed a quasi-experimental design to develop and test a psychometric measure of Christian spiritual maturity using causal-comparative correlational methods. Participants were volunteers recruited from a private Christian university in the Midwestern United States. Undergraduate students in required freshmen-level Bible survey courses were recruited. The majority of students were non-theology majors; a proportion of students were theology majors. The follow-up study attempted to add variability to the existing sample by including more undergraduate theology students, graduate students in education and theology, and graduate professors.

Out of 672 participants, 542 (80.7%) volunteers were between the ages of 18-25 years and 325 (48.4%) were female. Four hundred and four students were in their first or second year of college (60.2%). Four hundred (59.5%) volunteers self-identified as White, while 246 affiliated with another ethnicity (Asian = 34, Black = 114, Hispanic = 51, Other = 47).

Four hundred and eighty-nine (72.8%) participants self-identified as Assembly of God/Non-denominational/Pentecostal, while 156 were affiliated with another denominational group (Baptist = 31, Catholic = 16, Methodist = 19, Other = 90). Four hundred and twenty-four (63.1%) volunteers indicated that they had been converted for eight years or longer. Eighty-eight students reported four to seven years since conversion, 45 reported one to three years since conversion, and eight reported less than one year since conversion. Sixty five participants reported never having been converted. Three hundred and twenty-three (48.1%) volunteers described themselves as intellectually moderate, while 231 described themselves as conservative, and 43 described themselves as liberal.

Five hundred and twenty-five (78.1%) students had never been married, while 59 were married, 21 were divorced, and 4 were widowed. Five hundred and eighty-one (86.5%) participants did not have children, 21 had one child, 20 had two children, 16 had three children, and 8 had four or more children. Four hundred and fifty-three (67.4%) volunteers reported that their parents were married, 113 reported their parents were divorced, 32 reported one of their parents had been widowed, and 33 reported their parents had never married.

## Measures

To assess whether the new measure of Christian maturity correlated as expected with other psychological variables, various construct validity indicators were administered along with the new Christian maturity scale (CMS). Spiritual indicators included a revised form of Benson, Donahue, and Erickson's (1993) Faith Maturity Scale (FMS) (Simpson, Watson, Fuqua, Newman, & Choi, 2011), and three subscales (Instability, Defensiveness, and Awareness) from the Spiritual Assessment Inventory (SAI) (Hall & Edwards, 1996). In addition, the Objective Measure of Ego Identity Status religious subscale (OMEIS) (Adams, Shea, & Fitch, 1979) was used to assess religious identity development. Indicators of beliefs included the Implicit Measures of Morality (IMM) (Dweck, Chiu, & Hong, 1995), the Christian Orthodoxy Scale (COS) (Fullerton & Hunsberger, 1982), and the Empathy Quotient (EQ) (Baron-Cohen & Wheelwright, 2004). Subjective well-being indicators included the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the UCLA Loneliness Scale (Russell, 1996), and the Life Satisfaction Scale (LSS) (Diener, Emmons, Larsen, & Griffin, 1985). Because the CMS correlated well with the other psychological variables as expected in the first wave of data collection, these relationships are not the focus of investigation for this study.

## Procedures

One of the researchers gave volunteers a packet of self-report measures. Research volunteers were asked to work independently and to turn in their completed surveys to the investigator when they were finished. To improve the subject-to-item ratio and to safeguard against order effects, the items were bundled into nine different versions of the test (i.e., codes 000-888) and systematically randomly distributed to the participants. Each version of the test consisted of the 42 new items comprising the Christian Maturity Scale. In addition, the FMS and SAI were administered in different order to approximately one-third of the sample (i.e., 000 and 111), the OMEIS, BDI, UCLA Loneliness Scale, and LSS were administered in different order to approximately one-third of the sample (i.e., 222, 333, 444, and 555), and the IMM, COS, and EQ were administered in different order to the remainder of participants (i.e., 666, 777, and 888). The researcher then placed each individually-submitted answer sheet into a file that was carried directly to her locked office for analysis.

During the fall semester of 2010, one of the researchers solicited instructors who were known to her using an IRB-approved script and announcement. Beginning in the spring semester of 2012, the authors recruited additional undergraduate theology students, graduate students in education and religion, and professors to increase the variance in age as a proxy indicator for maturity. Amenable instructors arranged to allow data collection during regularly scheduled class time. Researchers described the purpose of the study and outlined the IRB-approved informed consent form. Subjects willing to proceed then volunteered to participate.

## Results

Data were collected in two waves. In the initial study, 541 undergraduates enrolled in required freshman-level Bible survey courses participated. Out of the 464 enrolled non-theology majors, 395 responded (85%). Out of 172 enrolled theology majors, 146 responded (85%). The second wave of data collection yielded data from 80 out of 81 theology undergraduates and

100% participation from 49 education and theology graduate students. In addition, two graduate professors participated, one in education and one in theology.

Quantitative self-report data were collected from participants who completed the measures described above. In addition to categorizing participants by major area of study, all participants also completed 10 demographic questions describing characteristics of interest: age range, gender, ethnicity, years of education, denominational affiliation, years since conversion, intellectual preference (i.e., liberal, moderate, conservative), marital status, number of children, and parents' marital status.

Each variable was first examined for possible range of answers. All answers were within the possible range, so all items were retained for analysis. Internal consistency coefficients remained high for both scales. For the scale measuring Step 2: Loving God for Self's Sake, Cronbach's alpha was .897, and for the scale measuring Step 3: Loving God for God's Sake, alpha was .872. High inter-item correlations again suggested that the scales could be shortened for better utility, although three items most suitable for inclusion in the shortened form of the Step 2 scale differed after the second wave of data was collected. Reliability analyses yielded good internal consistency with an alpha coefficient of .889 for the Step 2 scale on 10 items. Cronbach's alpha for the Step 3 shortened scale on 10 items was .875.

Factor analysis on 20 retained items using principal axis factor analysis yielded a KMO value of .857 with communalities ranging from .318 - .772. In keeping with theory and the scree plot, two factors were selected and rotated with direct oblimin to account for 50.79% of the variance in scores. The inter-component correlation was slightly higher after the addition of the second wave of data although the scales remained relatively uncorrelated at .081. All item loadings clustered together on the expected components. Bi-variate correlations between factor scores and the summated scales indicated that it would be appropriate to retain the scale scores for further analyses (Factor 1 with Step 2  $r^2=.993$ ,  $p=000$ , Factor 2 with Step 3  $r^2=.990$ ,  $p=000$ ).

The answer to the first research question, then, appeared to be that the attempt to add variability to the range of maturity among participants did not yield a substantive effect on the low correlations between the dimensions. This low correlation lends support to the idea that the two scales measure discrete dimensions of spirituality. On the other hand, further examination of the relationships among variables was warranted. Results from the first wave of data collection suggested that the variables of greatest interest as potential indicators of Christian spiritual maturity were educational level and academic major. That is, theology majors and those with higher levels of education were less likely to Love God for Self's Sake, as demonstrated by lower scores on the Step 2 scale. Moreover, even though age did not appear to be a significant indicator of Christian spiritual maturity in the first wave of data collection, extreme over-representation of participants between the age of 18-25 (87%) suggested a restriction of range and the possibility that age might still prove to be a potentially meaningful proxy variable for maturity in the present study. Thus, the participants selected for the second wave of data collection were more educated, older, and included a greater representation of theology majors than did the first wave of data collection.

In this study, education level was categorized in terms of years of college education. Possible answers included one year, two years, three years, four years, and five years or more. As previously noted, education level did not prove to be a meaningful indicator of maturity on the CMS Step 2,  $F(4, 624) = .797$ ,  $p = .527$  or on Step 3,  $F(4, 624) = 1.26$ ,  $p = .284$ . Further, there were still no significant differences among groups based upon age for either Step 2,  $F(4, 611) = .923$ ,  $p = .450$  or for Step 3,  $F(4, 611) = 2.219$ ,  $p = .066$ . Academic degree, however,



continued to yield meaningful differences among groups although the patterns revealed in the second wave of data collection were somewhat unexpected. Once again, all groups scored higher on Step 3 than on Step 2, suggesting that all participants were less extrinsically motivated to love God and others than they were intrinsically motivated to do so. Unlike the first study, however, the graduate group presumed to be more spiritually mature than the undergraduate students scored higher on both Step 2 and Step 3, with the graduate theology group yielding the highest scores on both scales across groups. Table 1 displays the mean scores on the CMS scales by groups.

Table 1

*Mean Scores on CMS Scales by Academic Degree*

Group by Degree	N	Step 2: Loving God for Self's Sake Mean Scores	Step 3: Loving God for God's Sake Mean Scores
Undergraduate Theology Majors	227	19.36	41.17
Undergraduate Non-Majors	393	24.60	40.10
Graduate Theology Majors	29	26.40	47.69
Graduate Non-Majors	22	28.91	44.86

In the analysis of Step 2, a significant Levene's test ( $p = .000$ ) indicated the Brown-Forsythe ANOVA procedure should be employed. The difference between groups was statistically significant,  $F(3,109.344) = 11.40$ ,  $p = .000$ . Tukey's HSD revealed that undergraduate theology majors again reported lower scores on Step 2 than did their non-major counterparts,  $p = .000$ , with a mean difference of 5.240 using 95% CIs [8.130, .2349]. Further, honest significant differences were detected between undergraduate theology majors who reported significantly lower scores than the graduate non-major group,  $p = .007$ , with a mean difference of 9.549 using 95% CIs [17.165, 1.933].

For Step 3, another significant Levene's test ( $p = .000$ ), suggested the Brown-Forsythe ANOVA procedure. In contrast to the first wave of data collection, the difference between groups was statistically significant,  $F(3,141.153) = 6.63$ ,  $p = .000$ . Tukey's HSD revealed that the graduate theology group reported statistically significantly higher scores on Step 3 than did both undergraduate groups. The graduate theology group scored higher than undergraduate non-majors,  $p = .009$ , with a mean difference of 7.560 using 95% CIs [1.416, 13.708]. In addition, honest significant differences were detected between the graduate theology group and undergraduate theology majors,  $p = .040$ , with a mean difference of 6.493 using 95% CIs [.2022, 12.785].

### Conclusion and Recommendations

This study provides some useful information to the field of spiritual development and measurement. Specifically, the original hypothesis driving the development of the new measure of Christian spiritual maturity is based upon an Object Relations framework, which presumes that increasing Christian spiritual maturity should yield higher scores at Step 3 than Step 2. This pattern did hold true among all groups, indicating a greater intrinsic than extrinsic motivation for

love of God and others. Tangentially, however, one of the authors speculated that healthy Object Relations Development would purport higher scores at Step 3 and would be founded upon secure attachment to God, reflected in potentially high scores on Step 2. That is, higher scores on Step 3 should also be accompanied by higher scores on Step 2, even while the Step 2 scores should be proportionately lower than those at the third step. The results of the second wave of data collection, which attempted to purposively increase the range of maturity within the sample by adding participants who were older and more educated and who included a greater representation of theology degrees lent some support for this hypothesis: The graduate group's mean scores were higher than those of the undergraduates on both scales, with the graduate theology group reporting the highest scores across groups on both Loving God for Self's Sake (Step 2) and Loving God for God's Sake (Step 3).

Further study is required to better understand the underlying conceptual nature of Christian spiritual maturity. If tested in a new sample that included good representation from both theology and non-theology degrees as well as good variability in age and education level, would the two scales remain orthogonal? If the two scales, Loving God for Self's Sake and Loving God for God's Sake, remain uncorrelated when analyzing a new sample, then several questions persist. If these two different steps represent truly uncorrelated aspects of Christian spiritual maturity, suggesting that they measure discrete aspects of spiritual development, does that indicate that the Object Relations and Attachment frameworks are ill-fitting models for this instrument? Or could uncorrelated steps merely indicate that different stages of Object Relations Development truly are unrelated? That is, when an individual grows out of one stage of development, are the indicators of that stage no longer salient? The mean scores from this recent study indicated a pattern more consistent with the original hypothesis than did the data collected in the first wave alone. That is, higher scores on Step 3 were accompanied by higher scores on Step 2 when graduate students were sampled. The proportion of graduate students, however, should be increased in relation to undergraduates in subsequent studies.

This study should help to bridge the understanding between secular psychological theoretical frameworks of development and evangelical Christian frameworks from a Biblically-based perspective. These findings lend insight to guide future studies of the contributors facilitating healthy spiritual development for Christians, including practitioners treating Christian clients, schools serving Christian populations, and Christian individuals striving to understand their own spiritual development.

## References

- Adams, G. R., Shea, J., & Fitch, S. A. (1979). Toward the development of an objective assessment of ego-identity status. *Journal of Youth and Adolescence*, 8, 223-237.
- Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An investigation of adults with Asperger Syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34(2), 163-175.
- Batson, C. D., & Schoenrade, P. A. (1991). Measuring religion as quest: 2. Reliability concerns. *Journal for the Scientific Study of Religion*, 30(4), 430-447.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-471.

- Benson, P. L., Donahue, M. J., & Erickson, J. A. (1993). The Faith Maturity Scale: Conceptualization, measurement, and empirical validation. In M. L. Lynn & D. O. Moberg (Eds.), *Research in the social scientific study of religion* (Volume 5, pp. 1-260. Greenwich, CT: JAI Press.
- Berger, P. (2009, July/August). Born again modernity. *American Interest*, 4(6), 121-127.
- Clairvaux, B. (2005). On loving God. In E. Griffin (Ed.), *Bernard of Clairvaux: Selected works* (pp. 47-93). San Francisco, CA: HarperSanFrancisco.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Dweck, C. S., Chiu, C., & Hong, Y. (1995). Implicit theories and their role in judgments and reactions: A world from two perspectives. *Psychological Inquiry*, 6(4), 267-285.
- Fullerton, J. T., & Hunsberger, B. (1982). A unidimensional measure of Christian orthodoxy. *Journal for the Scientific Study of Religion*, 21, 317-326.
- Hall, T. W., Brokaw, B. F., Edwards, K. J., & Pike, P. L. (1998). An empirical exploration of psychoanalysis and religion: Spiritual maturity and object relations development. *Journal for the Scientific Study of Religion*, 37, 303-313.
- Hall, T. W., & Edwards, K. J. (1996). The initial development and factor analysis of the Spiritual Assessment Inventory. *Journal of Psychology and Theology*, 24, 233-246.
- Hall, T. W., & Edwards, K. J. (2002). The Spiritual Assessment Inventory: A theistic model and measure for assessing spiritual development. *Journal for the Scientific Study of Religion*, 41, 341-357.
- Hill, P. C., & Hood, Jr., R. W. (Eds.). (1999). *Measures of religiosity*. Birmingham, AL: Religious Education.
- Kirkpatrick, L. A. (1993). Fundamentalism, Christian orthodoxy, and intrinsic religious orientation as predictors of discriminatory attitudes. *Journal for the Scientific Study of Religion*, 32, 256-268.
- Meier, C. A. (1959). Projection, transference, and the subject-object relation in psychology. *Journal of Analytical Psychology*, 4, 21-34.
- Newport, F., & Carroll, J. (2005, Dec. 2). Another look at evangelicals in America today: About 3 in 10 white, non-Catholic Christians describe themselves as "evangelical." Gallup News Service. Retrieved on May 25, 2012 from <http://www.gallup.com/poll/20242/Another-Look-Evangelicals-America-Today.aspx>
- Pargament, K. I., Kennell, J., Hathway, W., Grevengoed, N., Newman, J., & Jones, W. (1988). Religion and the problem-solving process: Three styles of coping. *Journal for the Scientific Study of Religion*, 27, 90-104.

- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66, 20-40.
- Salsman, J. M., & Carlson, C. R. (2005). Religious orientation, mature faith, and psychological distress: Elements of positive and negative associations. *Journal for the Scientific Study of Religion*, 44, 201-209.
- Sethi, S., & Seligman, M. E. P. (1989). Optimism and fundamentalism. *Psychological Science*, 4, 256-259.
- Simpson, D. B., Newman, J. L. & Fuqua, D. R. (2008). Understanding the role of relational factors in Christian spirituality. *Journal of Psychology and Theology*, 36(2), 124-134.
- Simpson, D. B., Watson, A., Fuqua, D. R., Newman, J. L., & Choi, N. (2011, August). *An experimental measure of faith maturity*. Presented to the American Psychological Association, Washington, D.C.
- Slater, W., Hall, T. W., & Edwards, K. J. (2001). Measuring religion and spirituality: Where are we and where are we going? *Journal of Psychology and Theology*, 29, 4-21.
- Watson, A. (2011). *A developmental approach to measuring spiritual maturity from a Christian perspective*. Ann Arbor, MI: UMI Dissertation Publishing.
- Watson, E. W., & Watson, A. (In press). *The love of God: An interdisciplinary approach to developing and measuring spiritual maturity based on a Johannine love ethic*. In Pickwick Publications *Collected essays on Johannine literature in honor of Ben Aker*.

---

*Dr. Edward W. Watson* is the former chair of the Undergraduate Department of Theology at Oral Roberts University. He currently serves as a professor of Biblical literature and practical theology in the graduate school in the College of Theology and Ministry at ORU. He can be reached at [ewatson@oru.edu](mailto:ewatson@oru.edu).

*Dr. Angela L. Watson* is a graduate professor in the School of Education at Oklahoma Wesleyan University. She earned a Ph.D. in Educational Psychology from Oklahoma State University, and her current research interest focuses on the development of spiritual maturity and formation. She can be reached at [angela-watson@cox.net](mailto:angela-watson@cox.net).

---