

Gender Differences in Spiritual Development During the College Years

Alyssa N. Bryant

© Springer Science + Business Media, LLC 2007

Abstract Gender differences in spirituality and related traits are an assumed reality despite the lack of empirical information that directly compares women and men. I used a national and longitudinal sample of 3,680 college students surveyed with the Cooperative Institutional Research Program (CIRP) Freshman Survey (2000) and later with the College Students' Beliefs and Values (CSBV) Survey (2003) to examine gender differences on 13 spiritual characteristics and explore the personal and educational factors associated with changes in spirituality during college. The results showed marked gender differences in spiritual qualities, and gendered patterns of spiritual development were identified that are associated with religious identity, peer relationships, and science exposure.

Keywords Spirituality · Religion · College

The notion of gender difference is a popular concept in modern society that is predicated on everything from media speculation to personal anecdotes to scientific research. Indeed, many who have studied empirically the multiple facets of human development either imply or directly infer that men and women are simply different, whether it be in regard to women's unique forms of moral reasoning (Gilligan 1982), ways of knowing (Magolda 1992; Belenky et al. 1986), emotionality (Miller 1976), styles of relational attachment (Chodorow 1978; Josselson 1987; Miller 1976), or identity formation (Josselson 1987). Differences on all of

these dimensions, encompassed as they are by the affective, internal aspects of the human psyche, lead to beliefs about gendered experiences with respect to the spiritual self as well.

Definitions

Religion is typically associated with commitment to a supernatural power that is expressed through ritual and celebration both individually and within the context of a faith community. The term "religion" connotes a common belief system, a set of principles and practices, a code of conduct, and doctrine or dogma. Shared stories or symbols are often used to understand and connect with the transcendent source of power, or God (Hill et al. 2000; Knox et al. 1998; Love 2001, 2002). In light of these descriptors adopted in the extant literature, the present study incorporates several measures of religiousness, including internalized personal commitment to one's religious faith (a cognitive/affective measure), engagement in religious activities (a behavioral measure), endorsement of principles associated with conservative religious doctrine, and skepticism regarding the hallmark beliefs of religious individuals (a negative measure of religiousness).

An elusive construct imbued with multiple meanings, spirituality has been defined in the research literature as the process of seeking personal authenticity, genuineness, and wholeness; transcending one's current locus of centrality (i.e., recognizing concerns beyond oneself); developing a greater connectedness to self and others through relationships and community; deriving meaning, purpose, and direction in life; and openness to exploring a relationship with a higher power or powers that transcend human existence and human knowing (Love and Talbot 1999; see also Hill et al. 2000; Love 2001, 2002; Parks 2000). The spiritual dimension can

The opinions expressed in this report are those of the author and do not necessarily reflect the views of the John Templeton Foundation.

A. N. Bryant (✉)
Department of Adult and Higher Education,
North Carolina State University,
300N Poe Hall, Box 7801, Raleigh, NC 27695-7801, USA
e-mail: alyssa_bryant@ncsu.edu

involve religious sensitivities, or, on a more fundamental level, the locus of one's faith and trust (be it God, science, personal success, etc.; see Fowler 1981), but spirituality can be altogether separate from religious belief and practice as well. The distinctions between "spiritual" and "religious" are by no means definitive. There is a high degree of correlation between the constructs and both are associated with internal processes and traits, as well as outward manifestations of those inner qualities.

This study captured the manifold dimensions of spirituality in the form of constructs that measure the extent to which students were seeking and experiencing spirituality, questing to find meaning and purpose in their lives, feeling "centered" and peaceful, struggling with spiritual issues, and growing spiritually. Each of these share in common with the definitions provided in the literature a commitment to pursuing the deeper questions of life and perpetual movement toward an actualized, carefully conceived life purpose. In addition to these facets, which hinge on a general orientation toward valuing and seeking spirituality, the notion of "transcending one's current locus of centrality" relates to another set of constructs that emphasize helping behaviors and social activism to improve the human condition. Inasmuch as these constructs ascertain an individual's recognition of human interconnectedness and the needs of others—trademarks of the spiritually attuned person—they are in essence a manifestation of spiritual maturity.

Assertions of Religious and Spiritual Gender Differences and Associated Theoretical Explanations

Although spiritual gender differences are less often the focus of empirical research, religious differences between women and men have been more readily documented across the life span. Among adolescents, girls are significantly more likely than boys to attend religious services, to regard religious faith as important in shaping daily life, to have made a personal commitment to live life for God, to be involved in a religious youth group, to pray, and to feel close to God (Smith et al. 2002; Smith and Denton 2005). Buchko (2004) suggested that college women, to a greater extent than college men, "experience a strong spiritual relational component to their religious faiths" (p. 96) That is, they experience daily connection with God through prayer, seek direction from religious advisors or teaching when handling personal problems, feel assured that God is present and active in their lives, derive comfort and security from faith, and express feelings of devotion to and reverence for God.

Religious and spiritual gender differences in adulthood are also implied in much of the literature to date. Scholars who address women's spirituality refer to many of the same themes that developmental theorists have cited; they often

portray the connections between women's spiritual development and their relationships with others. For example, Ochs (1983) maintained that "since traditional spirituality has been male-centered, it has been regarded as an extension of the male maturational process that emphasizes individuation—coming into selfhood. The new spirituality... is an extension of the female maturational process that emphasizes nurturing—coming into relationship" (p. 2). The focus of "being-in-relationship" as central to women's spirituality was echoed by Randour (1987) who added that men, too, live in relationship to others. Although, "where they differ is in how they live out their relationships, departing perhaps in which relationships they find more salient, in their style of being-in-relationship, and in the status, recognition, and compensations achieved by their relationships" (Randour 1987, p. 132). In other words, relational influences on men's spirituality are unlike those on women's because men's relationships are framed by different motivations, objectives, and benefits, which results in unique implications for their spirituality. Another purported difference between the sexes: Ozorak (2003) contended that women and men embrace different relational schemas—or formulated, role-bound ways of interacting in a particular relationship—in describing their relationships with God and experiences within their religious communities. Whereas women focus on the personal connections forged with a loving God and with members of their religious communities, men are more attuned to God's power and judgment and on practicing spiritual discipline (Ozorak 1996).

Gendered patterns in religiousness have also been studied in later adulthood. For example, Thompson and Remmes (2002) reported that, among older men, a feminine orientation predicts higher levels of self-assessed religiousness, religious participation and devotion, and intrinsic religious motivation. The latter concept—intrinsic religiousness—involves regarding "spirituality and faith as ultimate, flooding the individual's life with motivation and meaning" (p. 523). This internalized, deeply felt commitment is counter to extrinsic religious motivation, defined as "utilitarian, granting the individual safety, social standing, solace, and endorsement for a way of life" (p. 523). The absence of a feminine orientation is not equated with a lack of religiousness among these older men; rather, men with a masculine ideology and orientation are inclined toward a more extrinsic form of religiousness and religious quest. Among older widowed women, both intrinsic and extrinsic religious involvement are associated with peace, pleasure, and satisfaction in life (Neill and Kahn 1999). Indeed, "engaging in organized religious activities [provides] women with friendships, a sense of community, and a way of contributing to the welfare of others. Through faith in God and prayer [women are] able to cope with stress and find meaning and purpose to life and death" (p. 327).

To what can we attribute these observed differences between women and men? Francis (1997) outlined the major theoretical frameworks used to explain statistical gender differences in religious participation and belief. From a sociological perspective, some theorists interpret these differences in the context of women's socialization, which stresses "conflict resolution, submission, gentleness, nurturance, and other expressive values that are congruent with religious emphases" (p. 82). Similarly, Francis described earlier work that linked the more family-centered role of women to their greater investment in traditional religion. Other theories place more weight on individual characteristics to account for gender differences, such as Freudian notions of women's unique psychological draw to God as a father-figure, personal traits (e.g., dependency, guilt), and feminine versus masculine gender-role orientations.

Stark (2002), however, found these prevailing theories on gender differences in religiousness lacking in sustainable evidence, and, citing the research of Miller and Hoffmann (1995), argued instead for an explanation grounded in the connection between risk-taking behavior and men's irreligiousness. Based on criminology research, he took the Miller and Hoffmann hypothesis a step further and claimed that gender differences in risk-taking (and ensuing irreligiousness) are a manifestation of differential physiology, primarily testosterone levels. Hence, although he conceded that socialization may still have a hand in influencing men's and women's religiousness, Stark suggested that biology may hold the key to understanding this phenomenon. Kanis (2002) proposed that women's bodily experiences and natural rhythms—menstruation, pregnancy, birth, and nursing—are the means to deepening women's understanding of the theological and spiritual realms of life. Critiques of the biological argument point out that the feminization of religion and spirituality, particularly with respect to Protestantism and Catholicism, is a relatively recent historical phenomenon. If biological explanations for women's religiosity were accurate, such historical shifts would not exist (Carroll 2004). Given the utility of biological explanations for gender differences in other realms (e.g., differences in male and female stress responses; see Taylor et al. 2000), biological explanations cannot be dismissed entirely given the inconclusiveness of the research to date; nonetheless, sociological theories are at present better substantiated.

Women and Spirituality

The reality of religious gender differences is apparent, but frameworks for understanding this phenomenon are continually questioned and revised. Furthermore, observed reli-

gious differences carry over into assumptions about men's and women's spiritual distinctiveness. Because the two dimensions overlap in meaning, the presumed connection between religion and spirituality seems to have shaped the conclusion that women are more spiritual in a way that parallels their greater religiousness. Two factors contribute to this assumption.

First, as mentioned earlier, much of the research on human development, particularly affective forms of development, alludes to gendered patterns of growth (Magolda 1992; Belenky et al. 1986; Chodorow 1978; Gilligan 1982; Josselson 1987; Miller 1976), and this invariably has ramifications for theories about how women's spiritual development is unique from men's and vice versa.

Second, feminist epistemologies and research have given rise to a plethora of work on women's experiences, including their experiences with religion and spirituality (King 1989, 1995; Ochs 1983; Ruether 1974). In light of patriarchal structures present in many of the world's religious traditions, spirituality has come to represent a new way for women to embrace a sense of life meaning with or without religion (King 1989). In addition, feminist therapists have drawn on spirituality as an avenue for women to find solace, healing, and direction (Hunt 1995; Kaschak 2001).

Ballou (1995) contrasted spirituality with Western science and logic, and she linked seventeenth century shifts toward rationality and empiricism with the patriarchal agenda, that is, with materialism, scientism, and power. Because masculinity, science, and patriarchy have been historically intertwined in this way, it follows that definitions of spirituality may have inadvertently become feminized and made spirituality more accessible to those with feminine orientations. Moreover, feminist scholars tend primarily to discuss women's experiences in their own right, without relying on comparisons to men (King 1995). As a result, the implication of their work—intended or otherwise—is that women are spiritually distinctive and perhaps more spiritual than are men.

In sum, assumptions of spiritual gender differences are based on research that identified gender differences in religious belief and practice, affectively focused human development theories, and the rise of feminism and its emphasis on women's spirituality. Hypotheses drawn from studies on gender differences in religiousness provide a number of provocative explanations for apparent differences that range from sociological to psychological to biological rationalizations. Yet, we lack empirical information on whether women and men really do differ spiritually (not just religiously) and, if differences exist, what in fact accounts for them.

The present study was designed to explore not only comparative data on men's and women's spirituality, but also

the factors associated with gendered spiritual development during one of the most critical and transformative times in life: the college years. This particular point in time—the transition from adolescence to adulthood—is marked by significant spiritual exploration and discovery, “big questions,” and exposure to people and events that challenge one’s conceptions of faith and belief (Parks 2000). Because of the opportunity to observe notable change in the short term, the college years represent an ideal moment in which to study the intrapersonal, interpersonal, sociological, and educational forces that influence spiritual development for women and men. Specifically, the following questions were addressed: (1) What gender differences and similarities exist across multiple dimensions of spirituality and related traits?; (2) How are student characteristics, institutional environments, and college experiences associated with men’s and women’s commitment to integrating spirituality into their lives and their self-perceived levels of spirituality? Do these constructs have different effects on spirituality that are dependent on gender?

Method

Data Source and Sample

This study was based on two national college student surveys developed by the Higher Education Research Institute at the University of California, Los Angeles. Upon entry to college, participants completed the 2000 Cooperative Institutional Research Program (CIRP) Freshman Survey, administered to a representative sample of students at 434 baccalaureate colleges and universities across the country. The annual CIRP Freshman Survey is a four-page instrument that collects data on a wide range of constructs associated with students’ behaviors, attitudes, values, self-assessments, and expectations as entering first year students. Three years later in Spring 2003, a subset of students who had participated in the 2000 CIRP administration took part in the 2003 College Students’ Beliefs and Values Survey (CSBV), a new four-page survey developed to explore issues of meaning, purpose, and spirituality. The Spirituality in Higher Education project, the major multi-year program of research through which the CSBV survey was formulated, was initiated in 2003 with funding from the John Templeton Foundation. The project was designed to explore the “inner” lives of college students: the values and beliefs that guide them, the meaning they derive from their education and the world around them, and the patterns of spiritual development that characterize their college years. In conjunction with the goal to understand these complex spiritual realities of students’

experience, the project raises the equally critical question of the extent to which colleges and universities are equipped to support and facilitate students’ quest for meaning and spiritual growth.

The 175-item CSBV questionnaire, developed by the project’s research team and a technical advisory panel comprised of nationally recognized researchers with expertise in the subject matter (<http://www.spirituality.ucla.edu/technical/index.html>), covers a diverse set of content domains, including spiritual orientation, spiritual well-being, spiritual/religious practices, self-assessments of spiritual traits, compassionate behavior, spiritual quest, spiritual/mystical experiences, facilitators/inhibitors of spiritual development, theological/metaphysical beliefs, attitudes toward religion/spirituality, and religious identity/affiliation. Beyond these domains, additional items were included on the instrument that cover student activities and achievements during college (e.g., participation in clubs, college GPA). Several of the items on the CSBV instrument are post-tests of questions asked of respondents to the 2000 CIRP, which allow for longitudinal analysis.

In total, the longitudinal sample consisted of 3,680 students from a diverse sample of 46 institutions who responded to both the CIRP and CSBV surveys. The data were weighted to correct for nonresponse bias and to approximate the population of third year students at the 46 colleges and universities. The final weight was “normalized” by dividing the original weight by the ratio of the weighted sample to the unweighted sample. Doing so maintained the corrected proportions provided by weighting, but preserved the original sample size so as not to exaggerate significant findings so often observed in large samples.

Demographically, the weighted sample was 53 percent female, and the racial/ethnic breakdown was as follows: 84% White, 5% Black, 4% Asian, 4% Latino/a, 2% American Indian, and 2% “other.” Regarding religious preference, students were grouped in the following traditions: 1% Islamic, 2% Jewish, 31% Roman Catholic, 48% Protestant Christian, 4% “other,” and 12% indicated no religious preference (the remaining 2% of the sample did not respond to this item). Students attended a diverse group of institutions with respect to type (university vs 4-year college), funding source (public, independent, religious), selectivity, and size.

Analyses and Variables

To answer the study’s guiding questions, two types of analyses were conducted. First, ANOVA was used to assess gender differences across 13 factor scales derived from responses to the CSBV. In conjunction with the research team, the factor scales were identified through principal components factor extraction with Varimax rotation. The process entailed locating clusters of items that had

consistent and coherent content and that simultaneously demonstrated a high degree of statistical internal consistency and differentiation from one another. Inter-correlations were used to assess the validity of the factors, namely to ensure that the relationships between the factors, and between the factors and other survey constructs, were theoretically meaningful (e.g., as expected, religious skepticism was *negatively* correlated with religious commitment and measures of religious behavior). The factor structure that emerged in this sample of college juniors was confirmed again in a nationally representative sample of over 100,000 entering first year college students in 2004.

Although a total of 19 factor scales emerged from the factor analysis, only those that relate to spirituality were used in the present study: spirituality, aesthetically based spiritual experience, religious commitment, equanimity, spiritual struggle, spiritual/religious growth, religious engagement, charitable involvement, religious/social conservatism, religious skepticism, spiritual quest, social activism, and compassionate self-concept. Although charitable involvement, social activism, and compassionate self-concept are not direct measures of spirituality or religiosity, they represent manifestations of one's internal spiritual maturity in that they reflect the qualities of concern for justice and care for others, which in turn are linked to such spiritual dimensions as interconnectedness and self-transcendence. A universal factor structure was assumed for both men and women, given the apparent commonalities in Cronbach's alphas across gender¹.

The second major set of analyses was a series of regressions used to compare the effects of various college experiences on women's and men's spiritual development. The two dependent variables were (1) the importance students attributed to "integrating spirituality into my life" and (2) self-rated spirituality compared to peers. The independent variables were submitted to the first set of regressions in a series of seven blocks. These blocks were ordered in accordance with Astin's (1993) Input-Environment-Outcome (I-E-O) model, which enables a more accurate assessment of the effect of college environments/experiences on outcomes by controlling for student background characteristics and predispositions ("inputs"). Because pre-tests of the dependent variables are controlled in this process, independent variables that enter the regression model can be understood as associated with *changes* in the dependent variable over time (i.e., with student growth and development).

As dictated by the I-E-O model, the first block contained the pre-test that corresponds to the dependent variable as

measured upon entry to college (either the goal to integrate spirituality or self-rated spirituality). Block 2 was comprised of 10 "input" variables related to student background characteristics (i.e., religious affiliation, race, and political orientation). Block 3 was a dichotomous measure that indicates whether students lived on campus, and Block 4 contained six variables related to aspects of the institutional environment: the college's religious affiliation (Evangelical, Catholic, other Christian church-affiliated, and non-sectarian; public was the reference group) and a peer measure of spirituality (an aggregated mean per institution based on the dependent variable for the regression). In an effort to assess the gendered effects of majoring in one of the sciences on spirituality and Ballou's (1995) proposition that science and logic are counter to spirituality, Block 5 included a dichotomous variable that measures whether students had opted to major in one of these fields. Finally, Block 6 was comprised of a range of college experiences and involvement, including religious behaviors, charitable involvement, spiritual dialogue with peers, faculty support of spiritual and religious discussions, and so forth.

All regressions were run separately for men and women in a two-step process. First, the dependent variable was regressed on a set of chronologically blocked independent variables (as described above). The p value for entry was set at .001, and tolerance was set at .30 to manage problems associated with multicollinearity. A second set of regressions involved force-entering one at a time each variable that had entered the first regressions for *either* women or men. By force-entering a common list of predictors, the variables in each regression equation were identical per group, which makes coefficients directly comparable. Finally, b -coefficients from these final regressions were contrasted using t tests to understand the gendered effects of the independent variables on spirituality. The b -coefficients of all input variables were drawn following controls for Blocks 1 and 2, and the b -coefficients for the remaining variables were drawn after controlling for Blocks 1–4.

Results

Gender Comparisons on Factor Scales

Table 1 displays the results of the ANOVA to compare men's and women's scores on the factor scales. Despite the common factor structure identified for both genders, all 13 factor scales differentiated men from women ($p < .001$). Per my expectations, and consistent with previous studies (Francis 1997; Stark 2002), women demonstrated greater commitment to religion in belief and (to a lesser extent) practice than did men. In fact, 37% of women and 25% of

¹ The scales, along with Cronbach's alphas and the items they represent, can be obtained from the author.

men were highly committed to religion. In terms of behavioral indicators of religiousness, 22% of women and 18% of men were deeply engaged in religious practices. In line with their higher levels of religiousness, women also exhibited somewhat greater religious/social conservatism than did men (e.g., agreeing that people who don't believe in God will be punished, being committed to introducing people to one's faith, believing that casual sex is not acceptable behavior). Lastly, twice as many men as women (20 vs 10%) were decidedly skeptical about religion.

Similar to the differences on the religious measures, women scored higher than men did on dimensions related to spirituality, spiritual quest, and self-rated spiritual/religious growth. That is, they indicated an interest in spirituality, claimed to have had spiritual experiences, were seeking spiritual virtues in life (answers to life's mysteries, beauty, wisdom, meaning, etc.), and believed that they had undergone positive changes in their religious convictions and spirituality during college. An outward extension of their inner spiritual sensitivities, women also tended to be more involved in charitable activities, concerned with social activism, and more likely than men to perceive themselves as compassionate individuals.

Regarding measures of spiritual well-being, a more complicated picture emerged. Whereas women were more likely than men to experience equanimity (e.g., feeling good about the direction in which life is headed, feeling at peace/centered, able to find meaning in times of hardship), men exhibited lower levels of spiritual struggle than women did. Although higher levels of *psychological* distress among women have been well documented in the literature (Matlin 2000), the surprising contrast of equanimity with spiritual struggle in women's lives has not. The spiritual struggle measure includes such items as questioning one's spiritual/religious beliefs; feeling unsettled about spiritual

and religious matters; struggling to understand evil, suffering, and death; feeling angry with God; and feeling disillusioned with one's religious upbringing. All of these experiences may indeed be linked to development, as the struggle to make sense of the world can lead to spiritual growth in the end. As the struggle unfolds, it seems that, in this sample, women were able to maintain a sense of centeredness and meaning (i.e., equanimity) despite the hardship they had encountered.

Change in Spirituality During College: Gender Comparisons

Before discussing the regressions, it is instructive to consider gender differences and similarities in changes during college on the two primary dependent variables that constituted the focus of the analyses. As Table 2 depicts, students generally became more committed to integrating spirituality into their lives over 3 years of college. However, when men and women were compared, the gender difference widened over time. In response to the question asking students about the value they place on "integrating spirituality into life" ("essential," "very important," "somewhat important," or "not important"), women became increasingly more likely than men to describe this goal as "essential." Men, however, became more inclined over time than women to indicate that integrating spirituality into their lives was "not important."

Table 3 shows evidence of an overall decline in students' self-rated spirituality during college. How can this finding be reconciled with general increases in the goal to integrate spirituality into life? It is possible that the decline in self-rated spirituality is an indication of students becoming more aware of the meaning of spirituality and more stringent in their definitions of what it takes to be a spiritual person—a goal to which they aspire, but are still striving to achieve.

Table 1 Gender differences on spiritual dimensions.

Dimension	Mean for women	Mean for men	Maximum	<i>F</i>
Charitable involvement	10.9	9.6	16.0	351.5*
Equanimity	14.3	13.2	18.0	170.7*
Religious skepticism	16.0	17.9	33.0	116.9*
Religious commitment	38.0	34.2	52.0	94.9*
Spirituality	31.0	29.1	47.0	80.4*
Aesthetically based spiritual experience	6.9	6.4	12.0	66.0*
Spiritual quest	26.2	25.0	38.0	47.3*
Compassionate self-concept	22.9	22.2	30.0	43.6*
Religious/social conservatism	15.1	14.2	24.0	40.5*
Religious engagement	19.4	18.1	40.0	34.5*
Social activism	19.7	18.8	33.0	34.4*
Spiritual/religious growth	1.1	9.8	15.0	16.3*
Spiritual struggle	8.8	8.5	15.0	12.2*

*ANOVA indicates significant difference at $p < .001$.

Table 2 Gender comparison of change in importance of “integrating spirituality into my life”.

Integrating spirituality is...	2000			2003		
	Men	Women	Difference	Men	Women	Difference
Essential	23	29	+6	27	37	+10
Very important	26	24	-2	26	25	-1
Somewhat important	30	29	-1	25	24	-1
Not important	21	18	-3	22	14	-8

Furthermore, it is well documented that students’ religious involvement declines considerably during college and that religiousness and spirituality are highly correlated in samples of college students (Bryant et al. 2003). Thus, students may perceive their weakened religious participation as a relevant indicator of their spirituality and assess themselves accordingly. In other words, although students may aspire to a spiritual life, the changes in religious activity as they begin college may cause many to doubt their spiritual maturity.

For women, there was a greater loss of spiritual “confidence” over time than there was for men, which resulted in a 2003 gender gap. Women became more apt than men to classify their spirituality as “average” relative to their peers, whereas men became less likely to do so. Yet, men tended more toward rating their spirituality in the “lowest 10%” compared to peers over 3 years time than did women. Overall, it seems that women’s inclinations are to avoid the extremes in their self-assessments, whereas greater numbers of men come to identify as either very spiritual or very unspiritual.

Factors that Influence Spiritual Development: Regression Results

What accounts for the differences between women and men observed across numerous spiritual dimensions and changes during college? Why do men and women exhibit different levels of commitment to spirituality? The regressions

illuminate the various contributors to these differences and identify the personal and social forces that play a significant role in the spiritual lives of young adults. It is important to note that, in light of the general direction of change described above, positive coefficients in the “integrating spirituality into my life” regression are indicative of variables that enhanced even further students’ already growing commitment to this goal, whereas negative coefficients indicate variables that curtailed the generally positive change. Moreover, in the “spirituality self-rating” regression, positive coefficients point to variables that served to curb the downward trend, whereas negative coefficients reflect variables that made the downward trend even more pronounced.

Tables 4 and 5 show unstandardized *b*-coefficients for women and men in addition to *t* values. The *t* values significant at $p < .001$ are indicated with an asterisk. A significant *t* value suggests that the given variable had a statistically significant *different* effect on women’s spirituality than it did on men’s. The discussion of results will focus only on variables with *t* values that are significant or approach significance, as well as on variables that appear to significantly affect both men and women similarly.

Integrating Spirituality into My Life

The independent variables that entered regression 1 explained 62% of the variance among women and 60% of the variance among men. Regarding the predictors of the

Table 3 Gender comparison of change in self-rated spirituality.

Spirituality compared to peers...	2000			2003		
	Men	Women	Difference	Men	Women	Difference
Highest 10%	15	15	0	13	9	-4
Above average	29	35	+6	24	31	+7
Average	37	34	-3	32	36	+4
Below average	13	14	+1	20	19	-1
Lowest 10%	7	3	-4	11	4	-7

Table 4 Predictors of “integrating spirituality into my life”.

Variable	Unstandardized coefficients		
	Men	Women	t value
Goal: Integrate spirituality into my life (pre-test)	.51*	.61*	-3.47*
Religion: Protestant	.50*	.21*	3.68*
Religion: Islamic	-.93*	.29	-3.68*
Religion: Roman Catholic	.23*	.14	1.07
Race: Black/African American	-.07	.29*	-2.71
Attended evangelical institution	.20	.13	.43
Attended nonsectarian institution	-.06	-.27*	2.63
Peer environment: Integrating spirituality into life	.26	.12	1.22
Prayed	.28*	.28*	.37
Religious Engagement	.09*	.07*	3.02
Discussed meaning of life with friends	.23*	.28*	-1.01
Had many religious friends	.08*	.17*	-4.44*
Hours per week: Studying/homework	-.08*	-.01	-3.91*
Discussed religion/spirituality in class	.27*	.19*	1.27
Charitable involvement	.08*	.10*	-1.21

* $p < .001$ $R^2 = .60$ (Men); $.62$ (Women)

goal to “integrate spirituality into my life,” it appears that women predisposed to value this goal upon entry to college continued to value it 3 years later. The same was true for men, but to a lesser extent. That is, men were not as influenced as were women by the personal inclinations they demonstrated at the start of college. Furthermore, men’s religious preferences played a greater role in commitment to spirituality than did women’s, such that being Protestant had a stronger positive effect on men’s than on women’s desire to integrate spirituality, and being Islamic had a significant negative effect on men’s spirituality² (whereas for women the effect of being Islamic was nonsignificant but positive). Among women, being Black/African American was positively associated with integrating spirituality into life, whereas for men the relationship was nonsignificant and negative. This gender difference was not significant, but approached the set p value.

Aspects of the college environment and forms of involvement also showed notable differences in their effects on men and women. Indicative of the relationship between women’s spiritual growth and connectedness to others, surrounding oneself with friends of the same religion had a stronger influence on women’s spirituality than on men’s. Devoting a considerable number of hours per week to studying and homework negatively related to men’s goal to integrate spirituality into life, an association not found among the women. The t values of two additional variables

approached significance and warrant mention: Attending a nonsectarian institution served to curb spiritual growth for women more so than for men, whereas being religiously engaged (e.g., attending religious services, joining a religious organization on campus) had more positive implications for men’s spirituality than for women’s. Other forms of college involvement that had similar, positive relationships to spirituality across gender include prayer, discussing the meaning of life with friends, discussing religion/spirituality in class, and charitable involvement.

Self-rated Spirituality

The second regression equation explained 53% of the variance in self-rated spirituality for both women and men. The pre-test was a significant predictor of the outcome for both groups. Being Protestant or Roman Catholic was slightly more predictive of men’s self-rated spirituality than women’s, although the gender differences merely approached significance in both cases. In addition, having many religious friends again appeared to have stronger, positive implications for women’s spirituality than for men’s. One of the most striking findings relates to majoring in one of the science fields: Men who selected a science major tended to experience greater-than-expected declines in their spiritual self-perceptions, but women were minimally impacted by majoring in science (the coefficient for women was actually positive). Beyond this, differences in the coefficients for two other variables approached significance. First, prayer was a stronger predictor of men’s than of women’s increased spirituality self-ratings.

² This finding should be interpreted with caution because it is based on just 17 Islamic students in the sample.

Table 5 Predictors of self-rated spirituality.

Variable	Unstandardized coefficients		
	Men	Women	<i>t</i> value
Self-rated spirituality (pre-test)	.49*	.51*	-.60
Religion: Protestant	.47*	.19*	3.27
Political orientation	-.14*	-.08	-1.29
Religion: Roman Catholic	.28*	.08	2.15
Attended evangelical institution	.47*	.39*	.64
Major: Science	-.21*	.09	-3.68*
Prayed	.30*	.26*	2.26
Religious Engagement	.08*	.08*	.30
Hours per week: Watching TV	-.04	-.04*	-.32
Had many religious friends	.08*	.16*	-3.84*
Charitable involvement	.05*	.04*	.71
Spiritual struggle	-.01	-.04*	2.27
Discussed meaning of life with friends	.23*	.23*	-.13
Discussed religion/spirituality in class	.30*	.27*	.43

* $p < .001$ $R^2 = .53$ (Men); $.53$ (Women)

Second, spiritual struggle had a greater likelihood of impairing women's than men's spiritual self-assessments.

A number of additional variables influenced women and men in similar ways. Attending an evangelical college or university, being religiously engaged, charitable involvement, discussing the meaning of life with friends, and discussing religion/spirituality in class showed comparable positive relationships to self-rated spirituality regardless of gender.

Discussion

Taken together, the findings from the present study point to gender differences across a number of spiritual and religious constructs and to unique patterns of change for men and women during the college years. Moreover, various student characteristics and some aspects of college life appear to direct men's and women's spiritual development in different ways. Yet, in a few respects, college involvement impacts both sexes similarly. Five primary findings emerged from the present study. First, as indicated (or implied) by the literature (Ballou 1995; Buchko 2004; Francis 1997; Neill and Kahn 1999; Ochs 1983; Ozorak 2003; Randour 1987; Smith et al. 2002; Smith and Denton 2005; Stark 2002; Thompson and Remmes 2002), the findings presented here suggest that women are more spiritually and religiously inclined than are men. All 13 factor scales were found significantly to differentiate men from women; some of the most robust differences occurred in charitable involvement, equanimity, and religious skepticism. However, this conclusion should not be adopted

uncritically. Do men and women actually express different degrees of spirituality? Or do the differences reflect underlying definitions of spirituality and survey items that appeal primarily to women? As notions of spirituality become increasingly imbedded within popular culture, do women feel inclined to say that they are spiritual and compassionate because they believe that these are qualities they *should* endorse? Likewise, do men hesitate to describe themselves in such a way because of the societal pressures and expectations they do or do not face? These issues necessitate further study that delves more deeply and qualitatively into what the concept of "spirituality" means to women and men and how spiritual qualities manifest in ways associated with gender. It is quite possible that the language used to assess spirituality in this and other studies inaccurately reflects the spiritual dimensions relevant to and present in the lives of men. As King (1995) suggested, "feminist critical analysis has called into question the false universalism of androcentric thinking. Women must not commit the mistake now of constructing a new, false universalism of a different sort on the basis of the female experience alone" (p. 30). As such, a consideration of both sexes in the construction of spiritual definitions is essential.

Although significant differences between the sexes materialized on numerous spiritual characteristics, the second major finding is grounded in observed similarities in the activities that relate to changes in spirituality during college. Discussions of a spiritual nature (whether with friends or in classroom contexts) and charitable involvement are positively associated with *both* men's and women's spiritual development. The effects of these activities are uniform perhaps because of the universally

powerful ways in which they expose students to diverse viewpoints, different ways of life, and new perspectives on the world and social issues. Such encounters can have dramatic repercussions for students regardless of gender. Altogether, gender similarities like these are important to note as they highlight equally valuable ways to engage women and men spiritually.

Third, religious identity seems more strongly linked to men's spirituality than to women's. For example, being Protestant relates to an enhanced sense of commitment to integrating spirituality into one's life among men, whereas being Catholic is a significant predictor of both spiritual commitment and spiritual self-perceptions for men (but not for women). Although a theoretical framework to ground this finding does not currently exist, it may be that religious identity, in this case a specifically Christian religious identity, serves as the conduit through which men come to express their spiritual selves and a backbone that provides structure and definition to what is amorphous and undefined. Perhaps women's spirituality assumes greater flexibility in the dynamic interface with religious identity such that spiritual commitments and goals may or may not exist within a religious framework. Given the negative images of womanhood presented in myriad religious contexts and the sense of contradiction and disillusionment they may introduce into the lives of women, an adaptable approach to defining spirituality may enable women to identify as spiritual without necessitating the concurrent development of a particular religious identity. Thus, it may be the unique experiences that women and men have with religion—whether affirming or devaluing—that determine how religious identity informs their spirituality. As women have historically struggled with religious inequalities, it is logical to assume that their conceptualization of spirituality has been impacted by perceptions of, or direct encounters with, oppressive circumstances in a way that men's conceptualization of spirituality has not. To test these speculations empirically, future research ought to explore further the connection (and disconnection) between religious identity and spirituality to understand how these constructs are situated in men's and women's lives: Do women, more so than men, consider a religious identity as "optional" in the quest for spiritual fulfillment? If so, what contributes to this perspective?

A fourth major finding of the study is that two key aspects of the academic experience in college are negatively associated with men's spirituality: hours per week spent studying and doing homework assignments and majoring in one of the scientific fields. These data beg the question of how the nature of intellectual and scientific pursuits detracts men from spiritual goals and self-perceptions and why women are apparently unaffected by such influences. Could it be that men become more entrenched than women do in

the scientific culture—which may be antithetical to spirituality—when they major in science? As past research has demonstrated women's marginalization in scientific disciplines (Astin and Sax 1996; Kennedy and Parks 2000), it is possible that women's distance from core peer and faculty networks diminishes the negative effect of that culture on their spirituality. We have seen that men tend to exhibit a greater degree of skepticism than do women, a characteristic that may be aggravated by fields where skepticism is valued and encouraged. Ballou's (1995) perception of the anti-spiritual ties that bind masculinity and scientific empiricism seems to resonate with the findings reported here.

The fifth finding underscores the significance of peer group effects on women's spirituality. Women with many close religious friends—friends who share the same beliefs; are involved in a religious organization on campus; and attend church, temple, or other place of worship—became increasingly committed to integrating spirituality into their lives and more prone to rate themselves as "spiritual" in relation to others. The effects of religious friends on men were similar in direction, but not as strong. Parks (2000) related Chodorow's (1978) theoretical contributions to a framework for understanding the development of the self in college students: "For males, therefore, a central task in becoming a self is separation or differentiation, going forth and heading out. In contrast, for females the task of becoming a self requires identification with, attachment, and connection" (p. 49). If such assertions are applied to the data from the present study, it may be that women's strong allegiance to a set of religious friends is indicative of their simultaneous investment in, and attachment to, a religious community that in turn has an intrinsic impact on their spiritual self-perceptions. For men, if indeed they differentiate from even their closest friends, the relationships fostered with religious peers may not translate into deep community devotion and engagement, and thus result in fewer opportunities for spiritual influence.

Furthermore, women may experience greater social pressure to conform to the expectations of their religious friends. In adopting a spiritual persona, women may be responding to group norms with respect to internalizing and reflecting the traits that "good" women should exhibit. The pressure for men to assume socially desirable characteristics (spirituality in this case) may not be as strong in religious peer groups that potentially hold a different set of expectations for men's and women's conformity and behavior. In the end, perhaps the results of the present study lend further support to the perceived relational nature of women's spirituality. However, the measure used in the present study—number of close religious friends—is not a robust indicator of relational depth and quality. As such, further assessments of the degree to which women's spirituality

emphasizes and is influenced by relationship—and how relationships factor into men’s spirituality—are needed.

In short, the data reported here suggest a number of areas that deserve further investigation: the apparent gender differences in spiritual qualities; the connection between men’s spirituality and religious identity; the negative influence of academic forces, particularly science involvement, on men’s spirituality; and women’s spiritual growth in conjunction with their friendships to religious peers. For the most part, these questions will be best examined qualitatively. Indeed, quantitative analyses on such a complex subject tell part of the story for a large group of individuals, but fall short of unraveling the multifaceted strands of meaning that constitute spirituality in the lives of women and men. Still, despite the present study’s limited ability to measure the construct of spirituality in all of its complexity, the results do provoke new ways of understanding gendered patterns in development across these elusive dimensions, encourage critical reflection on the meaning and validity of gender differences in spirituality, and provide both tests of previous claims and hypotheses for future work.

Acknowledgement The author thanks the Spirituality in Higher Education project’s co-principal investigators, Alexander Astin and Helen Astin, and Jennifer Lindholm, the project director, for the insight they provided throughout the preparation of this manuscript. The Spirituality in Higher Education project, on which this study is based, is funded by a grant from the John Templeton Foundation.

References

- Astin, A. W. (1993). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. Phoenix, AZ: Oryx Press.
- Astin, H. S., & Sax, L. J. (1996). Developing scientific talent in undergraduate women. In C. Davis, A. Ginorio, C. Hollenshead, B. Lazarus, & P. Rayman (Eds.), *The equity equation: Women in science, mathematics, and engineering* (pp. 96–121). San Francisco: Jossey-Bass.
- Ballou, M. (1995). Women and spirit: Two nonfits in psychology. *Women & Therapy, 16*(2/3), 9–2.
- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women’s ways of knowing: The development of self, voice, and mind*. New York: Basic Books.
- Bryant, A. N., Choi, J. Y., & Yasuno, M. (2003). Understanding the religious and spiritual dimensions of students’ lives in the first year of college. *Journal of College Student Development, 44*, 723–745.
- Buchko, K. J. (2004). Religious beliefs and practices of college women as compared to college men. *Journal of College Student Development, 45*, 89–98.
- Carroll, M. P. (2004). Give me that ol’ time hormonal religion. *Journal for the Scientific Study of Religion, 43*, 275–278.
- Chodorow, N. (1978). *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley, CA: University of California Press.
- Fowler, J. W. (1981). *Stages of faith: The psychology of human development and the quest for meaning*. San Francisco: Harper & Row.
- Francis, L. J. (1997). The psychology of gender differences in religion: A review of empirical research. *Religion, 27*, 81–96.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women’s development*. Cambridge, MA: Harvard University Press.
- Hill, P. C., Pargament, K. I., Hood, R. W., Jr., McCullough, M. E., Swyers, J. P., Larson, D. B., et al. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour, 30*, 51–77.
- Hunt, M. E. (1995). Psychological implications of women’s spiritual health. *Women & Therapy, 16*(2/3), 21–32.
- Josselson, R. (1987). *Finding herself: Pathways to identity development in women*. San Francisco: Jossey-Bass.
- Kanis, S. (2002). Theobiology and gendered spirituality. *American Behavioral Scientist, 45*, 1866–1874.
- Kaschak, E. (Ed.) (2001). *The invisible alliance: Psyche and spirit in feminist therapy*. Binghamton, NY: Haworth Press.
- Kennedy, H. L., & Parks, J. (2000). Society cannot continue to exclude women from the fields of science and mathematics. *Education, 120*, 529–537.
- King, U. (1989). *Women and spirituality: Voices of protest and promise*. London: Macmillan.
- King, U. (Ed.) (1995). *Religion and gender*. Oxford: Blackwell.
- Knox, D., Langehough, S. O., Walters, C., & Rowley, M. (1998). Religiosity and spirituality among college students. *College Student Journal, 32*, 430–432.
- Love, P. G. (2001). Spirituality and student development: Theoretical connections. In M. A. Jablonski (Ed.), *The implications of student spirituality for student affairs practice: New directions for student services* (pp. 7–16). San Francisco: Jossey-Bass.
- Love, P. G. (2002). Comparing spiritual development and cognitive development. *Journal of College Student Development, 43*, 357–373.
- Love, P. G., & Talbot, D. (1999). Defining spiritual development: A missing consideration for student affairs. *National Association of Student Personnel Administrators Journal, 37*, 361–375.
- Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students’ intellectual development*. San Francisco: Jossey Bass.
- Matlin, M. W. (2000). *The psychology of women* (4th ed.). Fort Worth, TX: Harcourt.
- Miller, J. B. (1976). *Toward a new psychology of women*. Boston: Beacon Press.
- Miller, A. S., & Hoffmann, J. P. (1995). Risk and religion: An explanation of gender differences in religiosity. *Journal for the Scientific Study of Religion, 34*, 63–75.
- Neill, C. M., & Kahn, A. S. (1999). The role of personal spirituality and religious social activity on the life satisfaction of older widowed women. *Sex Roles, 40*, 319–329.
- Ochs, C. (1983). *Women and spirituality*. Totowa, NJ: Rowman & Allanheld.
- Ozorak, E. W. (1996). The power, but not the glory: How women empower themselves through religion. *Journal for the Scientific Study of Religion, 35*, 17–29.
- Ozorak, E. W. (2003). Culture, gender, faith: The social construction of the person-God relationship. *International Journal for the Psychology of Religion, 13*, 249–257.
- Parks, S. D. (2000). *Big questions, worthy dreams: Mentoring young adults in their search for meaning, purpose, and faith*. San Francisco: Jossey-Bass.
- Randour, M. L. (1987). *Women’s psyche, women’s spirit: The reality of relationships*. New York: Columbia University Press.
- Ruether, R. R. (Ed.) (1974). *Religion and sexism: Images of women in the Jewish and Christian traditions*. New York: Simon and Schuster.

- Smith, C., & Denton M. L. (2005). *Soul searching: The religious and spiritual lives of American teenagers*. New York: Oxford University Press.
- Smith, C., Denton, M. L., Faris, R., & Regnerus, M. (2002). Mapping American adolescent religious participation. *Journal for the Scientific Study of Religion, 41*, 597–612.
- Stark, R. (2002). Physiology and faith: Addressing the “universal” gender difference in religious commitment. *Journal for the Scientific Study of Religion, 41*, 495–507.
- Taylor, S. E., Klein, L. C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A. R., & Updegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review, 107*, 411–429.
- Thompson, E. H., Jr., & Remmes, K. R. (2002). Does masculinity thwart being religious? An examination of older men’s religiousness. *Journal for the Scientific Study of Religion, 41*, 521–532.