

2004 College Students' Beliefs and Values (CSBV) Survey Methodology

This methodological report summarizes the procedures followed in designing the CSBV survey, developing the 12 “scales” to measure students’ spiritual/religious orientations, and administering the survey to entering freshmen in fall 2004.

Development of the CSBV Survey

The College Students’ Beliefs and Values (CSBV) Survey was initially developed as a four-page questionnaire and administered to a sample of college juniors in spring 2003. For the purposes of creating a longitudinal sample, these students were selected because they had already participated in the 2000 Cooperative Institutional Research Program (CIRP) annual Survey of Entering Freshmen three years earlier.

The HERI research team worked in collaboration with the Technical Advisory Panel (TAP) to design the original CSBV. The process of survey development began with an exploration of various definitions of “spirituality” proposed by scholars in business, education, and other fields. Because a number of psychologists and measurement specialists during the past decade have also attempted to develop measures of “spirituality” and “religiousness,” this critical body of work was reviewed as well. While the research team’s evaluation of these measurement tools indicated that they contain a number of interesting and potentially useful items, no single instrument appeared to be ideally suited to the purposes of this project. Among the limitations inherent in many of these instruments are the following:

- “Spirituality” is often equated with traditional religious practice and beliefs. Questions often assume (either explicitly or implicitly) a monotheistic/Judeo-Christian belief system.
- No distinction is made between one’s “spirituality” and one’s theological perspective
- No distinction is made between “inner” and “outer” manifestations of spirituality, i.e.,

between spiritual attitudes/beliefs/perspectives and spiritual action or behavior.

In developing the new survey instrument the research team thus sought to design a set of questions that would satisfy the following requirements:

- All students – regardless of their particular theological/metaphysical perspective or belief system – should be able to respond in a meaningful way.
- Both spiritual beliefs/perspectives and spiritual practices/behaviors would be covered.
- The instrument would accommodate those who define their spirituality primarily in terms of conventional religious beliefs and practices as well as those who define their spirituality in other ways.
- The instrument would be as “user-friendly” as possible, that is, it would be of reasonable length and as free as possible of esoteric or ambiguous terminology.

One key resource was Hill and Hood’s (1999) comprehensive analysis of 125 different scales that had been developed in this field. The HERI research team made at least a cursory examination of every scale and every item and also relied on several reviews that discuss various measurement problems inherent in most of these instruments: ceiling effects, social desirability, and lack of precision in defining the constructs that each scale purports to measure. This preliminary work resulted in the identification of eleven content areas or “domains” to be considered in designing items and scales to measure spirituality and religiousness:

- Spiritual outlook/orientation/worldview
- Spiritual well-being
- Spiritual/religious behavior/practice
- Self-assessments (of spirituality and related traits)
- Compassionate behavior
- Spiritual quest

- Spiritual/mystical experiences
- Facilitators/inhibitors of spiritual development
- Theological/metaphysical beliefs
- Attitudes toward religion/spirituality
- Religious affiliation/identity

Based on the analysis of existing scales and items, the HERI research team selected a large number of items that appeared to cover one or more of these content domains. In addition to editing many of these items, the team also developed a number of new items. Incorporating the feedback from the TAP, the research team prepared a draft pilot survey instrument. Throughout this process, TAP members and HERI researchers served as “judges” in identifying relevant domains and in examining each potential item that might be appropriate to a given domain. Because most domains had more items than needed, final items were selected primarily on the basis of inter-judge reliability.

The final pilot questionnaire included approximately 175 items having to do with spirituality and religion, 50-60 other items covering students’ activities and achievements since entering college (e.g., participation in student organizations, college GPA), and posttests on selected items from the freshman questionnaire that these same students had completed three years earlier in fall 2000 (e.g., importance of “helping others in difficulty”).

The fall 2004 CSBV survey, which was administered to entering first-year students as a two-page addendum to the four-page CIRP Freshman Survey, was a modified version of the pilot survey described above. The research team again partnered with the TAP to modify the original CSBV pilot questionnaire primarily with respect to cutting the length from four pages to two pages and ensuring that items were appropriate for individuals who had not yet attended college. Approximately 30 CSBV items were included in the regular 4-page CIRP portion of the

questionnaire, and several other items that focused on college experiences (e.g., interactions with faculty, self-perceived changes in college, involvement in college activities and clubs) were omitted. In determining which of the remaining items to retain in the new two-page CSBV, priority was given to those constituting factor scales derived from the pilot study (described below). New items intended to measure developmental issues relevant to the lives of young adults were added to serve as pre-tests for future longitudinal follow-ups (e.g., sense of obligation to follow parents' religious practices, feelings about "security" versus "doubt" versus "seeking" within one's spiritual life). The revised CSBV also included a new question pertaining to the level of importance students assign to various aspects of college culture (e.g., "helps you develop your ability to think critically," "encourages personal expression of spirituality," "respects diverse perspectives"). In total, the two-page CSBV addendum to the 2004 CIRP Freshman Survey included 129 items. And, as already indicated, the four-page CIRP incorporated approximately 30 additional CSBV items.

Development of "Scales" to Measure Spiritual/Religious Development

Following the administration of the CSBV pilot survey in spring 2003, the HERI research team performed a number of preliminary analyses of the survey data in order to determine the feasibility of developing "scales," which would combine several items with similar content. Scales can serve at least two purposes: (1) To develop more reliable measures of the relevant constructs under study, and (2) To facilitate the task of interpreting results. Given that there is likely to be a good deal of redundancy in the students' responses to 175 different items, it becomes much easier to make sense out of the results if these items can be reduced to a much smaller number of multi-item scales. For these purposes we relied on the technique of factor analysis (Principal Components factor extraction with Varimax rotation), a procedure that examines the correlations among a set of variables (in this case, individual questionnaire items)

with the aim of reducing the variables to a smaller set of more general “factors.” In many respects this was a trial and error process in which we sought to identify clusters of items that had consistent and coherent content and that simultaneously demonstrated a high degree of statistical internal consistency.

Our first task was to sort the 175 items into broad categories. Initially we identified seven a priori clusters of items that were hypothesized to represent the following constructs: conservative Christian, liberal Christian, “cultural creative” (following Paul Ray’s research), well-being, religious skepticism, self perceived changes, and self-ratings. The remaining large pool of items was separated into two large groups: items having to do with “interior” values, beliefs, and perceptions, and items having to do with “exterior” behaviors, experiences, and actions. Separate factor analyses were performed on each of these nine groups of questionnaire items. Many factor analyses were repeated rotating different numbers of items in order to arrive at the solution that demonstrated both the best simple structure and the most coherence. Once a promising potential scale was identified, a reliability analysis was performed in order to eliminate items that were not contributing to scale reliability. The resulting scale was then correlated with other items in the questionnaire in order to (a) identify other possible items that could be added to the scale and (b) explore the scale’s construct validity, i.e., does it correlate in expected ways with other items and other scales? An item that appeared to belong on more than one scale was either omitted or placed on the scale with which it had the highest correlation.

Six of the resulting 19 scales verified constructs that were initially hypothesized: Christian Conservatism (which we later renamed “Religious/Social Conservatism”), Religious Skepticism, and Well-Being (which actually turned into four scales: Self-Esteem, Equanimity, Psychological Distress, and Spiritual Distress). (The constructs “cultural creative” and “liberal Christian” were not confirmed in the factor analysis.) Two other scales appeared to replicate

“domains” that formed part of the framework that we originally used to select the items: Spiritual Quest and Aesthetically-based Spiritual Experience.

Subsequent to the 2004 CSBV administration, the factor scales were modified on the basis of item availability on the revised two-page questionnaire. Some scales were omitted because they were not directly related to spiritual/religious constructs (e.g., Self-Esteem, Growth in Leadership) or because they were not relevant to the experiences of first-year college students (e.g., Spiritual/Religious Growth during college). A new scale – Ecumenical Worldview – was added, resulting in a total of 12 factor scales reflective of the 2004 CSBV data. The items comprising each scale are listed in the 2004 CSBV Factor Scales Table.

2004 CSBV Survey Administration

A year prior to the fall 2004 administration, the HERI research team began recruiting campuses to participate in the combined CIRP/CSBV survey. Once registration for the traditional CIRP Freshman Survey began, institutions that had expressed interest in the CSBV earlier in the year were invited to participate. In addition, as other campuses registered for the CIRP, they were subsequently contacted by the research team via email and asked to also consider registering for the CSBV special addendum at no cost beyond their normal CIRP fees.

Altogether, a diverse group of 236 institutions and 112,232 students participated in the 2004 CIRP/CSBV Survey. The method of administration to entering first-year students was at the discretion of the campus, but most institutions opted to distribute the six-page paper-and-pencil survey in summer or fall to groups of students at first-year orientation or during the early weeks of the fall term.

A CSBV “normative” sample was selected on the basis of response rates for each campus. To insure representative survey responses by campus, most schools were included in the normative sample only if they had received completed surveys from at least 40 percent of their

first-time, full-time freshman class. After eliminating 27 institutions where the student participation rate was judged to be too low, a total of 98,593 students from 209 institutions was retained for inclusion in the normative CSBV sample.

Data from this normative sample were weighted to approximate the responses we would have expected had all first-time, full-time students attending baccalaureate colleges and universities across the country participated in the survey. The first step involved classifying the institutions across 13 different stratification “cells” representing various types of campuses in terms of control (public or private), religious affiliation (nonsectarian, Roman Catholic, Evangelical, or “Other” religious affiliation), and selectivity level (very high, high, medium, or low SAT composite score). Two weights were then applied. The “within-institution” weight brought the sample size up to the total number of first-time, full-time male and female students at each institution. The “between-institution” weight corrected for over- or under-sampling by institutional type such that the weighted numbers of students in each of the thirteen stratification cells reflected the proportions present in the national population of students attending all baccalaureate colleges and universities. The final weight was the product of the within- and between-institution weights.

Outcome Variables

This study presents 12 outcomes of interest which may be categorized into three broad categories.

- 1) Spiritual Factors: Spirituality, Spiritual quest, and Equanimity
- 2) Religious Factors: Religious commitment, Religious struggle, Religious engagement, Religious/social conservatism, and Religious skepticism
- 3) Related Qualities: Charitable involvement, Ethic of caring, Ecumenical worldview, and Compassionate self-concept

In this section, we detail each of the dependent measures. A descriptive summary of all 12 outcome variables can be found in Table 1, and includes sample sizes (N), minimums, maximums, means, and standard deviations (see Appendix B for more details concerning how items were scored and for distributions of students' responses).

Table 1. Descriptive Statistics for the 12 Outcome Measures (without Missing Values Replaced)

Dependent Measure	N	Minimum	Maximum	Mean	Standard Deviation
<i>Spiritual Factors</i>					
Spirituality	1000394	14.00	47.00	28.54	6.89
Spiritual quest	1040796	10.00	38.00	24.73	5.59
Equanimity	1044295	6.00	18.00	13.37	2.57
<i>Religious Factors</i>					
Religious commitment	989052	12.00	47.00	31.51	10.10
Religious struggle	1031990	7.00	21.00	11.83	2.98
Religious engagement	978935	9.00	44.00	20.70	7.91
Religious/social conservatism	1024970	7.00	24.00	14.94	4.04
Religious skepticism	1028091	9.00	33.00	17.80	5.13
<i>Related Qualities</i>					
Charitable involvement	1041900	6.00	29.00	14.13	3.88
Ethic of caring	1059731	9.00	33.00	18.49	4.41
Ecumenical worldview	964680	12.00	44.00	32.41	4.57
Compassionate self-concept	1215281	4.00	20.00	15.31	2.56

Spiritual Factors

Spirituality. The *Spirituality* outcome examines a variety of ways in which college students describe their spirituality. This is a composite measure that consists of the following 14 items ($\alpha = .88$):

- Personal goal: Integrating spirituality into my life
- Belief: We are all spiritual beings
- Belief: People can reach a higher spiritual plane of consciousness through meditation or prayer
- Self-description: Having an interest in spirituality

- Self-description: Believing in the sacredness of life
- Personal goal: Seeking out opportunities to help me grow spiritually
- Spiritual experience while: Listening to beautiful music
- Spiritual experience while: Viewing a great work of art
- Spiritual experience while: Participating in a musical or artistic performance
- Spiritual experience while: Engaging in athletics
- Spiritual experience while: Witnessing the beauty and harmony of nature
- Spiritual experience while: Meditating
- On a spiritual quest
- Self-rating: Spirituality

Spiritual Quest. The *Spiritual Quest* measure describes behaviors and goals of students who are on a spiritual quest. This outcome is a composite measure consisting of 10 items ($\alpha = .85$):

- Personal goal: Finding answers to the mysteries of life
- Personal goal: Attaining inner harmony
- Personal goal: Attaining wisdom
- Personal goal: Seeking beauty in my life
- Personal goal: Developing a meaningful philosophy of life
- Engaged in: Searching for meaning/purpose in life
- Engaged in: Having discussions about the meaning of life with my friends
- Personal goal: Becoming a more loving person
- Personal goal: Improving the human condition
- Close friends: Are searching for meaning/purpose in life

Equanimity. The *Equanimity* outcome reflects students' self-descriptions and experiences and is comprised of the following six items ($\alpha = .76$):

- Self-description: Feeling good about the direction in which my life is headed
- Experience: Felt at peace/centered
- Self-description: Being thankful for all that has happened to me
- Self-description: Seeing each day, good or bad, as a gift
- Experience: Been able to find meaning in times of hardship
- Self-description: Feeling a strong connection to all humanity

Religious Factors

Religious Commitment. The *Religious Commitment* measure examines the various ways in which students describe their commitment to religion. This is a composite measure that consists of the following 12 items ($\alpha = .96$):

- My spiritual/religious beliefs: Are one of the most important things in my life
- My spiritual/religious beliefs: Provide me with strength, support, and guidance
- My spiritual/religious beliefs: Give meaning/purpose to my life
- Belief: I find religion to be personally helpful
- Belief: I gain spiritual strength by trusting in a Higher Power
- Self-rating: Religiousness
- My spiritual/religious beliefs: Lie behind my whole approach to life
- Experience: Felt loved by God
- My spiritual/religious beliefs: Have helped me develop my identity
- Self-description: Feeling a sense of connection with God/Higher Power that transcends my personal self
- Personal Goal: Seeking to follow religious teachings in my everyday life

- My spiritual/religious beliefs: Help define the goals I set for myself

Religious Struggle. The *Religious Struggle* outcome describes the ways in which students are struggling with their current religion. This measure is comprised of seven items ($\alpha = .75$):

- Experience: Questioned your religious/spiritual beliefs
- Self-description: Feeling unsettled about spiritual and religious matters
- Experience: Struggled to understand evil, suffering, and death
- Experience: Felt angry with God
- Self-description: Feeling disillusioned with my religious upbringing
- Experience: Felt distant from God
- Experience: Disagreed with your family about religious matters

Religious Engagement. The *Religious Engagement* measure reflects students' behaviors and experiences in regards to their engagement with their current religion. This measure is a composite of nine items ($\alpha = .87$):

- Activity: Reading sacred texts
- Activity: Religious singing/chanting
- Activity: Other reading on religion/spirituality
- Experience: Attended a class, workshop, or retreat on matters related to religion/spirituality
- Experience: Attended a religious service
- Close friends: Go to church/temple/other house of worship
- Hours per week: Prayer/meditation
- Do you pray?
- Activity: Prayer

Religious/Social Conservatism. The *Religious/Social Conservatism* outcome represents values and beliefs that tend to be religiously and/or socially conservative. This outcome is comprised of the following seven items ($\alpha = .72$):

- Belief: People who don't believe in God will be punished
- Self-description: Being committed to introducing people to my faith
- Belief: If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time (reverse coded)
- Belief: Abortion should be legal (reverse coded)
- Reason for prayer: Forgiveness
- Conception of God: Father-figure
- Close friends: Share your religious/spiritual views

Religious Skepticism. The *Religious Skepticism* measure describes some ways in which students have begun to be skeptic about their religion. This is a composite measure that consists of the following nine items ($\alpha = .83$):

- Self-description: Believing in life after death (reverse coded)
- Belief: While science can provide important information about the physical world, only religion can truly explain existence (reverse coded)
- Belief: It doesn't matter what I believe as long as I lead a moral life
- Belief: What happens in my life is determined by forces larger than myself (reverse coded)
- Belief: Whether or not there is a Supreme Being doesn't matter to me
- Belief: I have never felt a sense of sacredness
- Belief: The universe arose by chance
- Belief: In the future, science will be able to explain everything

- Relationship between science and religion: Conflict; I consider myself to be on the side of science

Related Qualities

Charitable Involvement. The *Charitable Involvement* outcome reflects the various ways in which students participate in charitable activities. This measure is a composite of 11 items ($\alpha = .71$):

- Experience: Participated in community food or clothing drives
- Experience: Performed volunteer work
- Experience: Donated money to charity
- Experience: Helped friends with personal problems
- Personal goal: Participating in a community action program
- Hours per week: Volunteer work
- Community service/volunteer activity: Tutoring/teaching
- Community service/volunteer activity: Counseling/mentoring
- Community service/volunteer activity: Environmental activities
- Community service/volunteer activity: Services to the homeless
- Community service/volunteer activity: Community improvement/construction

Ethic of Caring. The Ethic of Caring measure describes a variety of goals in which students express their caring. This outcome is comprised of the following nine items ($\alpha = .79$):

- Ultimate spiritual quest: To make the world a better place
- Personal goal: Becoming involved in programs to clean up the environment
- Personal goal: Reducing pain and suffering in the world
- Personal goal: Influencing the political structure
- Personal goal: Influencing social values

- Personal goal: Helping others who are in difficulty
- Personal goal: Helping to promote racial understanding
- Personal goal: Becoming a community leader
- Engaged in: Trying to change things that are unfair in the world

Ecumenical Worldview. The *Ecumenical Worldview* outcome represents numerous ways in which students are accepting of other people, cultures, ideas, and perspectives. This measure is a composite of 12 items ($\alpha = .70$):

- Belief: All life is interconnected
- Belief: Love is at the root of all the great religions
- Belief: Non-religious people can lead lives that are just as moral as those of religious believers
- Belief: Most people can grow spiritually without being religious
- Self-description: Having an interest in different religious traditions
- Self-description: Believing in the goodness of all people
- Engaged in: Accepting others as they are
- Self-rating: Understanding of others
- Personal goal: Improving my understanding of other countries and cultures
- Important that this colleges: Respect diverse perspectives
- Reason to attend college: To make me a more cultured person
- Experience: Socialized with someone of another racial/ethnic group

Compassionate Self-Concept. The *Compassionate Self-Concept* measure is comprised of four self-descriptions ($\alpha = .78$):

- Self-rating: Kindness
- Self-rating: Compassion
- Self-rating: Forgiveness
- Self-rating: Generosity

Missing Values Analysis

In order to recover missing cases, missing values for all items that were part of any of the 12 outcome measures were replaced using SPSS's Missing Values option. Specifically, missing values were replaced using the multiple regression method. In other words, multiple regression was used for data imputation by using non-missing data to predict the values of missing data. For example, missing values for any one item that comprises any of the outcome measures were imputed using all other items which comprise any of the 12 outcome measures as predictors. Then, the new variables (with the missing values replaced) were renamed and merged into the dataset. The 12 outcome measures were then re-calculated using the items with the missing values replaced. The shorter scales – comprised of 7 items or less – used the missing values replaced if only one item was missing (i.e., Equanimity, Religious struggle, Religious/social conservatism, and Compassionate self-concept). The longer scales – comprised of more than 7 items – used the missing values replaced if one or two items were missing (i.e., Spirituality, Spiritual quest, Religious commitment, Religious engagement, Religious skepticism, Charitable involvement, Ethic of caring, and Ecumenical worldview).

Comparison of Outcome Measures Without and With Missing Values Replaced

Table 2 presents the descriptive summary of the 12 outcome measures with the missing values replaced. The descriptive statistics for the outcome measures *with* the missing values replaced is very comparable to the descriptive statistics for the outcome measures *without* the missing values replaced (see Tables 1 and 2). However, *with* the missing values replaced, the sample sizes increase notably for every outcome measure.

Table 2. Descriptive Statistics for the 12 Outcome Measures (with Missing Values Replaced)

Dependent Measure	N	Minimum	Maximum	Mean	Standard Deviation
<i>Spiritual Factors</i>					
Spirituality	1101477	14.00	47.00	28.55	6.87
Spiritual quest	1106899	10.00	38.00	24.70	5.60
Equanimity	1067096	6.00	18.00	13.37	2.57
<i>Religious Factors</i>					
Religious commitment	1075097	12.00	47.00	31.47	10.08
Religious struggle	1064729	7.00	21.00	11.83	2.98
Religious engagement	1150014	9.00	44.00	20.77	7.91
Religious/social conservatism	1134547	7.00	24.00	14.92	4.02
Religious skepticism	1093301	9.00	33.00	17.81	5.12
<i>Related Qualities</i>					
Charitable involvement	1102286	6.00	29.00	14.12	3.87
Ethic of caring	1205679	9.00	33.00	18.46	4.41
Ecumenical worldview	1126271	12.00	44.00	32.36	4.57
Compassionate self-concept	1223409	4.00	20.00	15.31	2.56

Table 3 compares the percentages of students for each outcome measure within each of the three categories: low, medium, and high. The percentages for each of the outcome measures *with* the missing values replaced are very comparable to the percentages for the outcome measures *without* the missing values replaced. Thus, we are confident in utilizing our outcome measures with the missing values replaced.

Table 3. Comparison of Low, Medium, and High Categories (Percentages)

Factor	<i>Without</i> missing values replaced			<i>With</i> missing values replaced		
	Low	Med	High	Low	Med	High
<i>Spiritual Factors</i>						
Spirituality	25	58	17	24	59	17
Spiritual quest	23	52	25	23	52	25
Equanimity	20	58	22	20	58	22
<i>Religious Factors</i>						
Religious commitment	17	60	23	17	60	23
Religious struggle	36	53	11	36	53	11
Religious engagement	24	56	20	24	57	20
Religious/social conservatism	16	68	16	16	69	16
Religious skepticism	24	59	17	24	59	17
<i>Related Qualities</i>						
Charitable involvement	27	60	14	27	60	13
Ethic of caring	26	61	13	26	61	13
Ecumenical worldview	19	67	14	19	68	13
Compassionate self-concept	25	45	30	25	45	30

As a final check, we compared the intercorrelations among all 12 outcome measures before and after the missing values replacement (see Tables 4 and 5). The intercorrelations after the missing values replacement are very comparable to the intercorrelations before the missing values replacement. In fact, when there is a change in the intercorrelations, the change is very small (all the differences are only 0.01 in magnitude). And, there is no systematic increase or decrease in the correlations. In some cases, the correlation increases whereas in others the correlation decreases.

Table 4. Intercorrelations Among the 12 Outcome Measures (without Missing Values Replaced)

	Spirituality	Spiritual quest	Equanimity	Religious commitment	Religious struggle	Religious engagement	Religious/social conservatism	Religious skepticism	Charitable involvement	Ethic of caring	Ecumenical worldview
Spirituality	1.00										
Spiritual quest	0.58	1.00									
Equanimity	0.58	0.48	1.00								
Religious commitment	0.79	0.36	0.54	1.00							
Religious struggle	0.19	0.33	0.10	0.04	1.00						
Religious engagement	0.74	0.30	0.46	0.82	0.07	1.00					
Religious/social conservatism	0.61	0.20	0.39	0.78	0.01	0.77	1.00				
Religious skepticism	-0.63	-0.20	-0.40	-0.77	0.06	-0.69	-0.71	1.00			
Charitable involvement	0.36	0.33	0.36	0.28	0.17	0.33	0.20	-0.17	1.00		
Ethic of caring	0.41	0.61	0.37	0.26	0.23	0.22	0.13	-0.10	0.47	1.00	
Ecumenical worldview	0.40	0.59	0.48	0.18	0.28	0.12	-0.02	-0.03	0.37	0.53	1.00
Compassionate self-concept	0.29	0.29	0.33	0.24	-0.00	0.20	0.18	-0.17	0.27	0.30	0.34

Table 5. Intercorrelations Among the 12 Outcome Measures (with Missing Values Replaced)

	Spirituality	Spiritual quest	Equanimity	Religious commitment	Religious struggle	Religious engagement	Religious/social conservatism	Religious skepticism	Charitable involvement	Ethic of caring	Ecumenical worldview
Spirituality	1.00										
Spiritual quest	0.58	1.00									
Equanimity	0.57	0.48	1.00								
Religious commitment	0.78	0.36	0.54	1.00							
Religious struggle	0.19	0.33	0.10	0.04	1.00						
Religious engagement	0.73	0.30	0.46	0.81	0.08	1.00					
Religious/social conservatism	0.61	0.20	0.39	0.78	0.01	0.77	1.00				
Religious skepticism	-0.62	-0.20	-0.39	-0.76	0.06	-0.68	-0.71	1.00			
Charitable involvement	0.35	0.33	0.36	0.28	0.18	0.33	0.20	-0.17	1.00		
Ethic of caring	0.41	0.61	0.37	0.25	0.24	0.23	0.13	-0.09	0.47	1.00	
Ecumenical worldview	0.40	0.59	0.48	0.18	0.27	0.13	-0.02	-0.03	0.37	0.53	1.00
Compassionate self-concept	0.29	0.29	0.33	0.24	0.00	0.21	0.18	-0.17	0.27	0.29	0.34

Table 4. Intercorrelations Among the 12 Outcome Measures (without Missing Values Replaced)

	Spirituality	Spiritual quest	Equanimity	Religious commitment	Religious struggle	Religious engagement	R cor
Spirituality	1.00						
Spiritual quest	0.58	1.00					
Equanimity	0.58	0.48	1.00				
Religious commitment	0.79	0.36	0.54	1.00			
Religious struggle	0.19	0.33	0.10	0.04	1.00		
Religious engagement	0.74	0.30	0.46	0.82	0.07	1.00	
Religious/social conservatism	0.61	0.20	0.39	0.78	0.01	0.77	
Religious skepticism	-0.63	-0.20	-0.40	-0.77	0.06	-0.69	
Charitable involvement	0.36	0.33	0.36	0.28	0.17	0.33	
Ethic of caring	0.41	0.61	0.37	0.26	0.23	0.22	
Ecumenical worldview	0.40	0.59	0.48	0.18	0.28	0.12	
Compassionate self-concept	0.29	0.29	0.33	0.24	-0.00	0.20	

Table 5. Intercorrelations Among the 12 Outcome Measures (with Missing Values Replaced)

	Spirituality	Spiritual quest	Equanimity	Religious commitment	Religious struggle	Religious engagement	R cor
Spirituality	1.00						
Spiritual quest	0.58	1.00					
Equanimity	0.57	0.48	1.00				
Religious commitment	0.78	0.36	0.54	1.00			
Religious struggle	0.19	0.33	0.10	0.04	1.00		
Religious engagement	0.73	0.30	0.46	0.81	0.08	1.00	
Religious/social conservatism	0.61	0.20	0.39	0.78	0.01	0.77	
Religious skepticism	-0.62	-0.20	-0.39	-0.76	0.06	-0.68	
Charitable involvement	0.35	0.33	0.36	0.28	0.18	0.33	
Ethic of caring	0.41	0.61	0.37	0.25	0.24	0.23	
Ecumenical worldview	0.40	0.59	0.48	0.18	0.27	0.13	
Compassionate self-concept	0.29	0.29	0.33	0.24	0.00	0.21	

Longitudinal Data Collection Procedures (2007)

In 2004, a special six-page expanded version of the annual Cooperative Institutional Research Program (CIRP) Freshman Survey that is conducted annually by UCLA's Higher Education Research Institute was administered to 112,232 entering first-year students from 236 colleges and universities nationwide. This extensive survey included questions about students' backgrounds, high school experiences, expectations about college (including majors and careers), and attitudes about social issues. In addition to the regular four page freshman survey, the instrument included a two page addendum containing 160 specially designed questions that pertained directly to students' perspectives and practices with respect to spirituality and religion. This addendum is known as the College Students Beliefs and Values (CSBV) Survey¹.

In Spring 2007, 14,527 students who were completing their junior year at a selected subsample of 148 of the original 236 institutions provided us with longitudinal follow-up survey data that included information on most of the 160 questions contained on the 2004 CIRP/CSBV Survey, thus enabling us to measure *change* in students' spiritual and religious qualities during college. This sample of respondents includes sizable numbers of students from most religious denominations and racial/ethnic groups, and their colleges represent all types of public, private nonsectarian, and religiously-affiliated (mostly Roman Catholic, mainline Protestant, and Evangelical) institutions. A complex weighting scheme was employed that allows us to estimate how the entire population of juniors attending baccalaureate institutions would have responded to the survey.

¹ Please see 2004 CSBV Survey Methodology for more information.

Development of 2007 CSBV Survey

Since the 2007 CSBV Survey was created as a follow-up to the 2004 CIRP/CSBV Survey, it was particularly important to post-test key items from the 2004 survey, including those that were used to construct the factor scales measuring different aspects of spirituality, religiousness, and related factors. To understand how students' undergraduate experiences may impact their spiritual development, questions concerning college activities, classroom teaching methods, interactions with faculty, discussions on religion and spirituality, and other academic and nonacademic experiences as well as satisfaction with college were added to the follow-up survey. The follow-up questionnaire was four pages in length, including 150 items having to do with spirituality and/or religion, 59 items covering students' activities and achievements since entering college, and post-tests on selected items from the freshman questionnaire such as student's degree aspirations and political orientation.

Data Collection Procedures

At the end of March 2007, a sample of 43,761 students from the selected 148 institutions was sent a postcard reminding them of their earlier participation in the 2004 CIRP/CSBV Survey, and alerting them that a follow-up survey packet would be arriving in the mail shortly. In early April, a packet contained a letter introducing the survey, a copy of the survey questionnaire, and a web link where students could access the survey online if they wished to do so was sent to students. A stamped return envelope was also included as well as a cash incentive of either \$2 or \$5. Several email reminders were also sent to students throughout the course of the administration and proved to be highly effective in boosting response rates.

Sample Description and Weighting

From the original sample of 43,761 potential CSBV follow-up participants, those students with undeliverable mailing addresses (including those few who had been followed up only via email but had faulty email addresses) were deleted from the mail-out sample. An additional, 3,050 students from 12 schools were eliminated from the mail-out sample due to systematic errors in their addresses or because the institutions had response rates of less than 25%, thus leaving 36,703 eligible participants. The final sample of respondents from this group consisted of 14,527 students from 136 institutions, reflecting an overall response rate of 40 percent.

The respondents' answers were weighted to reduce the effects of response bias. Because we had extensive personal information from their 2004 freshman survey available on each respondent and non-respondent, we were able to devise a correction for response bias based on student characteristics. Response bias was also corrected based on differential sampling of students from different types of institutions. These weighting procedures were conducted separately for men and women.