

## **Development of the College Students' Beliefs and Values (CSBV) Survey**

The CSBV pilot survey was designed as a longitudinal follow up of third-year undergraduate students who had first enrolled as freshmen at a diverse sample of colleges and universities that participated in the 2000 Cooperative Institutional Research Program (CIRP) annual Survey of Entering Freshmen.

This very crucial part of the project was carried out by the HERI staff in collaboration with the Technical Advisory Panel (TAP). Developing an appropriate instrument presents a number of conceptual and technical challenges. In preparation for the first meeting of TAP, the HERI staff completed a preliminary review of the literature in order to understand the various definitions of "spirituality," which have been proposed by scholars in business, education, and other fields. The staff also developed an annotated bibliography, and one of the Astins' graduate students conducted a preliminary interview study of college undergraduates to determine what the concept of "spirituality" means to them.

A number of psychologists and measurement specialists during the past decade have attempted to develop measures of "spirituality" and "religiousness." While our review of these measurement tools indicated that they contain a number of interesting and potentially useful items, no single instrument appears 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 we 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 fashion.
- 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.

During the six months prior to the first TAP meeting, the HERI staff examined the considerable body of work that had already been done on the measurement of religiousness and spirituality. One key resource was Hill and Hood's (1999) comprehensive analysis of 125 different scales that had been developed in this field. The HERI staff made at least a cursory examination of every scale and every item. The staff 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 towards religion/spirituality
- Religious affiliation/identity

Based on the analysis of existing scales and items, the HERI staff 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 staff also developed a number of new items. These materials were then mailed to the Technical Advisory Panel prior to its first meeting in Fall 2002. Based on their feedback, a revised list of items was prepared for further review at that meeting. Following the meeting, the HERI staff prepared a draft pilot survey instrument which was mailed to the TAP for their final review. Throughout this process TAP members and HERI staff served as "judges" in identifying relevant domains and in examining each potential item that might be appropriate to a given domain. Since for most domains we had more items

than needed, final items were selected primarily on the basis of inter-judge reliability.

The final pilot instrument 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, which these same students had completed three years earlier in Fall 2000 (e.g., importance of "helping others in difficulty").

### **Development of Factor "Scales"**

Following the administration of the instrument in Spring 2003, the HERI staff 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,<sup>1</sup> 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

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<sup>1</sup> Principal components factor extraction, with Varimax rotation.

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? 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. The complete list of 19 scales, together with the items that define them, is provided in the CSBV Factor Scales Table.