

12-1979

An Examination of Scholarly Perspective, Religiosity and Factors Which Lead to Religious Change

Paul Fehrmann

Follow this and additional works at: <http://digitalcommons.wku.edu/theses>

 Part of the [Philosophy Commons](#), [Psychology Commons](#), and the [Religion Commons](#)

Recommended Citation

Fehrmann, Paul, "An Examination of Scholarly Perspective, Religiosity and Factors Which Lead to Religious Change" (1979). *Masters Theses & Specialist Projects*. Paper 2005.

<http://digitalcommons.wku.edu/theses/2005>

This Thesis is brought to you for free and open access by TopSCHOLAR®. It has been accepted for inclusion in Masters Theses & Specialist Projects by an authorized administrator of TopSCHOLAR®. For more information, please contact topscholar@wku.edu.

AN EXAMINATION OF SCHOLARLY PERSPECTIVE, RELIGIOSITY
AND FACTORS WHICH LEAD TO RELIGIOUS CHANGE

A Thesis
Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Paul G. Fehrmann
December 1979

AUTHORIZATION FOR USE OF THESIS

Permission is hereby

granted to the Western Kentucky University Library to make, or allow to be made photocopies, microfilm or other copies of this thesis for appropriate research or scholarly purposes.

reserved to the author for the making of any copies of this thesis except for brief sections for research or scholarly purposes.

Signed

Paul Fishman

Date

1-15-80

Please place an "X" in the appropriate box.

This form will be filed with the original of the thesis and will control future use of the thesis.

AN EXAMINATION OF SCHOLARLY PERSPECTIVE, RELIGIOSITY
AND FACTORS WHICH LEAD TO RELIGIOUS CHANGE

Recommended Jan 4, 1980

James A. Padgett
Director of Thesis

George J. Hines

James W. Hines

Approved January 9, 1980

James Gray
Dean of the Graduate College

Acknowledgements

Although I have experienced the usual fatigue, I must say that the present study has afforded me an opportunity to research issues of ongoing interest to me, and this research activity has not dulled my interest.

I want to thank my thesis committee, Larry Hanser, Dorsey Grice, and Sam McFarland for their support, criticism, and patience. Dialogue with each of them has been satisfying, challenging and uniquely helpful. I am particularly grateful for the guidance given me by Sam McFarland, my thesis chairman. His insistence on academic rigor has been especially gratifying, and I want to thank him again for his expressions of concern during my visits with the surgeon.

A special kind of support has come from Mom and Dad Fehrmann, Mom and Dad Ritter, Kevin, my brother, and Glenna, my sister. Then there is Mary Lou and crew, Shelley, Chuck and Kathy, the Sevals, the Wahlbergs, Aunt Claire, and quite a few other friends, and professional colleagues.

My wife, Ginny, continues to be very special to me. Ginny, thank you for your patience, your listening, and your encouragement. It has been good to have your support.

Table of Contents

	Page
Acknowledgements	iii
List of Illustrations	v
Abstract	vi
Introduction.	1
Literature Review	11
Problem	23
Method.	26
Results	31
Discussion	38
Appendix A. Survey	43
References	51

List of Illustrations

	Page
Table 1. Means, Standard Deviations, and Alpha Reliabilities for Scales Used to Test Hypotheses.	32
Table 2. Reasons For Religious Change Scale Factor Loadings	33
Table 3. Correlations between the Four Subscales of the Reasons For Religious Change Scale	34

AN EXAMINATION OF SCHOLARLY PERSPECTIVE, RELIGIOSITY
AND FACTORS WHICH LEAD TO RELIGIOUS CHANGE

Paul G. Fehrmann December 1979 54 pages
Directed by: Sam McFarland, Dorsey Grise, and Larry Hanser
Department of Psychology Western Kentucky University

As a replication and expansion of work done by Alsdurf (1977), the relations between religiosity, commitment to scholarly openness and reasons for religious change were examined through a survey of 146 students attending a South-central university. A discussion of logical and empirical studies was presented to help clarify the theses under examination, and it was maintained that this study was primarily concerned with empirical relationships. A negative correlation was obtained between scholarly openness and religiosity for the total population studied, but the correlation was weak. In contrast to expectations, a significant negative correlation between scholarly openness and religiosity was not obtained for those who reported never experiencing a significant religious change. Conflicting with Alsdurf's (1977) findings, a sinfulness factor mediating religious change was positively rather than negatively correlated with scholarly openness, and a factor assessing significant interaction with others was unrelated rather than positively correlated with scholarly openness. It was concluded that

knowing factors reported as mediating religious conversion does not provide a basis for predicting scholarly openness, but that empirically, scholarly openness and religiosity are not necessarily incompatible.

Chapter I

Introduction

There is a general view, held by many, that religion and science are incompatible. In one sense this general view suggests that there are conflicts between the claims of scientific knowledge and religious knowledge, as in some conflicting formulations of evolutionary theory and Biblical creation accounts. The incompatibility can also refer to conflict evidenced through members in one area suppressing the work being done by members in the other area, as when religious bodies suppressed the work of Galileo. A third kind of conflict might consist of opposing perspectives on the relationship of faith and reason. This kind of conflict has been pointed out by a number of scientists (White, 1960; Leuba, 1916; Stark, 1963; Barbour, 1966).

A conflict of perspectives is discussed by Stark (1963), for example. He sees the scientist's attitude toward knowledge as "grounded in skepticism and empirical rules of evidence" (p. 4). On the other hand, the religious attitude gives faith precedence over reason as a means to truth. The religious approach also involves an "ultimate commitment to a non-empirical system" (p. 4). Lehman (1972) also sees a fundamental logical incompatibility between two epistemologies. On the one hand, the scientific outlook places a high value on skepticism or suspension of belief in

given systems of knowledge. On the other hand, religion places a high value on a firm commitment to a given value orientation, set of beliefs, and given practices.

As Alsdurf (1977) suggested, a potential for significant cultural influence lies in a mutually excluding relationship between religious and scientific attitudes. Alsdurf quotes Stark as claiming that "a trend in American society is making the scientific scholar into a cultural hero" (p. 2). Stark is quoted as saying that "if by becoming a scientist a man is likely to be detached from traditional religious orientations, then we must expect that the future American society will either become increasingly irreligious, or that religions will become increasingly modified" (p. 14).

In his study, however, Alsdurf (1977) found that the relationship between scholarliness and religiosity was not necessarily one of exclusion. He found, for example, that when some of his subjects reported having become more religious, their scores for scholarliness were either negatively or positively correlated with their religiosity scores depending on the factors they listed as having been significant in their religious change. The aim of the present study is to replicate and expand Alsdurf's work on the relationship between scholarliness, religiosity, and the factors reported as important in religious change. The present study is, in part, an attempt to further test the "incompatibility thesis," held by many, that there is an incompatibility between the scholarly and religious orientations.

A second purpose is to examine some factors which might mediate the relationship between scholarly and religious orientations.

Relationship of Logical and Empirical Problems

Two issues which are integral to the assumptions of the present study require preliminary consideration. This consideration aims at clarifying the purposes of the present study.

First, some hold that logical problems cannot be solved empirically and that empirical problems cannot be solved logically. If this is true, then a second issue is raised. If the present study is an empirical study of the incompatibility problem, and if the problem is a logical one, then the present study could not result in information relevant to solving the problem. So then, do studies focusing on the incompatibility between religiosity and scholarliness focus on a logical or an empirical problem? And, is it true that logical problems cannot be solved empirically?

An answer to the first question depends on what, precisely, is being asked. If the question is asking about a possible contradiction between what is meant by the concepts of religiosity and scholarliness, then the problem is about a possible logical incompatibility. If the question is whether men can have the characteristics of being religious and being scholarly at the same time, then the question is about a possible empirical incompatibility.

Before stating what kind of incompatibility the present study is addressing, two other studies (Stark, 1963; Alsdurf, 1977) will be analyzed to determine how others have viewed the incompatibility and to suggest how empirical questions are related to logical questions.

Speaking about modern scholarship and religion, Stark sees these two as based upon conflicting methods of arriving at true beliefs.

Religion, because of its ultimate commitment to a non-empirical system, must take the position that man's reason is subordinate to faith as a means to truth. From this view, reason is at best unreliable, and at worst, sinful pride. Science, on the other hand, defines truth as that which may be demonstrated either logically or empirically, and thus opts for the supremacy of reason (p. 4).

Stark takes these different epistemologies to be contradictory "value orientations," and based on the belief that individuals cannot hold contradictory values, he says adoption of the one will mean non-adoption of the other (p. 5). And then, he continues, conceptualizing the relationship this way leads to "the level of concrete behavior, making it possible to investigate empirically whether scientific and religious outlooks are actually incompatible" (p. 5).

It appears clear that Stark believes his was an empirical study. He was attempting to determine whether men can in fact hold to conflicting methods of arriving at truth. In addition, however, he refers to a logical incompatibility between faith and reason when he speaks of contradicting values and direct conflicts between the two approaches (pp. 4,5). This conflict is, of course, the stated basis for expecting the

empirical incompatibility, and though Stark doesn't clearly specify what constitutes the logical incompatibility, there are perhaps three possible formulations.

First, one might perceive a contradiction between the two viewpoints in that the scientific approach tries to base its beliefs only on empirical data and religion affirms non-empirical truths. In speaking about what he means by religion, Stark states that he is concerned with "faiths which posit the existence of a relevant supernatural being . . ." (p. 4). But positing such a being is not contradictory to empirical data. Though it appears to go beyond empirical data, it is not necessarily an irrational contradiction of data observations.

A second place one might perceive a contradiction is with a perspective of faith which holds that inductive and deductive reasoning processes are not to be trusted at all. This would be a logical contradiction of scientific trust in these reasoning processes. But such a conceptualization of faith seems odd. Surely it can be seen that those who do try to have this kind of faith do use induction and deduction to acquire or explain the beliefs that they have, though they might then try to hold onto the beliefs against all suggestions for change. Thus when Stark speaks of faith seeing reason as unreliable or of reason being subordinated to faith, it doesn't seem that he can be holding that the religious believer does not trust reason at all. Therefore, the contradiction formulated on the basis of such a view of faith

is probably not the contradiction leading Stark to expectations of an empirical incompatibility.

A third way that a logical contradiction could arise is with a believer holding on to a belief regardless of what empirical evidence there was to suggest its invalidity. Here the religious contention would not be that reason is not to be trusted at all, but that with regard to certain beliefs, such as a belief in a relevant supernatural being, one holds them no matter what changes are recommended as a result of rational inquiry. Though Stark does not clearly speak of faith holding out against reason in this way, this might be the way he views it. This view of faith might be logically incompatible with the idea of trusting reason, and such a logical incompatibility could lead one to expect to find an empirical incompatibility between the characteristics of having faith and being scholarly.

To expect such an empirical incompatibility, though, some further clarification of the logical incompatibility must be made. First, those concerned with the incompatibility thesis are not interested in the conflict between two different men having opposing viewpoints. They're interested, rather, in the possible excluding relationship of opposing viewpoints in a given individual. There is nothing contradictory in the idea of one individual having one approach to truth and another individual having another opposing approach. So an incompatibility statement would

have to refer to 'an individual,' it seems, if it is to be a statement of a logical incompatibility.

Second, it seems that an accurate incompatibility statement would need reference to time, because it does not seem contradictory for an individual to have one approach to faith and reason at one time and another approach at another time. The incompatibility statement must refer to an individual's having contradictory approaches to belief at the same time.

Given these qualifications, it follows that a given individual cannot have an approach wherein he is open to changing his religious beliefs as evidence and reason dictates and yet is closed at the same time. This is a logical incompatibility from which expectations of empirical incompatibility might be derived.

Alsdurf also speaks of examining the "relationship between a scholarly outlook and religious faith" (p. 21). And in a statement of his research problem he speaks of looking at the "incompatibility between the scholarly outlook and religious faith" which previous studies have examined (p. 20). So he also appears interested in religiosity as the kind of faith construed as logically incompatible with a scholarly outlook. Alsdurf clearly sees himself as collecting data to learn of a possible empirical incompatibility between the scholarly outlook and religious faith.

Earlier, the issue was raised concerning the belief that empirical studies cannot be used to solve logical problems. The reasoning which leads us to believe that logical truths cannot be proven or disproven empirically can perhaps be clarified by examining this statement: an individual cannot be open and closed to changing his religious beliefs at the same time. If we were to measure being open to change in one's belief and being closed, and found that individuals scored high on both measures, we would probably conclude that we did not accurately measure either being open or being closed. We would assume it more likely that we made some mistake in measurement than that something both is and is not at the same time. So we say that empirical studies cannot disprove logical truths. If, on the other hand, we found that all who scored high on openness also scored low on closedness, we couldn't say that we had proven the logical truth, it seems, because we began by assuming that those who were open would not be closed. From these observations, empirical findings clearly do not lead us to make changes in the things that logical truths state.

But now it seems that empirical studies are related to logical truths in the following three ways. First, an important difference can be found between our knowledge of a logical truth before and after an empirical study. Before the study we have the concept that "men cannot be open and closed at the same time." But after the study, it seems, we have a different concept which states that "we have experienced

in fact that men are not both open and closed at the same time." So our study does add to our conceptual holdings. We gain experiential confidence that the particular logical truth holds in the world.

A second way such studies can be related to logical truths is in learning empirically whether or not such given logical truths apply to certain groups of people. To the extent that religious individuals scored high on the scholarly measure in Alsdurf's study, for example, one might conclude that a particular logical incompatibility of scholarlyness and faith did not apply to that group of religious subjects.

A third way empirical studies could be related to logical truths is in suggesting conceptual change. Again, with Alsdurf's example, the group of religious subjects who scored high on the measure for scholarly openness could possibly merit having a different concept of faith ascribed to them, perhaps faith as a strengthener of will rather than as a bastion against intellectual onslaughts.

A logical incompatibility between religiosity and scholarlyness, assumed by many, leads to expectations of an empirical incompatibility. This logical incompatibility holds that one cannot have faith, as a closed orientation to religious belief, and have a scholarly approach to truth at the same time. The present study is a reexamination of the empirical relationship between religiosity and scholarlyness

and of factors which might mediate the relationships which may be obtained.

Chapter 11

Literature Review

The following studies represent attempts to determine the empirical relationship between religiosity and scholarliness. All have reported data which appears, superficially, consistent with the thesis of their incompatibility.

Leuba (1934) surveyed 2,300 scientists from Cattell's American Men of Science (1933) on their beliefs with respect to a God influenced by worship and with respect to immortality. His results showed that different academic disciplines had substantially different percentages of those who affirmed the beliefs. Physicists were most likely and psychologists were least likely to be believers. Leuba also compared "greater" and "lesser" scientists, using those identified as distinguished in Cattell's volume. The more eminent scientists evidenced lower percentages of believers in each discipline.

Finding different disciplines to have different percentages of believers, Leuba concluded that one's discipline influenced one when it came to accepting certain religious beliefs. He interpreted lower religiosity of the greater scientists as attributable to their greater independence of thought, with such independence leading to greater skepticism or disbelief.

Dejong and Faulkner (1972), though, suggested that Leuba might have misclassified some scientists as believers, because of reinterpretations the scientists might have given to the concept of immortality. For example, Dejong and Faulkner found that some affirmed this belief as a conviction that memory of them and their work would continue after they were gone. If Leuba did misclassify a number of the scientists, then he would not have had clear cut believer and non-believer groups to compare with respect to scholarliness.

Dejong and Faulkner's study (1972) of 56 university professors found that over half belonged to a church, attended services regularly, and regarded church membership and prayer as important parts of their lives. They also found, however, that many of the respondents had "rather thoroughly demythologized the core beliefs of the Christian faith" (p. 15). As an example, only 21% believed in the physical resurrection of Jesus. It seems, then, that church membership and the other factors mentioned may indicate an external conformity rather than a true religious commitment, and a measure of religiosity is needed that will discriminate those who affirm belief statements of the intended content (a content, e.g., that is not "demythologized").

As a part of her study of the kinds of people who do scientific research, Roe (1952) questioned 64 eminent scientists on their religious beliefs. The scientists, representing the fields of biology, physical science, psychology, anthropology, were selected as eminent on the basis of their

membership in professional organizations, inclusions in Who's Who In America, and ratings of prominence by colleagues. In keeping with Leuba's findings, Roe found that "only 3% of these men are seriously active in any church" (p. 65). However, Roe makes the following comment on the measure she used for religiosity. "I usually made a point of inquiring about religious interests although I do not have definite information on this from 10 of the subjects" (p. 62). This statement suggests Roe did not have a consistent measure for religiosity, and suggests that she could not clearly define the religiosity is that is or is not related to scholarliness. Again, a more consistent and valid measure of religiosity is needed.

Stark (1963) examined national survey data collected by the National Opinion Research Center (NORC) in 1958, and he found that only 3% of the graduate students surveyed claimed religious affiliation, while 28% of the general U.S. population claimed affiliation. He concluded that loss of faith is associated with being a graduate student and that scholarliness would lead one to become less religious. Stark found three items in the NORC survey which could serve as an index of scholarliness: a secular as opposed to a religious school experience; a graduate school experience in a school rated as high quality on indexes developed, for example, by Davis (1962); and a high quality undergraduate school experience at such schools as the top 50 schools appearing in Knapp and Greenbaum's 1953 overall ratings. Stark designed a

objective measure of scholarliness by assigning points to the factors just listed: attendance at a secular school, 2; at a parochial school, 0; at hi, lo and medium quality graudate and undergraduate schools, 2, 1, and 0, respectively. He also designed a subjective measure of scholarliness by assigning points for responses to the question "Do you consider yourself an intellectual?": definitely, 3; in many ways, 2; in some ways, 1; definitely not, 0. Stark's measure for religiosity consisted of questions concerning religious affiliation and attendance at worship services. He found that religious involvement was negatively correlated with both measures of scholarliness.

It seems clear that Stark's measure of religiosity consists of those factors which, as Dejong and Faulkner pointed out, could be more indicative of external conformity than "true religious commitment." Doherty (1964) also argues that the measures Stark uses for religiosity can be strongly confounded with other social sanctions impelling Catholic believers to attend church services. Again, the need for a better meaur^e of religiosity is indicated.

The studies cited above have been criticized for inadequate measurement of religiosity, since they focus on external behaviors rather than internal commitment. Additionally, though, the measures of scholarliness appear to have serious shortcomings.

Inclusion in Cattell's American Men of Science, working in the biological, physical, or psychological sciences,

ratings of prominence, the quality of graduate or undergraduate schools, attendance at a secular versus a denominational school, the number of books or articles published, and the self-rating as an intellectual all have been used as measures of scholarliness. But although each of the measures cited above can be seen as measures in part of what we mean by scholarliness, they do not seem to measure that aspect of scholarliness believed to be incompatible with religiosity.

Leuba (1934) says that which differentiates scholars from those who are not scholarly is "independence of thought" combined with "experience, knowledge, and understanding" (p. 300). Stark (1963) speaks of "qualities of thought," and of an "approach to data . . . grounded in skepticism and empirical rules of evidence" in his discussion of what it is in the scholarly approach which is incompatible with religiosity (pp. 4,5). Moberg (1962) speaks of an "approach to reality," a "method of extending knowledge," and an "attitude of mind" which leads to the incompatibility between scholarly work and religiosity (pp. 334).

These are statements describing those components of scholarliness which supposedly conflict with religiosity. However, it is not clear how responses to the scholarliness measures previously described indicate these qualities. If these characteristics are the important components of scholarliness, and they are not being measured, then we cannot accurately determine the relationship between scholarliness and religiosity. The need is for a measure which more

clearly taps the attitudinal components of scholarliness deemed incompatible with religiosity.

Lehman (1972) developed a conceptual scheme which he thought represented that aspect of scholarliness which many have seen as incompatible with religiosity. It included the concepts of tolerance for divergent world views, continual searching for challenges to whatever an individual holds true, willed suspension of belief in received knowledge, curiosity about the unknown, and breaking through habitual ways of thinking and feeling. With this conceptual scheme in mind, he designed a 5-question scale which asked the academician about his pursuit of scholarly curiosity, his preference for working on research rather than with students, his preference for national recognition within his discipline over that of local peers, his defense of research freedom, and his belief that students should be made to question their religious beliefs. This attempt to get directly at scholarliness is a departure from the methods previously used.

Using this measure of scholarliness, Lehman found that those higher on the measure scored lower on 3 measures of religiosity, an experiential, a ritual, and an ideological measure. These 3 measures, along with a cognitive measure, made up Lehman's Religiosity Scale (RS). The experiential measure consisted of items assessing experiences peculiar to religious people, such as experiencing God's intervention or his presence. The ritual measure consisted of items assessing participation in activities which religious

people would engage in such as prayer, church attendance, or devotional Bible reading. The ideological measure consisted of items pertaining to doctrinal belief. And the cognitive measure consisted of items used to discriminate the breadth of each individual's knowledge of his religious dogmas. The correlations between Lehman's measure for scholarliness and the experiential, the ritual, and the ideological measures of religiosity were $-.55$, $-.36$, and $-.28$ respectively. Lehman therefore corroborated the conclusion that had been drawn from the studies using more indirect measures: the "extent to which an academician is committed to the scholarly perspective helps to explain his traditional religious involvements" (p. 212), and the "more one has internalized the scholarly ethos the less likely one is to ascribe to a conservative religious ideology" (p. 206).

Lehman's approach may have been an improvement over the indirect measures used in other studies. However, the validity of his scale as a measure of the scholarly perspective is questionable. It does not seem clear that a person's preference for national recognition would necessarily lead us to ascribe to him any of the characteristics which Lehman has suggested constitute scholarliness. In fact, such a preference could indicate a deemphasis of independent thought or of looking for challenges to that which is held as true. Furthermore, as Alsdurf (1977) pointed out, the item which focuses on having students question their religious beliefs directly confounds scholarliness and religiosity. While

Lehman's attitudinal measure of the scholarly perspective may represent an improvement in the measurement of scholarliness, his measure appears to need further improvement.

Following Lehman's lead, Alsdurf (1977) developed an 18-item direct measure of the scholarly perspective, the Commitment to Scholarly Openness Scale (CSO), designed to operationalize the conceptual scheme suggested by Lehman while avoiding the problems his scale seemed to have. The scale contained questions asking about goals of education (vocational versus a more broadly enlightening role), the importance of dialogue across fields, academic freedom (e.g., acceptance of a communist faculty member), and the importance of questioning received knowledge.

Performing Cronbach's reliability test on pilot study data, Alsdurf found an alpha of .83 for the CSO, and a Pearson correlation of .75 was found between the CSO and an Abstract Orientation Scale (O'Connor, 1979), with the assumption being that a positive correlation would exist between abstract thinking and commitment to a scholarly perspective.

Another instrument, the Reasons for Religious Change Scale (RRC) was designed with 31 items to reflect factors which might have produced a religious change for the individual. On a scale of 1 (very descriptive) to 9 (not at all descriptive), 142 faculty members at 3 universities designated the relative importance of personal, ecclesiastical, social, and educational factors in determining their current religious position. In addition, the respondents were asked

to describe, in their own words, the significant factors which they believed had led to their religious change, and when these descriptions were analyzed, six reasons for religious change emerged.

A principle components analysis of responses to the 37 reasons for religious change (31 of RRC and 6 of respondents own description) yielded six factors with eigenvalues greater than 1.0; and after varimax rotation, the meanings of these factors were viewed as follows: Recognition of Personal Sinfulness, Fallibility; Personal Interaction with Significant others; Attraction to Church's Compassion; Adjustment to Social Arrangements; Scholarly World View which Replaced Religion; and Negative Reaction to Church's Hypocrisy and Social Inactivity.

A third instrument used by Alsdurf, the Religiosity Scale (RS), was modified from its form as used by Lehman (1972) by adding three items to the ritual measure: personal prayer, Bible or devotional reading, and religious financial contributions. Additionally, the cognitive religious measure used by Lehman was omitted from the RS because the history of cognitive measures suggested that knowledge of particular religious information is strongly confounded with a respondent's ideological position. Following Lehman, then, the RS used by Alsdurf included measures for ritual, experiential, and ideological dimensions of religiosity.

Alsdurf's factor analysis of the RS showed that the three measures of religiosity just described formed a single

measure of religiosity. This result was congruent with Clayton and Gladden's (1974) conclusion that religiosity is a single empirical factor. In addition, religiosity (RS) and commitment to scholarly openness (CSO) were negatively correlated for the entire sample of 257 respondents, $r = -.24$ ($-.28$ corrected for attenuation), which was a result corroborating the general findings of previous research. However, for those who had either changed in a more or less religious direction, religiosity and CSO were not correlated, $r = .03$, ns, and $r = -.05$, ns. Furthermore, one factor of religious change, Personal Interaction With Significant Others (DIA), was positively correlated with CSO overall, $r = .29$, and for those who changed in a less religious direction, $r = .33$, or in a more religious direction, $r = .29$. Recognition of Personal Sinfulness and Fallibility (SIN), was negatively correlated with CSO for all changers, $r = -.31$. Still another factor, Attraction to the Church's Compassion (COMP), was not significantly correlated with CSO for those who changed in either a more religious direction, $r = .04$, or in a less religious direction, $r = .03$.

Alsdurf and McFarland (1977) interpreted the relationship between the SIN, COMP, and DIA religious change factors and CSO in the following manner.

Religious change through the process of increased recognition of one's own sinfulness and fallibility (SIN) is incompatible with scholarly openness and may work to inhibit or diminish that commitment, whether one is becoming more

religious or changing from one religion to another. It was further suggested that awareness of one's fallibility might lessen faith in human reason per se, which in turn would lower one's commitment to open exploration.

Conversion through attraction to the church's love and compassion (COMP), though, does not seem to inhibit scholarly openness. Here the authors suggested a possible lack of logical or psychological chains leading from conversion via the church's authentic love to a lessening of scholarly openness.

Those whose changes were produced through intense personal interaction (DIA) appear to be more committed to scholarly openness than those whose changes are not so produced, regardless of the direction of change. Alsdurf and McFarland (1977) suggested that the commitment to scholarly openness could have been instilled by the open, personal dialogue leading to altered religious belief. An alternate interpretation admitted that individuals who believe in open exploration and dialogue are more likely to experience religious change through personal interaction than by other means. The positive relationship between a personal interaction change process and scholarly openness was seen as serving to erase the negative relationship between scholarly openness and religiosity.

While Alsdurf and McFarland admitted the post-hoc and tentative nature of their interpretations, those interpreta-

tions were seen as suggesting precise hypotheses which could be examined in later research.

Chapter III

Problem

Most findings of previous research have been used to support claims suggesting an incompatibility between the scholarly outlook and religious faith. However, the incompatibility has not been clearly demonstrated because of problems in the measurement of a scholarly outlook and religious faith. Also, as suggested by Alsdurf (1977), the relationship between a scholarly outlook and religious faith seems to be more complicated than merely an exclusion of one by the other.

Those who reportedly had not experienced a significant religious change exhibited a negative correlation between scores for religiosity and scholarly openness. However, depending on the kind of factors involved for those who had experienced a religious change, the correlation expected between scholarliness and religiosity might be positive, negative, or nonsignificant. Three such factors reported by Alsdurf are significant personal interaction, feelings of sinfulness and fallibility, and attraction to the churches' compassion.

One other factor not studied by Alsdurf is that of mystical experience leading to significant religious change. This factor has been studied by Hood (1975, 1974, 1973) who has developed scales to assess mystical experience.

As a replication and expansion of Alsdurf's work (1977), then, the present study will test the following hypotheses in an attempt to offer further clarification on the relationship which exists between religious faith and the scholarly outlook. The hypotheses will be examined using a student population, allowing for greater generalization of the results. If the results corroborate those of Alsdurf, greater generalization will be possible, since Alsdurf's population consisted of faculty members.

1. In keeping with previous findings, religiosity and commitment to scholarly openness will be negatively correlated for all individuals who report that they have not experienced a significant religious conversion.
2. For those who have had a religious conversion, the significant psychological factors mediating those conversions will determine the degree of commitment to scholarly openness. Specifically,
 - a. To the degree that one's conversion is mediated through increased feelings of sinfulness and fallibility, commitment to scholarly openness will be low. This relationship will be exhibited by a significant negative partial correlation between the SIN subscale of the ERC and the CSO with religiosity controlled.
 - b. To the degree that the conversion is mediated through persona, interactions and dialogue, commitment to scholarly openness will be high. The

partial correlation between the DIA subscale and the CSO will be positive with religiosity controlled.

- c. Conversion mediated through attraction to the churches compassion will not be related to commitment to scholarly openness. The partial correlation between the COMP subscale and the CSO, controlling for religiosity, will not be significant.
 - d. It is not clear what the relationship will be between conversion mediated by mystical experience and commitment to scholarly openness, and so no hypothesis concerning that relationship is offered at this time.
3. As a consequence of the four parts of Hypothesis 2, the converts will vary in their commitment to scholarly openness according to the psychological factors which mediated their conversions. Specifically, those subjects whose conversions were mediated through interaction and dialogue will have the highest mean CSO scores while those subjects whose conversions were mediated through feelings of sinfulness and fallibility will have the lowest mean CSO scores. Again, no suggestion is made here concerning those subjects whose conversion is mediated through mystical experience.

Chapter IV

Method

Subjects

One hundred and forty-six students (juniors, seniors, and graduate students) attending a Southcentral university made up the research population, including 74 male and 72 female respondents ranging in age from 19 to 40 enlisted from departments across the university. These subjects were engaged after contacting professors and obtaining permission to use class time. Students were selected as subjects instead of nonstudents because of student availability, and upper level students were selected because of the increased likelihood that a pertinent religious change would have occurred.

Instruments

Subjects were given a printed survey (Appendix A) consisting of survey instructions, a section of demographic questions, an item measuring significant religious change, an item measuring the direction of significant religious change, and the three primary scales: the Commitment to Scholarly Openness Scale (CSO); The Religiosity Scale (RS); and the Reasons For Religious Change (RRC). Those who completed the RRC as well as the CSO and the RS were those who had experienced a significant religious change, becoming more religious or changing from one religion to

another. The CSO and the RS were rotated to control for effects due to order of administration. Survey instructions were read aloud and clarified as necessary by the examiner, and the survey took approximately fifteen to thirty minutes of class time to complete.

Following the work of Lehman (1972) and Alsdurf (1977), the scholarly outlook is conceptualized in the present study as a tolerance for differing views, an inclination to fresh conceptualization, an openness to and a searching for challenges to what one believes, and a tendency to skepticism or to willed suspension of belief in received knowledge claims.

The CSO designed by Alsdurf was modified at the suggestion of Lehman and after some reflection by the present author. Some new items were added to tap scholarly creativity and to strengthen the other dimensions, and other items were adapted for use with a college student population. A pilot test on the revised CSO, using 81 junior, senior, and graduate level students, produced an alpha reliability of .83 and a correlation between the CSO and the Marlowe Crowne Social Desirability (SD) scales of $r = .11$, ns, suggesting that answers to CSO are not a product of a tendency to give socially desirable answers. In addition, with these subjects the skewness of the CSO and SD score distributions was -0.058 and -0.249 respectively, indicating that the low correlation was not a result of the distribution shapes.

Again following the lead of Lehman and Alsdurf, religiosity is conceptualized in the present study as three

dimensional, composed of an ideological component pertaining to beliefs about God and man, an experiential component pertaining to experiences which are viewed as religious, and a ritual component pertaining to activities judged to be religious. The format of the Religiosity Scale used by Alsdurf (1977) was kept for use in the present study.

The RRC was altered for the present study from its scope as designed and used by Alsdurf (1977) to more effectively tap four specific reasons for religious change: 1. increased feelings of sinfulness and fallibility (SIN); 2. personal interaction and dialogue (DIA); 3. attraction to the church's compassion (COMP); and 4. mystical experience (MYS). The alteration of the RRC consisted of excluding those items which did not reflect the first three factors just mentioned adding items which appeared to have potential for improving the reliable measure of those three factors. Items also were added to tap mystical experience as conceptualized and researched by Hood (1975). These items, chosen as a shortened form of the Mysticism Scale designed by Hood, were selected on the basis of their exhibiting high item to total scale correlations as well as high loadings on the second factor Hood found when he factor analyzed responses to the Mysticism Scale.

Hood (1975) developed a scale consisting of 32 items covering eight categories representing mysticism as conceptualized by Stace (1960). Using a varimax rotation procedure, a factor analysis resulted in the selection of two factors on

the basis of eigenvalues of 12.00. Hood concluded that the first factor was "best conceived as an indicator of intense experience, not interpreted religiously and not necessarily positive . . . (and the experiences were not necessarily interpreted as objective sources of valid knowledge" (p. 34). He thought the second factor to be best conceived as "an indicator of a joyful expression of more traditionally defined religious experiences which may or may not be mystical but which are interpreted to indicate a firm source of objective knowledge" (p. 34).

Statistical Procedures

Each RRC subscale was checked for internal consistency by alpha reliability analysis. The independence of these subscales was examined through a principle components analysis of all RRC items. The RS scale was similarly examined for internal consistency. Hypothesis 1 was examined by product-moment correlation between PS and CSO for all subjects who had not experienced significant religious change. Hypothesis 2 a. was tested by product-moment correlation between the SIN subscale and the CSO with religiosity controlled by partial correlation. Hypothesis 2 b. was examined by product-moment correlation between the DIA subscale and the CSO with religiosity controlled. Hypothesis 2 c. was tested by product-moment correlation between the COMP subscale and CSO with religiosity controlled. The third hypothesis was examined by a one way analysis of variance with planned comparisons on pure conversion types, with conversion types being

isolated by scoring at or above one half of a standard deviation above the mean on one RPC subscale (e.g., COMF) and at or below the mean on the remaining three subscales (e.g., SIN, MYS, DIA).

Chapter V

Results

Frequency of Religious Change

Sixty respondents reported a significant change in religious beliefs in the direction of becoming more religious, and twenty-two reported having become less religious. Two reported changing from one religion to another. The remaining sixty-three participants reported never having experienced a significant religious change.

Test Analysis Descriptions

Means, standard deviations and alpha reliabilities for scales used in testing hypotheses in the present study are reported in Table 1.

A factor analysis of the Reasons For Religious Change Scale (RFC) yielded four factors with eigenvalues greater than 1, and the varimax rotated factor matrix (Table 2) showed that items loaded on these four factors corroborating expectations of four separate religious change factors named Sinfulness (SIN), Dialogue (DIA), Church's Compassion (COMP), and Mysticism (MYS). A Pearson correlation between the four scales measuring the four factors yielded correlations reported in Table 3.

A factor analysis of the Religiosity Scale yielded one general factor, consistent with the reports of Alsdurf (1977)

Table 1
Means, Standard Deviations, and Alpha Reliabilities
for Scales Used to Test Hypotheses

<u>SCALE</u>	<u>MEAN</u>	<u>SD</u>	<u>α</u>
CSO	103.3	12.3	.83(Pilot sample)
RS	17.2	6.5	.86
SIN	29.5(5.9) ^a	10.5	.89
DIA	21.5(5.4)	9.0	.89
COMP	16.0(4.0)	8.3	.86
MYS	21.0(5.25)	9.2	.81

^aFigures in parentheses represent mean item scores.

Table 2
Reasons For Religious Change Scale Factor Loadings

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
RRC1	.77			
RRC2	.83			
RRC3	.86			
RRC4	.57			
RRC5	.80			
RRC6		.86		
RRC7		.88		
RRC8		.64		
RRC9		.81		
RRC10				.74
RRC11				.80
RRC12				.81
RRC13				.75
RRC14			.35*	
RRC15			.35*	
RRC16			.80	
RRC17			.78	
RRC18			.86	
RRC19			.70	

Note: The factors used were those which had eigenvalues of greater than 1. Also, of those correlations not reproduced here, the highest was .37.

*Statistical analysis used to examine hypotheses in this study omitted the starred items.

Table 1
 Correlations between the Four
 Subscales of the Reasons For Religious Change Scale

	<u>SIN</u>	<u>DIA</u>	<u>COMP</u>	<u>MYS</u>
SIN	*	$r = .25, p .05$	$r = .24, p .05$	$r = .22, p .05$
DIA	*	*	$r = .39, p .01$	$r = .07, ns$
COMP	*	*	*	$r = .08, ns$

and of Clayton and Gladden (1973). One item, on the Religiosity Scale, with which subjects indicated holding a leadership position in a church, was deleted from final computations of religiosity, since it was apparently unrelated to the general religiosity factor.

Hypothesis Results

Although a specific relationship between commitment to scholarly openness and religiosity for the total population tested was not hypothesized, the results were significant, $r = -.20$, $p .01$, corroborating general findings of previous research.

Hypothesis 1 was not confirmed, since religiosity and commitment to scholarly openness were not significantly correlated for those who reported never having experienced a significant change in their religious beliefs, $r = -.14$, ns.

In direct contrast to expectations expressed in hypothesis 2 a., the partial correlation between scholarly openness (CSO) and the SIN subscale, with religiosity controlled, was positive, $r = .24$, $p .05$ ($r = .12$, ns). Correlations reported parenthetically in this section are the obtained zero-order correlations.

Hypothesis 2 b. was not confirmed, since the DIA subscale and CSO were not correlated, with religiosity controlled, $r = .18$, ns ($r = .14$, ns).

Hypothesis 2 c. was also not confirmed, since the partial correlation between the COMP subscale and CSO was not

was not significant, $r = -.07$ ($r = -.11$, ns), again with religiosity controlled.

The partial correlation between CSO and the MYS subscale was also not significant, $r = .11$ ($r = .11$, ns).

We were unable to adequately test Hypothesis 3, due to the small number of subjects who composed each pure group, and so hypothesis 3 was also not confirmed. The results relevant to hypothesis 3 showed that the means for the pure SIN, DIA, COMP, and MYS subscale groups were 106, 102, 101, and 98, respectively, and the corresponding number of subjects in each group was 2, 1, 2, and 3. A one way analysis of variance gave an F ratio of .52, $p = .50$. It was decided that the criteria for this one way analysis were too rigid because the resultant groups were left with too few subjects.

Reflecting on the criteria used to determine pure RRC subscale groups led to an alternation of those criteria and a second one way analysis of variance. This second analysis assumed that a subject would have to score at or above one half a standard deviation above the mean on one scale out of four for that scale to reflect a distinguishing conversion factor for that subject. If this were so, then the subject could score up to corresponding cut off points on the remaining three scales (i.e. $\frac{1}{2}$ SD above the mean) before he would be rejected as a pure type subject for the first scale. This method of determining pure RRC subscale groups was used for a second one way analysis of variance. The means for the SIN,

DIA, COMP, and NYS subscales were 103, 96, 102, and 100, with 5, 2, 3, and 6 subjects, respectively.

Neither of the analyses of variance procedures evidenced any significant differences of CSO between pure conversion types.

Chapter VI

Discussion

The significant negative correlation between religiosity and scholarly openness for the total population in the present study gives some support to the view that religiosity and scholarly openness are empirically incompatible in general. However, the negative relationship between religiosity and scholarly openness is empirically very weak, making its support of the incompatibility thesis weak as well.

Religiosity and commitment to scholarly openness were also negatively correlated for those who reported never experiencing a significant religious change, but the correlation was not statistically significant, contrary to expectations. Alsdurf (1977) found a significant negative correlation between scholarliness and religiosity for this group. By failing to significantly corroborate Alsdurf's findings, the present result tends to decrease conviction that religiosity and scholarly openness are empirically incompatible in general.

One reason for the present unexpected finding might be derived from comments made to this writer while collecting responses to the survey. One subject revealed that though he had experienced changes in his religious beliefs, these changes had occurred over a long period of time. He had gradually adopted his new religious posture and, thus, had chosen not

to affirm the item in the survey which indicated having experienced a significant religious change. Moreover, a professor in another of the classes surveyed also expressed a view of significant religious change which involved gradual change over a long period of time. He voiced concern that respondents might think as the student described above did in fact think with respect to significant religious change, and thus exclude themselves from the group who indicated that they had experienced a significant religious change.

If a relatively large number of subjects had experienced such a long-term conversion, but nevertheless had excluded themselves from the group who indicated that they had experienced a significant religious change, then they would have been included in the group representing themselves as not having had a significant religious change. And if they were included in this latter group, then the non-change group might have had its mean religiosity score raised, since the long-term conversion subjects might be expected to have higher religiosity scores than the no religious change group. If such a confounding did occur, then a significant negative correlation between religiosity and CSO for the group who indicated that they had not experienced a significant religious change would be less likely. It is unclear, though, why students would be more inclined toward this kind of confounding than were faculty members, the subject population studied by Alsdurf.

Finding the SIN factor mediating significant religious change and the CSO to be positively correlated disconfirmed expectations of a significant negative correlation, in marked contrast to the finding in Alsdurf's study. The explanation for this contrast is not clear. However, because the correlations were low in both Alsdurf's study and the present study, it is possible that both significant oppositional findings were due to chance. In this case, the findings would not require additional explanation.

The positive correlation between scholarly openness and the DIA factor mediating religious change was expected, but it did not reach statistical significance. Once again, it is possible that the finding in Alsdurf's study was due to chance.

The other two factors seen as mediating significant religious change, MYD and COMP, were also not statistically significant, which was as anticipated, though no particular expectation was delineated prior to the present study with respect to the MYS factor.

One conclusion which is based on the data concerning those who have experienced a significant religious change, and which is consistent with Alsdurf's (1977) findings and conclusions, is that scholarly openness and religiosity do not seem to be necessarily incompatible. This conclusion is in contrast to Lehman's (1972) contention that as academicians internalize the scholarly ethos they become less religious. Additionally, in contrast to expectations expressed by Stark (1963),

even if we were to become a society more taken with a scholarly, scientific perspective, it seems that we would not necessarily become an increasingly irreligious society.

Another implication, consistent with the data collected, which pertains to conceptualizing the faith attitude of religious people is that not all faith response to religious belief claims needs to be seen as the kind of response logically incompatible with a scholarly perspective. C. S. Lewis (1968) is an example of one who has construed religious faith as consistent with a scholarly perspective. He speaks of faith ". . . as the power of continuing to believe what we once honestly thought to be true until cogent reasons for honestly changing our minds are brought before us" (p. 42). He goes on further to speak of faith as ". . . the power to go on believing not in the teeth of reason but in the teeth of lust and terror and jealousy and indifference and boredom that which reason, authority, or experience, or all three, have once delivered to us for truth" (p. 43). Here faith would help you to hold to beliefs reached through reason and data investigation, even when your feelings would lead you to dispense with the beliefs. And here the religious person who held to his beliefs after a great deal of critical reasoning would likely be one who would score high on commitment to scholarly openness.

The results of testing hypothesis 3 could lead to the conclusion that pure conversion types cannot be distinguished with respect to their scores on CSO. And if this is so, then

clear statements cannot be made on the influence which specific mediating factors have on one's commitment to scholarly openness. Results could be more significant, perhaps, with a greater number of subjects in each group. Additionally, though, it could be that better procedures are needed for distinguishing pure conversion types.

In conclusion, it seems permissible to say that religious individuals can be scholarly and have a faith attitude which is not logically incompatible with a scholarly perspective. But, given the present data, it cannot be said that knowing the process one goes through in changing one's religious beliefs can give insight into the commitment one is likely to have to scholarly openness.

APPENDIX A

A Survey of Student Attitudes on Religion and Academic Life

This is a survey which will be used to examine the attitudes which students have towards academic life and religion.

The first part of the survey asks for some personal data such as your age, your sex, and your educational level. To keep your answers confidential your name is not being requested. However, you may put your name on your answer sheet if you would like an explanation of the survey results near the end of the semester.

The second and third parts of the survey asks for information about your religious beliefs, activities, experiences and about your attitudes towards academic life.

In the second and third parts of the survey you will find special instructions on what to do in those parts. Before beginning the survey, be sure you understand these instructions.

Personal Data

1. Age: _____
2. Educational level: ___ Freshmen ___ Sophmore ___ Junior
___ Senior ___ Graduate Student
3. Sex: ___ Male ___ Female

Religious Belief, Activity, and Experiences

1. People generally adopt one of four ideological positions in relation to religion today. Each view makes certain claims about God and man. Read all four statements below and place a check beside the type which most closely expresses your position.
- A. There is a personal God of transcendent existence and power, who created all we know including man, who judges His congregation of believers, and whose purposes will ultimately be worked out in history.
- B. There is a transcendent aspect of human experience which some persons call God. It is the Reality underlying all reality including man's uniqueness. Man's freedom and finiteness make both good and evil possible. Thus he is in need of renewal and guidance provided by the "Transcendent" and by the tradition which stems from it.
- C. God or the "Transcendent" is undefinable. If it is to be found anywhere, it is to be seen in the human struggles toward progress in the secular world. God is immanent in human life. Religious tradition mostly provides clues to the meaning of what God is doing throughout the world.
- D. The notions of God or the "Transcendent" are illusory products of man's imagination. Such notions are irrelevant to the real world. Man alone shapes history, and so-called sacred traditions are manifestations of his groping to understand his experiences.
2. Are you currently a member of a church or synagogue?
 YES NO
3. To what denomination do you belong (i.e., Church of Christ, United Methodist, etc.)?

4. How often do you attend a church or synagogue?
 almost never
 about one fourth of the time
 about one half of the time
 about three fourth of the time or more

5. Do you hold a leadership position in the congregation?
 YES NO
6. How often do you pray?
 almost never about once a week
 about once a month about once a day or more
7. How often do you read the Bible or other devotional material?
 almost never about once a week
 about once a month about once a day or more
8. How often do you contribute to your church financially?
 almost never frequently
 once in a while always
9. People often report having religious experiences. From the list below, check those experiences which you have had subsequent to childhood:
- A feeling of being in the presence of Divinity.
 - A feeling of having been punished by God for a wrong doing.
 - A feeling that God had intervened and rescued you from some sort of danger.
 - A feeling that you had been Divinely healed of a disease.
 - A feeling that you had been saved from sin.
 - A feeling of having discovered the meaning of life through religious faith.
 - A feeling of having been guided by God in making a decision.
10. Have you ever experienced a significant change in your religious beliefs?
 YES NO
11. What age were you when you had this religious change?

12. What educational level were you when you had this religious change?

13. What was the direction of the religious change?
___ more religious
___ less religious
___ from one religion to another

If you just indicated that you became more religious or changed from one religion to another, please complete the Reasons For Religious Change section. If you indicated that you became less religious, skip that section.

Reasons For Changes in Religious Belief

Listed below are reasons which may have contributed to your belief change, or conversion. Although this list does not include all reasons for changes in religious beliefs, please read each reason carefully and indicate how important that reason was for your conversion by circling the appropriate number next to the reason according to the following guide.

- | NOT IMPORTANT
AT ALL | | | | | | | | | SOMEWHAT
IMPORTANT | | | VERY VERY
IMPORTANT | | |
|-------------------------|---|---|---|---|---|---|---|---|-----------------------|---|--|------------------------|--|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 14. | An increasing sense of my own fallibility led me to discover my religious faith. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 15. | An awareness of my helplessness played a large part in my conversion. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 16. | Recognition of my shortcomings led me to my conversion. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 17. | I was converted in large part because I felt that I wasn't leading the kind of life that I thought I should lead. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 18. | A feeling of my own sinfulness led me to discover my religious faith. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 19. | Dialogue and discussion played a major part in my religious conversion. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 20. | A significant change in my religious beliefs was brought about through intense conversations with a lot of give and take. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 21. | Personal interaction with others was a major source of change in my religious beliefs. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 22. | Serious interpersonal discussions were important in my movement to religious conversion. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 23. | I adopted the beliefs of a certain religious group because I was convinced that the people there really cared about people and their needs. | | | | |

- 1 2 3 4 5 6 7 8 9 24. My conversion was a result of being attracted to the church's authentic love and compassion for mankind.
- 1 2 3 4 5 6 7 8 9 25. The church's willingness to respond to social needs was significant in my religious belief change.
- 1 2 3 4 5 6 7 8 9 26. My conversion was brought about in large part because certain religious groups showed that they really cared for me.
- 1 2 3 4 5 6 7 8 9 27. An intense experience which made me realize the unity of all things produced changes in my religious commitment.
- 1 2 3 4 5 6 7 8 9 28. My conversion was produced by an experience in which I was grasped and changed by a holy, superior power; it was not an act of my own reason and will.
- 1 2 3 4 5 6 7 8 9 29. An experience which is impossible to fully describe in words produced the changes I experienced in my religious beliefs.
- 1 2 3 4 5 6 7 8 9 30. Significant change in my religious commitment was preceded by an intense experience which revealed deeper aspects of reality to me than my own reason could discover.
- 1 2 3 4 5 6 7 8 9 31. An intense experience, in which I seemed to be absorbed by something greater than myself, led me to significant change in my religious belief.
- 1 2 3 4 5 6 7 8 9 32. As a result of an experience which left me with a feeling of wonder, I was moved to make changes in my religious belief.

In the space below we would like you to state in your own words the important factors which led you to the significant change you experienced in your religious beliefs.

Academic Life

Listed below are statements concerning academic life. Please read each statement carefully and rate (circle) your response to that statement from "Strongly Disagree" to "Strongly Agree" according to the following scale:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Slightly Agree
- 5 = Agree
- 6 = Strongly Agree

- 1 2 3 4 5 6 1. Ideally, I would like to have more time learning about other areas of study.
- 1 2 3 4 5 6 2. I find that discussing issues and ideas with other students often increases my own understanding.
- 1 2 3 4 5 6 3. I frequently explore new areas and ideas about which I have little previous knowledge.
- 1 2 3 4 5 6 4. Wrestling with the controversial issues is one of the more stimulating and valuable parts of my academic life.
- 1 2 3 4 5 6 5. As a student, my primary obligation is to gain a mastery of a certain body of knowledge rather than to engage in critical examination of issues.
- 1 2 3 4 5 6 6. I am more concerned with learning information to help me function competently within my job than I am with learning how to respond critically to ideas.
- 1 2 3 4 5 6 7. I have a continuing curiosity about the points of view of others and the reasons behind their views.
- 1 2 3 4 5 6 8. Students should be encouraged to question and explore whether their beliefs and values are valid or not.
- 1 2 3 4 5 6 9. My desire to show others who disagree with me that they are wrong is sometimes greater than my desire to fully understand their views.

- 1 2 3 4 5 6 10. Education should be aimed primarily at pragmatic goals such as providing skills for jobs.
- 1 2 3 4 5 6 11. Some findings and knowledge I have learned in college are clear-cut and it is likely that no new information will change them.
- 1 2 3 4 5 6 12. An active and outspoken communist should not be allowed to be a faculty member at this university.
- 1 2 3 4 5 6 13. If the art department wishes to use nude models it should be allowed to do so.
- 1 2 3 4 5 6 14. Students should be encouraged to challenge the instructors viewpoints with which they disagree.
- 1 2 3 4 5 6 15. My academic life is an expression of a personal search for the meaning of life.
- 1 2 3 4 5 6 16. I genuinely enjoy dialogue with faculty members who have very different points of view.
- 1 2 3 4 5 6 17. Information from academic areas other than my major contributes substantially to my academic enrichment.
- 1 2 3 4 5 6 18. I feel that nothing is "off limits" for academic exploration.
- 1 2 3 4 5 6 19. Beliefs are more important for personal growth than are doubts.
- 1 2 3 4 5 6 20. I had rather discuss important values with those who share my views than with those who hold very different views.
- 1 2 3 4 5 6 21. It is important for me to honestly search for and explore the challenges to my own views.
- 1 2 3 4 5 6 22. Students should try to break through habitual ways of thinking and develop their own fresh and independent thought.
- 1 2 3 4 5 6 23. It is important for man to constantly explore for new knowledge, even though the findings might contradict current ideas.

References

- Alsdurf, J. An examination of commitment to scholarly openness and religious belief among academicians. Unpublished Masters Thesis, Western Kentucky University, 1977.
- Alsdurf, J. A., and McFarland, S. G. Faculty religiosity and commitment to scholarly openness. Paper presented at the 1977 Convention of the Society for the Scientific Study of Religion, Chicago, October 28-30, 1977.
- Babour, I. G. Issues in science and religion. Englewood Cliffs, N.J.: Prentice Hall, 1966.
- Cattell, J. M. American men of science: A biographical directory. New York: R. R. Bowker, 1966.
- Clayton, R. R., and Gladden, J. W. The five dimensions of religiosity: Toward demythologizing a sacred artifact. Journal for the Scientific Study of Religion, 1974, 13 (2), 135-143.
- Davis, J. A., & Gottlieb, D. B., & Huson, C., & Spaeth, J. L. Stipends and sponges: The finances of American arts and science graduate students. Chicago: University of Chicago Press, 1962.
- De Jong, G. F., and Faulkner, J. E. Religion and intellectuals: Findings from a sample of university faculty. Review of Religious Research, 1972, 14 (Fall), 15-23.

- Doherty, J. F. Comment on Stark's "On the incompatibility of religion and science." Journal for the Scientific Study of Religion, 1964, 3, 240-241.
- Hood, R., Jr. "Religious orientation and the experience of transcendence." Journal for the Scientific Study of Religion, 1973, 12, 441-448.
- Hood, R., Jr. "Psychological strength and the report of intense religious experience." Journal for the Scientific Study of Religion, 1974, 13, 65-71.
- Hood, R., Jr. The construction and preliminary validation of a measure of reported mystical experience. Journal for the Scientific Study of Religion, 1975, 14, 29-41.
- Knapp, R. H., & Greenbaum, J. J. The younger American scholar: his collegiate origins. Chicago: University of Chicago Press, 1953.
- Lehman, E. C. The scholarly perspective and religious commitment. Sociological Analysis, 1972, 33 (Winter), 199-216.
- Leuba, J. H. The belief of God and immortality. Boston: Sherman and French, 1916.
- Leuba, J. H. Religious beliefs of American scientists. Harpers, 1934, 169, 291-300.
- Lewis, C. S. Religion: reality or substitute? Christian Reflections, Walter Hooper, ed., Grand Rapids, Michigan: William B. Eerdmans Publishing Company, 1968.
- Moberg, D. O. The church as a social institution. Englewood Cliffs, N.J.: Prentice Hall, 1962.

- O'Conner, J. Personality and intellectual aptitude correlates of performance on the Joe Doodlebug problem. A paper presented at the meeting of the Rocky Mountain Psychological Association, Salt Lake City, May, 1970.
- Roe, A. The making of a scientist. New York: Dodd, Mead and Co., 1952.
- Stace, W. T. Mysticism and philosophy. Philadelphia: Lippincott, 1960.
- Stark, R. On the incompatibility of religion and science: A survey of American graduate students. *Journal for the Scientific Study of Religion*, 1963, 3 (Fall), 24-40.
- White, A. D. A history of the warfare of science with theology. New York: Dover Press, 1960.