

RELIGIOUS ENVIRONMENT SCALES:  
AN EXPERIMENTAL MODEL FOR ASSESSING THE  
RELIGIOUS ENVIRONMENT AT CHURCH - CONTROLLED  
COLLEGES

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## ABSTRACT

### RELIGIOUS ENVIRONMENT SCALES: AN EXPERIMENTAL MODEL FOR ASSESSING THE RELIGIOUS ENVIRONMENT AT CHURCH-CONTROLLED COLLEGES

by Thurman Vanzant

#### The Problem

The Religious Environment Scales (RES) was constructed, following the format of the College and University Environment Scales (CUES), to assess the perceptions of the religious press at denominational colleges along six theoretically derived dimensions: Christian Faculty, Chapel, Denominational Relationship, Moral and Social Regulations, Religion Courses, and Students' Personal Religious Life.

This study investigated the profile of the religious environment at a selected church-controlled college and also tested these hypotheses:

Differences will be found in the mean scores of six selected groups at Evangel College on the individual scales of the RES.

Differences will be found in the mean scores of students at Evangel College on the individual scales of the RES when compared on selected variables.

#### Methods and Procedures

Evangel College, Springfield, Missouri was selected for the administration of the RES. The groups chosen for this study were:

Faculty-Administration, a random sample from each of the four academic classes, and Non-A/G students (i.e., those not members of the sponsoring denomination). The instrument was administered the last week of April, 1968. The number of returns used was 400, or 81 percent of the total sample. Reliability for the RES was tested by Lindquist's analysis of variance technique and each scale was estimated at .99.

A profile description was secured using the "66 plus" method of scoring. An item is "correct" when 66 percent or more answer in agreement with the keyed-answer. The group score is the number of items out of a possible 15 on each scale for which this consensus occurs. Comparative scores on the six scales are reported for the total institution and for the selected groups. Individual scores are also combined to determine group mean scores. Differences among the six groups and among the students when grouped by selected variables were tested by analysis of variance. Duncan's new multiple range test was used to determine which means actually differed.

### Major Findings

The institutional scores at Evangel College are high on the Christian Faculty and Religion Courses scales, medium high on the Regulations scale, and low on Personal Religious Life, Denominational Relationship and Chapel scales. The scores range from 13 on Christian Faculty to 3 on Chapel.

Significant difference among the six selected groups on the individual scales occurred on only two of the six scales: Chapel and Denominational Relationship.



Significant difference was found among students on the individual scales when grouped on selected variables. On the variable of sex, women students differ significantly from men students on four scales. On the variable of academic ability, there is an inverse relationship between academic ability and the mean scores on all scales; significant difference was found on four of the scales. On the variable of spiritual influence of home church, there were significant differences on all scales. Questionable differences were found on only one of the scales when the variables of spiritual influence of parents and level of pastor's education were used. No difference was found on the variables of geographical region of student's home or size of home church.

One of the major findings is that perceptions of the religious environment as measured by the RES are influenced by the variables of sex, academic ability, and spiritual influence of student's home church. These variables may be influencing perceptions as much or more than the religious press of the environment.

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THURMAN VANZANT

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## CHAPTER I

### THE PROBLEM: ITS NATURE AND IMPORTANCE

#### Background of the Problem

Church colleges are a viable segment of higher education in the United States and make a contribution to its strength and diversity. This is true even though they play a smaller role than they formerly did in the total scene of American higher education.

These church colleges share with other institutions of higher learning the need for continued research and self-evaluation. Features needing continued evaluation include the determination of institutional goals, the activities and educational experiences selected and planned to achieve those goals, the student "input", the impact of the institutional environment upon the student, and the quality of the institutional "output". Factors which contribute to an urgency for increased empirical data about church colleges include: (1) the present paucity of empirical data about these institutions, (2) the situation many of these colleges face of maintaining adequate enrollments and finances, and (3) the features which distinguish them from other institutions of higher learning have not been adequately researched.

One of the areas of recent research in higher education which applies to the church college is the attention given to the college environment as a strategic factor in the teaching-learning process.

Earlier research had tended to focus attention on isolated aspects of the environment without regard to the total milieu in which learning occurred.

The newer concern is upon the environment as a whole. It is generally held that behavior is influenced by the interaction between the student and the characteristics of the total environment that impinge upon him. This is similar to the findings in the physical sciences of the relations between an organism and its environment. The environment of the educational institution is seen as playing a large part in determining to what extent institutional objectives are achieved and what kind of impact is made upon the individual by a given college.

Research instruments have been developed to study the environment-as-a-whole. These provide a profile description of the major pressures and influences at work on a college campus. These instruments further provide a means of describing differences between the major pressures at various institutions. Significant questionnaires that have been developed for this purpose include those by Astin - the Environmental Assessment Technique (EAT) (6), Stern and Pace - the College Characteristics Index (CCI) (62, 76), and Pace - the College and University Environment Scales (CUES) (55).

One of the concepts underlying the research on college environments is the view that the college is a "culture". This is to be understood in terms used by the cultural anthropologists and sociologists as "... a pattern of values, beliefs, and prescribed

ways of behaving" (70: 57). The environment consists of the general culture as well as the social organization of the college community. Sanford says there is an overall college culture which embraces such elements as stated aims and educational philosophy of a college, its standards of work, and its "... values, beliefs, and ways in the realms of religion, politics, economics, arts, and social relations. It is to be expected that each student, if he remains in the college for his allotted time, will assimilate this culture in some degree" (70:58). The aggregate features of a college culture, and its sub-cultures, will sway and influence the behavior of those who enter that culture.

Another concept utilized by the research on college environments is that of the psychological theory of "need" and "press". This is based on Murray's personality theory which defines "need" as the significant determinants of behavior within the individual and "press" as the significant determinants of behavior in the environment (50). Stern's initial studies focused on students and their personality needs (77). Later, he and Pace theorized that these personality needs had their counterparts in the structure of the environment (62). Pace subsequently turned to examine the complexities of environments in terms of their sociological-educational press without reference to personality needs (55). This latter innovation conceives the college environments as exerting an intellectual-social-cultural press upon those who live in the environment.

The research instruments developed for assessing the climate of

a college are appropriate for research by church-related colleges. However, the religious aspect of their environments which is an important part of their total environment is not measured by the existing research instruments. This fact is underscored by a recent review of the findings by the use of these instruments at Catholic colleges:

Although the CCI and CUES include individual items about religious practices and values, the "blindness" of the current instruments to religious influences, as evidenced by the lack of scales referring to the moral and spiritual impact of the college on the student, leaves an important area of human life - and one of special concern for the value-oriented school - unexamined (31: 441).

#### Statement of the Problem

This study has a two-fold purpose: (1) the development of an experimental instrument which will be useful to church-controlled colleges in assessing the religious dimension of their environments, and (2) reporting the results obtained by the administration of this instrument at one church-controlled college, Evangel College, Springfield, Missouri.

#### Importance of the Study

No research instruments are available for investigating the perceptions of the religious dimensions of the environment at church-controlled colleges. The main contribution of this study is an attempt to fill this gap by taking the first step in developing such an instrument, the Religious Environment Scales (RES).<sup>1</sup> The RES is

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<sup>1</sup>The instrument may be found in Appendix A.

designed so that members of the academic community can report their perceptions of the religious press as measured by a set of theoretically derived scales. This technique permits students to describe both the religious characteristics of their college and the demands made upon them by the religious press of the environment.

The use of the RES can provide information of considerable importance for evaluation of programs and in self-study. The RES provides a description of the environment by those who experience it daily. What students are aware of and agree is true or not true of their campus constitutes the "functionally effective environment" which can be compared with the officially stated religious objectives (58: 174). For example, the presence of certain religious features such as daily chapel does not insure that they are perceived positively or as achieving the aims established for them. It is educationally desirable that stated objectives agree as closely as possible with the actual, functionally experienced goals.

The information from these scales can be beneficial to denominational boards which exercise a substantial degree of control over the policies of their colleges. Local boards of administration can equally benefit from this knowledge. Comparison of profile differences among various church-related institutions is a further potential benefit. Results gained from these scales can provide the basis for redirection of efforts, modifications of programs, or intensification of practices that could have far-reaching consequences in the development of these colleges and the relationships with their student clientele and their

denominational constituencies.

This study also reports data obtained by use of the RES at a denominational college. These data indicate what differences were found among the perceptions of various groups within the college. Selected variables are used in the investigation to help explore differences in perceptions among students who are members of the sponsoring denomination. To the extent these scales validly assess perceptions of the religious dimension of the environment, discriminate between various groups within the academic community, show relationships to selected variables, and provide a profile for comparison with other church colleges, the church-controlled college has available an instrument to assist in evaluation and planning.

#### Limitations and Scope of the Study

This study is the first step in the development of an experimental instrument to assess the religious dimension of a denominational college environment. It follows the format and general theoretical base of the College and University Environment Scales (55) in terms of environmental press. Persons living in the environment were asked to be reporters about religious features of their college. The instrument was designed by the researcher using factors considered to have a positive relationship to the success of church-controlled colleges.

The RES was designed primarily for use with those Protestant church colleges which maintain a strong identification with conservative, evangelical Christianity and which have strong ties with

a denomination or church body. Many of the items and scales of the RES therefore would not be relevant to a large segment of church-related colleges.

This study reports the investigation of the environment at one church-controlled college. While the results obtained will directly apply only to this one institution, there are many denominational colleges which have features and practices in common with the college used in this study. It is believed that the results reported from the study of this institution will have value and meaning for these other colleges. It is further believed that the technique used in this study and the instrument that was developed can be used or adapted for use by other denominational colleges.

This instrument is limited to six selected factors of the religious dimension and does not include all factors which may exist as part of the total complex religious environment, i.e., the local church a student attends while in college and the continued religious influence of his parents and his home church. Neither does the instrument explore highly individualized religious features (theologically or organizationally) which might characterize a given denominational college and which might be valuable for some schools to research.

The scope of the study is the development of an experimental instrument and the reporting the results of its administration to six selected groups at a denominational college. The instrument has six scales of fifteen items each; tabulating the responses to these items permits a description of the environment and comparison of



group perceptions based on consensus of perceptions. A number of selected variables are used to determine if they help explain the reported differences of perceptions. In addition to the RES, the CUES was administered to provide supplementary information about the perceptions of the college being studied and to investigate any relationships with the RES.

### Definition of Terms

Church college - used synonymously with "church-related" college to refer generically to the wide range of colleges subscribing to the Christian religion or having some type of connection with a Christian denomination.

Denominational college - used synonymously with "church-controlled" college to refer to a college which has strong ties with a particular denomination, which is by official statement theologically conservative or evangelical, which is owned and actively controlled by the sponsoring church body, and whose students for the most part come from that church body.

College environment - the characteristics of a college which fit together in a pattern and consist of "... features and facilities of the campus, rules and regulations, faculty, curricula, instruction and examinations, student life, extracurricular organizations ..." (55: 2) and which are measured by the CCI, EAT or CUES.

Religious environment - those religious practices, features, emphases and relationships which are part of the total environment at church-controlled colleges and which are measured by the RES

Effective religious environment - the religious aspects of the environment that students are aware of and agree with reasonable unanimity are true or are not true about the college as measured by the RES.

Religious factors - the theoretically derived scales which refer primarily to those objective religious practices and features which are a regular part of the life of the denominational college which the student encounters. The six selected scales are: Christian Faculty, Chapel, Denominational Relationship, Religion Courses, Moral and Social Regulations, and Students' Personal Religious Practices.<sup>2</sup>

### Organization of the Study

Chapter I contains an introduction to the problem of assessing the religious factors of a church-controlled college's environment and the need for an instrument for this assessment. An attempt has been made to justify the importance of such a study.

Chapter II contains a review of literature relevant to the study. Specifically, emphasis is given to (1) developments in research on college and university environments, (2) a review of developments in church-sponsored and church-controlled colleges, and (3) a summary of empirical research dealing with church colleges.

Chapter III describes the methodology and procedures used in conducting the study. It includes the methods of reporting the

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<sup>2</sup>Refer to Appendix B for a description of the scales.

data including the testable hypotheses, the statistical models used, the method of investigation including the selection of the sample groups, and a description of the development of the experimental scales used in securing the data for the study.

Chapter IV presents the analysis of the data. The data are presented in table form and the results of the analysis are discussed.

Chapter V contains the summary and conclusions of the study.

## CHAPTER II

### REVIEW OF LITERATURE

This chapter presents a review of literature relevant to the study of college environments, relevant to church-related colleges, and a summary of selected empirical research on church colleges.

#### Research on College Environments

Colleges differ in many ways, and there are many methods of describing the characteristics which distinguish them. Pace (60) and Astin (5) discuss some of these methods. Colleges may be classified by categories such as form of control, type of curriculum, or geographical region. Or, institutions may be described by quantitative characteristics such as size of student body, tuition, or faculty-student ratio.

These descriptive statements provide some information about the general characteristics that can be expected at a particular school. However, it is asserted that even with this information a person knows little that is important about a college (59: 45). Pace (57: 26) contends that there are more basic differences in the educational and psychological character of colleges; he observes, "... some of our familiar ways of classifying colleges according to structure or form of control obscure and often conflict with these differences in the educational and psychological character of the colleges." It is also said (59: 45) that what is really important to know about a college

is "... its overall atmosphere or characteristics, the kinds of things that are rewarded, encouraged, emphasized, the style of life which is valued in the community and is most visibly expressed and felt."

An approach to examining the overall atmosphere of a college is that taken by sociology and the techniques it has developed. These include the interview technique, sample surveys, and the use of field observations. Reisman and Jencks (67: 311) report such a study at three quite diverse institutions. Their study provides insight beyond what is available from mere descriptive data but is anthropological, subjective, and impressionistic. Pace (60) challenges their interpretation of the climate at one of the colleges based on what students reported on the College Characteristics Index. Another example of using interviews and being a participant-observer on a campus is the study by Eddy (24). From his examination of the "climate" at twenty colleges, he drew conclusions about the elements which contribute to the character of a college.

A different approach to the study of college environments was taken by Astin and Holland in 1961 (5: 22). Proceeding on the belief that the characteristics of the environment are largely dependent upon the characteristics of the student body, they developed the Environmental Assessment Technique (EAT) (6). This instrument uses eight characteristics of the student body to assess the institutional environment. These are: size of the student body, average intelligence, and six "personal orientations". These personal orientations are the percentage of baccalureate degrees awarded to students in

each of the six classes of major fields of study - Realistic, Scientific, Social, Conventional, Enterprising, and Artistic. Holland's theory of vocational choice asserts that information about the student's aptitude, personality, interests, and values is associated with his choice of field of study.

Astin later used two other approaches to the study of differences among colleges. One study (3) was a factor analysis study of thirty-three major institutional characteristics to determine the main dimensions upon which institutions differ. The other (4, 5) was a factor analysis study of fifty-two input student variables to determine the main dimensions upon which students differ. He holds that these differences among students determine in large measure the institutional environments.

A totally different method of examining college environments, as mentioned in Chapter One, is based on the needs-press theory of H. A. Murray (50). This concept asserts that behavior is the result of forces within an individual which interact with pressures within the environment. Stern (74: 6) comments that Murray

introduced a taxonomy for classifying both the environmental pressures and the characteristic ways in which an individual strives to structure the environment for himself. He called the external pressures press, their internal counterpart needs. Both needs and press are inferred from characteristic activities and events, the former from things that the individual typically does, the latter from things that are typically done to him in some particular setting.

Stern, Stein and Bloom (77) in the mid-1950's focused their attention on the needs aspect of this concept in their research on the

assessment of personality. An out-growth of their work was the Activities Index (AI) (76), a questionnaire containing thirty personality need scales of ten items each. This instrument reportedly gives a measure of personality that can be used in predicting student success in various types of academic programs.

The needs-press concept was utilized further by Stern and Pace as they developed the College Characteristics Index (CCI) (62, 76). Following the work that had been done with the AI, they hypothesized that the organization of environments would follow a pattern similar to the organization of personalities. The AI had been designed to measure personality needs; the CCI was developed to measure the environmental press conditions with corresponding scales conceived as counterparts to the personality need scales.

The rationale underlying the development of the CCI is given in the various writings of Stern and Pace. Pace (57: 26) emphasizes the marked differences in the educational and psychological character of colleges. Stern (75) gives a general discussion of the assumptions behind the measurement of need and press. The procedure used in selecting items is described by Pace and Stern (62: 269) and Pace (55: 6). The items selected refer to a wide range of topics of regulations, relationships, curricular experiences, extracurricular activities, and facilities which the student encounters. Pace (55) argues that all of these characteristics and events and practices, added together, fit into a pattern which largely determine the atmosphere of the campus. This pattern constitutes an educational press upon the

awareness of students. Students act as reporters indicating what they perceive as being generally true or not true of their college. What students are aware of and report with general agreement constitutes the functionally "effective environment" (58: 173). This press exerts a "directive" influence on student behavior (59: 47).

The CCI has been used in many research projects. The results have been reported periodically (62, 59, 75). Stern (74) outlines conclusions based on the findings of research with both the AI and the CCI. He then presents a statistical analysis of test responses and discusses the general character of the college environment inferred from six CCI factors extracted in the analysis (74: 11).

Research has been conducted (55: 7, 42: 28) to determine if the CCI corresponds to the personality need scales of the AI. The evidence fails to show any correlation between scale scores of individuals on the CCI and their parallel scores on the AI. It is concluded that what students say about the college environment as measured by the CCI is not influenced by their own personality needs as measured by the AI. Yonge (89: 259) notes the difficulty of maintaining a sharp distinction between student and environmental characteristics on the basis of the CCI and AI.

A variation to the study of college environments by the CCI is the College and University Environment Scales (CUES).<sup>1</sup> This instrument

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<sup>1</sup>The instrument may be found in Appendix C.



developed by Pace and published in 1963 (55), focuses attention on the environmental press apart from any personality measures. Pace had concluded that the college environment can be studied directly and in its own right without reference to personality needs.

CUES was an outgrowth of the work with the CCI. The same format was used, many items were retained, and many aspects of the same rationale of environmental press were retained: student awareness, student reporters, consensus as in opinion polling, and the functionally effective environment. Pace (55) details the procedure used in the factor analytic study of CCI items which led to the identification of five major ways in which colleges differ. The five scales, consisting of thirty items each, are practicality, community, awareness, propriety, and scholarship.<sup>2</sup> CUES describes institutions rather than individuals and permits comparisons among institutions along these five dimensions.

Many research projects have been conducted using the CUES so that information about the instrument is increasing. Pace (56) has compiled a report of many of the pertinent findings which include evidence of the reliability and stability of CUES scores, the interpretation of CUES under various conditions and some special ways in which CUES has been used. Yonge (88: 117) reports a study that suggests internal subjective factors do influence or distort the objective characterizations

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<sup>2</sup>Refer to Appendix D for a description of the scales.

of the environment. Pace (55: 27), however, in his review of studies with CUES concludes that "there is no important or meaningful relationship between students' academic aptitude or personality characteristics and their perception of the college environment." The value of CUES is seen in providing a measure of the environment as a whole and the ways in which it can be used as suggested by Pace (61: 27).

Great strides in the study of college environments have been taken by the empirical studies developed. Yonge (89: 259) offers this value judgment: "... Astin, Pace, and Stern have provided an inestimable contribution to the literature dealing with the student in higher education. Their pioneering studies are truly breakthrough; they have shifted the research emphasis from a descriptive to a dynamic model." It is certain that other dynamic models will be developed, perhaps on a base such as that suggested by Brown (9: 557), to study the various elements in the total educational environment and their interrelationships.

### Church-Related Colleges

A broad review of literature on the developments of church colleges has been included in this chapter as background information.

Roots and Expansion. The contribution of the Christian church to the development of higher education in America has been documented by Wicke (85), Pattillo and Mackenzie (63), Rudolph (69) and others. The role of the church in establishing the colonial colleges is well-known. The denominational college reached its pinnacle of

prestige and influence in the period between the American Revolution and the Civil War. This period of great expansion was marred, however, by the costly proliferation of church colleges (most of which did not survive), by the intense rivalry between denominations in establishing or controlling schools, and the low academic quality of many of these schools. It has been noted that the colleges were used for "denominational imperialism" and as a means of "sectarian aggrandizement and aggression" (80: 76). In spite of these blemishes, however, Brauer (8: 235) states,

The form of the college was also clear. The colleges were small and scattered across the nation following the people westward. They were to be the bearers of Christianity and civilization and were to synthesize the two in life, and they reflected the strength as well as weakness of their churches. They did not play a unique role in American higher education - they were American higher education.

Decline. Dramatic changes occurred in American life in the last part of the nineteenth century and the first three decades of the twentieth century which affected the church colleges (80, 83, 17). Many factors including a rising tide of secularism caused many of these colleges to minimize their religious connections. A decline in relationship developed between church and college. For many colleges "... the church connection became purely nominal, maintained by a trustee or two, a few professors in the Bible Department, possibly a chapel, and a certain residue of sentiment ... and most significantly, religious concerns faded from view" (1: 28). The decline in relationship is depicted by Trueblood (83: 16) as "tragic"; he observes, "it was bad for the colleges, which became thereby

increasingly rootless, and it was bad for the churches, which lost, in the divorce, the benefit of the sharp self-criticism which comes from disciplined intelligence." During the first half of this century there were increasing hints that the church-related college as it had been known might cease to exist.

Resurgence. Cuninggim (17: 1) says the overt hostility to religion in the college reached its peak around the First World War but that secularization of higher education has continued until the present. The denominational college of the nineteenth century, caught up in the explosive expansion of American higher education during the present century, was fighting for its life. McCoy (41: 169) describes what happened: "A funny thing happened to the old Christian college on its way to the cemetery. It just may be coming alive again. Admittedly there are some startling changes in what has survived or been resurrected. But there are definite signs of new life." He continued with his analogy:

Churchmen, public administrators, and foundation officials have shared the view that it remained only to prepare suitable obituaries for these anachronistic institutions still struggling along under religious auspices. Some church boards responsible for denominational colleges have at times been on the verge of recommending that their denominations withdraw from higher education. Like old soldiers, however, the church-related colleges refused to die out: they were only fading away. Then the process of resuscitation began. The G. I. Bill and the general rush for a college degree after the Second World War gave them new life. Federal funds provided further transfusions. The wake has ended because the corpse sat up in the coffin and demanded treatment rather than tears (41: 170).

Trueblood (83: 17) says that the sharp reversal of the process of the

divorce between Church and college is one of the most remarkable changes which has occurred in this century.

There have been other notable signs of renewed vitality of church colleges during the last two decades. The National Council of Churches conducted a research-study project in 1950 and 1951 which involved over 200 church colleges (20: 175). In 1954 the First Quadrennial Convocation of Christian Colleges was held at Denison University. This meeting received wide attention through the journal, The Christian Scholar (19), which contained a full report of the papers presented. The Second Quadrennial Convocation was held in 1958 and was well attended. The Christian Scholar (78) again gave a full report of the addresses and the Study Reports. One further evidence of vitality of church colleges was the comprehensive assessment of some 800 "church-sponsored" colleges by Pattillo and MacKenzie (63). This project, sponsored by the Danforth Foundation, is a monumental contribution to our knowledge and understanding of the church college.

Present Ambiguity. It means little today to know that a college is "church-related". It tells little about the degree of relationship with a church, with the Christian religion, or the amount or kind of religious emphasis on a campus.

Pattillo and Mackenzie (63: 31) say this relationship can be understood in terms of a continuum from close ecclesiastical control to only vague historical association with a church. They selected six elements to indicate relationship: composition of the governing board, legal ownership, amount of financial support from the church,

the name of the institution, the stated educational aims reflecting its religious orientation, and the extent to which preference is given to members of a particular church in the selection of personnel.

Another way to bring meaning into the current ambiguous situation is to look at "patterns of institutional character" (63: 191). Five distinct types of church-related colleges have been identified: "defender of the faith colleges", "non-affirming colleges", "free Christian colleges", and the "church-related university" (63: 192-195); the "affirming college" was added to the original list (25: 25-26). All but the "church-related university" have relevance for this research study.

The "defender of the faith college" is similar to the denominational colleges of the nineteenth century as described by Brown (11: 54). This college is self-consciously theistic, gives emphasis to specific religious beliefs by both faculty and students, and prominence is given to worship. It presents conflicting religious and philosophic views but these views are carefully evaluated in terms of officially espoused beliefs. The constituency expects the college to safeguard the faith and even their social practices (63: 193).

The "non-affirming college" is usually church-related but keeps the relationship very ambiguous and often gives little formal attention to religion. This college emphasizes its nonsectarian character and is so "open" it does not stand for anything unique which distinguishes it from secular institutions (63: 194).

The "free Christian college" is "free because it does not control thought; Christian because it has a definite commitment" (63: 194). Most faculty will share its religious purposes, chapel is probably optional though held important, a cooperative relationship exists with its church, and religion courses are intellectually demanding. This college sees itself as not forcing belief or conformity but expects students to grapple with the issues and arrive at their own position. This type of church college seeks to combine the best of the two other models while avoiding their weaknesses. It is observed that many colleges claim to be this kind of institution but only a minority actually achieve it (63: 195).

Most of the material presented at the Quadrennial Convocations of Christian Colleges in 1954 and 1958 would be sympathetic in spirit and agree with specifics of the "free Christian college" (19, 78). The articles by Ahlstrom (1), Coit (15), Ferre (28, 29), and Noble (53) describe the college that would belong in the "free" category.

Trueblood (83), Doerscher (22), Lowry (38, 39) and others express views of the church college which do not fit into these three categories. Another category was needed. Representatives of evangelical colleges (25) drafted a model to distinguish their liberal arts institutions from the types proposed by Pattillo and Mackenzie (63). They characterize their institutions as "affirming colleges". While holding that defense and apologetic are not necessarily incompatible with free inquiry, they insist their institutions are not defensive but declarative (25: 25). The "affirming college" differs from the

"defender college" in seeking to be involved in contemporary culture and to influence it, in seeking an honest investigation of all fields of knowledge, and in facing the world of learning without fear or suspicion. This college differs from the "free" college in being more openly committed to conservative Christianity, promotes the realization of Christian values in student character, has religious requirements for faculty selection, and has requirements for student religious and social life. It rejects the charge of indoctrination in the sense of imposed beliefs (22: 35) and the charge that religious requirements interfere with academic freedom (26: 18).

In spite of the great variations among church-related colleges there are general marks which are characteristic of most Protestant colleges (15: 246). Some of these marks would be disavowed by "non-affirming" institutions. The precise interpretation and expression of these marks will vary depending upon the "type" of the institution. Most Christian educators would agree with Noble (53: 140) that the first responsibility of any college is education. The church college "... may carry on education for the glory of God and in the name of Christ and feel there are particular clues or insight needed in the educational process, but education is what it is about." Brauer (8: 234) and Mickey (47: 17) call for church colleges to participate in higher education by playing a creative and distinctive role in meeting educational needs.

Most Christian educators agree that church colleges should take a firm stance as institutions committed to the Christian religion



(10: 27) and operate out of that conviction in selecting educational goals and methods (83: 27, 72: 23). These colleges should find an integrating faith and philosophy in the Christian religion; the various subjects should be integrated into a Christian world view that is presented to students as a live option (13:12). Lowry (39: 6) acknowledges the enormous task "... of trying to be true to their religious purposes and at the same time be genuine places of higher learning and free inquiry." Ferre' (28: 151) insists that neither task can be subordinated to the other. The ideal situation is an integration of faith and learning. One great responsibility is to confront students with the fundamental questions of human life (53: 141) and guide their quest for meaning. Church colleges are faulted in the Pattillo-Mackenzie report (63: 211) for not living up to their obligations to assist students in arriving at a reasoned framework of belief.

There is wide agreement that the religious element of a church college should be the unifying force of the entire college. It is asserted that the "Christian emphasis must be something integral rather than something merely added" (83: 15). The church college is not just a college with chapel services, some good rules, and required Bible tacked on. William Clark is quoted as saying, "The Christian college does not have a religious program; it is a religious program." (83: 32).

Closely associated with religion as the unifying force are certain theological notions worthy of mention. One is the doctrine of vocation as applied to the Christian college. Moseley (49: 254),

Ahlstrom (1: 33) and Brauer (8: 241) elaborate on the "calling" of the church college. Another theological idea applied to the Christian College is the teaching of the koinonia (fellowship) with the view that the church college is uniquely a Christian community. This concept, discussed frequently (13: 11, 81: 280, 38: 218, 83: 131), embraces many facets of truth. It suggests a unity with diversity, shared faith, commonly accepted goals and purposes, involves understanding, acceptance, authenticity, openness, forgiveness, and embraces the entire life of those who are its members.

One of the other marks of most church colleges is their emphasis on the liberal arts. This is the usual emphasis even though programs are offered in education and business. Many authors (22: 58, 85: 41, 83: 30, 43: 47) call for forceful leadership in the liberal arts within the Christian tradition. Brauer (8: 239ff) insists that the future contribution of the church college will be in the area of liberal arts. Two outstanding contributions to the literature of the church college and the liberal arts have been made by Lutheran educators (21, 33).

Other marks of Christian colleges are the many ways they seek to encourage Christian belief and life. This is another point where great variation among colleges occurs. It is held that a college must plan for the religious development of students in the same way that it provides for their other needs (83: 144, 17: 131). The role and importance of the Christian faculty members have been emphasized (83, 26). The Pattillo-Mackenzie report observes that

"... faculty notions about religion are probably the most important single factor in determining what the religious impact of an institution on its students will be" (63: 138). Another feature of church colleges has been chapel services and the provision for worship. The place and importance of chapel worship has been widely discussed (39: 115, 83: 139, 29: 177, 63: 146, 1: 37, 38: 224). Ferre<sup>29</sup> (29) presents a profound discussion of the meaning of the chapel for the Christian church, the significance of chapel for the college as an academic community, and the place of chapel in the Christian college from its own point of view. Cuninggim (17: 276) discusses the qualities of a well-prepared chapel service and pointedly comments: "Every time the chapel bell rings, religion as well as the college is on trial."

Another common practice for encouraging Christian belief is formal instruction in religion (63: 140, 17: 142). The direct study of religion, theology and the Bible is one of the most frequently used ways in "developing familiarity with, understanding of, and commitment to the Judaeo-Christian tradition" (85: 42). Coit (15: 250) insists that these religion courses must be taught in reference to other academic disciplines. The Pattillo-Mackenzie study (63:141) notes the present high academic qualifications of most religion teachers and the high quality of instruction in religion as an academic subject. A final means used in developing religious interests and permitting religious expression is the provisions for voluntary religious service organizations (85: 42, 11: 197, 17: 171).

One final mark of the church college in the present situation of ambiguity is the long-standing tradition of regulations for student conduct. Codes of conduct are intended to develop character through discipline. While the earlier "regimentation" has been somewhat liberalized (85: 82), Coit (15: 246) says the rank and file of church members are still interested in the church college being a "safe" place where they can deposit their children. The approach to the matter of regulations is a major difference between the "defender college" and the "free college" (63: 192, 194). Nelson (51: 170) investigated the standards of conduct at selected church-related colleges using two theoretical models of the "Primarily Religious" and the "Permissive" or "Neutral College". Mayhew (40: 66) believes that it does not make much difference what regulations are adopted as far as student contentment is concerned as long as the policy is made clear and the students understand it before they attend the institution. It is pointed out that the college often attempts "... to maintain a minority point of view regarding morals and social customs" (85: 83). Nelson's (51) discussion of discipline includes the approaches utilized by the "primarily religious" and the "permissive" colleges. Another valuable source of information on discipline at church colleges is Wrenn's article (87) giving conditions affecting the overall disciplinary situation.

Most Christian educators agree that the Christian college is not to be understood in terms of negatives. While some of the

"defender colleges" seem to focus on these, the "free" and "affirming" colleges would be declarative and positive. Mickey's comment (47: 18) is very emphatic on this: Church colleges should be "... centers of intellectual and spiritual adventure where Christians are outthinking and outliving their contemporaries ..."  
rather than "... places where Christians are not getting drunk, not gambling, not cursing, not being reckless with their money, and not being exposed to dangerous or heretical thinking " Ahlstrom's viewpoint (1: 33) is that church colleges do not exist "merely to provide a comfortable resort for like-minded people of a common ethnic or social or religious background. Nor is it to provide a quiet retreat from the winds of antagonistic doctrine that always blow in the world - a safe haven from reality."

The Future What the future holds for church colleges is as uncertain as the present situation is ambiguous. Change will certainly continue to occur with some institutions either closing or becoming publicly supported, while other institutions will experience movement away from the Christian tradition. The Pattillo-Mackenzie study (63) concludes that though many factors are at work to re-structure the place of the church college, the obstacles are not insurmountable. They believe "church institutions can and should play an important leavening role in American education and American life" (63: 200). Mayhew (40: 11) sees one of the largest difficulties being the conflict between the Christian religion these colleges profess and the secularism and materialism of the total American

society which affect even those at the church colleges. One of the persistent problems of the church college has been that of defining its role (63: v). Wicke (85: 102) touches this very nerve when he expresses his optimistic outlook for the future with a conditional statement:

The future of the church-related college depends upon its ability to keep a clear view of its mission; upon its ability to find the church support needed to supplement other sources of income; and upon its success in interpreting its goals to students, faculty, constituency, and the general public.

#### Empirical Research on Church Colleges

There is very little information available about church colleges which is based on empirical study. Most of the literature is impressionistic, subjective and prescriptive. A summary of selected research is presented in this section.

Reeves and associates (65) conducted a survey study of thirty-five colleges related to the Methodist Episcopal Church which was reported in 1932. This is a very thorough documentation of these colleges including the classification of stated aims, curriculum, and religious practices. Of interest to this research project are their findings on the factors which students reported as having influenced their religious and moral life (65: 425). Their report on chapel and faculty and student attitudes towards the chapel services is helpful (65: 171).

The Pattillo and Mackenzie report (63) has been cited frequently in the previous section of this chapter. They engaged in a systematic assessment of "church-sponsored" higher education because

there had never been a comprehensive study of this segment of higher education (63: v). They gathered information from more than 800 institutions and engaged in a detailed study at fifty representative colleges. Their chapters on "Dimensions on Church-Sponsored Higher Education" (63: 18ff), "Relationships with Religious Bodies" (63: 30ff), "A Religious Evaluation of the Institutions" (63: 137ff), and "Patterns of Institutional Character" (63: 191ff) are most significant to this research study.

Nelson (51) recently investigated the standards of conduct at selected church-related colleges using two theoretical models of the "Primarily Religious" and the "Permissive" or "Neutral College". He reports the varying social practices that are problems at these two types of church colleges, the philosophy governing the setting up of rules, and the approach to discipline used by each. He also discusses the circumstances which give rise to problems of conduct and enforcing the standards.

Brown (11) sought to provide the Methodist four-year college movement with an operational definition of the term "Christian tradition" in order to determine if selected Methodist colleges are currently moving away from a Christian tradition. He identified eight initial principles (11: 54) which were modified and increased to ten items by 1940 (11: 149). This was his base line by which current practices were judged. He established eight criteria to be used in his evaluation of practices to advance religious and values enrichment (11: 196-198) which are valuable to this study. Trout (82)

provides a similar study of selected Presbyterian colleges.

Strahan (79) who was to become the first academic dean at Evangel College developed a proposed curriculum and the student personnel services for this college in its formative stages. He provides information about the educational developments of the sponsoring denomination, the Assemblies of God, and about the educational and socio-economic background of prospective students and their families. Johns (35) gives an interpretation of the educational philosophy of the Assemblies of God as evidenced in their literature.

Studies on the climate of church colleges have been reported. Hassenger and Weiss (31) report the research at Catholic colleges with the CCI, EAT, and CUES. Chickering (14) reports the results of CUES at small church colleges from a study under the sponsorship of the Project on Student Development in Small Colleges. Boyer and Michael (7) report their findings with CUES at seven small religiously oriented colleges and give comparative scores with other selected colleges.

### Summary

In this chapter a review of approaches to the study of college environments has been presented with particular attention paid to the development of CUES. A review of church colleges was given describing their historical developments down to the present time and the current confusion over what it means to be "church-related". Finally, reference is made to selected empirical research on the church college. This discussion provides the background for the current study in the development of an instrument for the assessment of the religious environment at denominational colleges.



## CHAPTER III

### DESIGN OF THE STUDY

This study was designed to obtain an institutional profile of Evangel College on the Religious Environment Scales, to test differences in the perceptions of the religious environment held by selected groups within the college, and to investigate differences in perceptions of the religious environment based on selected variables. This chapter discusses the development of the RES, the method of reporting the profile data and the testable hypotheses, describes the institution studied, the sample selected, the administration of the instruments, and the statistical analysis.

#### Development of the RES

This experimental instrument was developed to provide a means of assessing the religious environment at denominational colleges. The RES follows the format of the CUES and utilizes the theoretical concept of environmental press. Respondents serve as reporters about their institution since they have lived in its environment, observed its religious features, and participated in its religious activities. Responses to the items about the various dimensions of the religious environment help define the religious press or climate of a college.

A set of theoretical religious dimensions or major emphases of the environment was developed for the framework of the instrument. These emphases were chosen on the basis of the search of the

literature - influenced especially by Brown (11), Pattillo and Mackenzie (63), Reeves (65), and Trueblood (83) - and the researcher's own conceptualizations. The dimensions selected as being most comprehensive and relevant to denominational colleges were: Christian Faculty, Chapel, Denominational Relationship, Moral and Social Regulations, Religion Courses, and Students' Personal Religious Life. A description of each of the scales is given in Appendix B. The RES provides a measure of the functionally effective environment along these six dimensions. Each scale represents a dimension on which denominational colleges would be expected to differ from one another and groups within a college might differ.

The specific items were selected after a pool of items had been accumulated and various screening steps were taken. Initially, items were written from ideas found in the search of the literature, from suggestions by recent graduates of Evangel College, from selected ministers and laymen, and from the researcher's own knowledge of church-related education. Pace (55: 6) writes that in selecting items for the CCI and CUES the concept of environmental press determined the type of items; but "the guidance for deciding on the content had to come from one's knowledge of higher education: one had to judge." This is the position taken in the selection of items on the church-controlled college.

A preliminary form of the RES was pretested using 10 recent graduates of Evangel College. The instrument was discussed individually with these persons and suggestions were received concerning ambiguous

statements, appropriateness of items, and alternate items. These suggestions were evaluated and incorporated into the instrument which was then submitted to groups at two colleges of different denominations for evaluation and reaction. These groups consisted of fourteen students and four faculty at one college and fifteen students and five faculty members at the other one. These groups were asked to indicate their judgment about the importance of the items, statements that were unclear, and to suggest alternate items. From the reactions received, some items were reworded, some were discarded and others were added. The final form of the RES consists of the six theoretical constructs with a total of 90 items. Each scale was limited to the fifteen items that were judged most appropriate to the scale. Psychometric data for the RES are given later in this chapter.

### The Institutional Profile and the Hypotheses

This study was designed to (1) secure a profile of the "effective" religious environment at Evangel College based on the scores of the RES scales for selected groups and for the entire institution, and (2) test certain hypotheses that had been developed.

The profile description uses the "66 plus" method of scoring (55: 36) which is an opinion polling technique to report consensus of perceptions. The comparative strengths of perceptions for the groups and for the total institution are reported on the six scales of the RES.

Statistical hypotheses were formulated to be tested when the RES is scored by the more familiar statistical computations of means, standard deviations, and variances. Mean scores are used to indicate

the average perceptions of each group on these scales. The hypotheses in testable form are:

- I. No difference will be found in the mean scores of the selected groups at Evangel College on the individual scales of the Religious Environment Scales.
- II. No difference will be found in the mean scores of Assemblies of God students at Evangel College on the individual scales of the Religious Environment Scales when compared on the following variables:
  - A. Sex
  - B. Academic ability
  - C. Geographical area of student's home
  - D. Spiritual influence of parents
  - E. Size of home church
  - F. Level of pastor's education
  - G. Spiritual influence of home church

#### Selected Institution

The institution selected for the administration of the RES was Evangel College, Springfield, Missouri. This is the national college of one of the younger Protestant denominations, the Assemblies of God, and is a "church-controlled" college strongly committed to conservative Christianity. It is a college of arts and sciences, regionally accredited, and though only thirteen years old, had an enrollment of 773 for the spring semester of 1968.

Evangel College is a residential college with students coming from all parts of the United States, though the majority come from the mid-west. More than ninety percent of the students come from the sponsoring denomination as indicated in Table 3.3.

Descriptive Data. Descriptive information about the college is provided by the responses of the sample on the CUES. Using upper-classmen as the reporters and scoring CUES by the "66 plus" method (55: 36), an institutional score on the five scales of CUES was secured. Table 3.1 presents the score for each scale, indicates the relative standing of this institution to the national norms reported by Pace (55: 42), and for comparison gives the average standing of six religiously-oriented schools (7: 66) on the national norms. Evangel College, similar to the scores in the Boyer and Michael study (7: 66), stands high on the dimensions of Community, Propriety, and Practicality. The scores on Awareness and Scholarship are quite low, the first at the 23rd percentile and the latter at the 15th.

Further descriptive information about this college is provided by the academic ability and achievement performance of the students selected for the sample. Ability is indicated by the ACE Psychological Examination (using national norms) and achievement by cumulative grade point averages as reported in Table 3.2. Mean grade point averages range from 2.24 for Freshmen to 2.70 for Seniors. Mean Total ACE scores range from the 48.5 percentile for non-A/G students to 63.5 for Seniors. The mean grade point average for all groups is 2.50 while the ACE Total Score average is at the 54.9 percentile.

Table 3.1 EVANGEL COLLEGE'S CUES SCORES COMPARED  
WITH NATIONAL NORMS AND A SELECTED STUDY OF CHURCH COLLEGES

Scale	E.C.'s Raw Score	E.C.'s Scores in Percentiles Using National Norms	Scores of Selected Study in Percentiles Using National Norms
Practicality	15	74%	62%
Community	17	83%	94%
Awareness	7	23%	48%
Propriety	17	90%	96%
Scholarship	3	15%	60%

Table 3.2 SUMMARY OF ABILITY  
AND GRADE POINT AVERAGES BY GROUPS

Group	Mean G.P.A.*	Mean ACE Verbal Score**	Mean ACE Q Score**	Mean ACE Total Score**
Seniors	2.70	60.7	62.6	63.5
Juniors	2.59	54.4	54.1	54.4
Sophomores	2.50	57.5	54.9	57.2
Freshmen	2.24	50.7	52.6	51.0
Non-A/G	2.49	50.9	49.8	48.5

\*Cumulative Grade Point Average through fall semester, 1967.

\*\*American Council on Education Psychological Examination, comprised of Verbal, Quantitative and Total Scores, taken upon entering the college.

### Sample

The sample for this study consisted of six groups at Evangel College. They were: Faculty-Administration, Seniors, Juniors, Sophomores, Freshmen, and Non-A/G students (i.e., those who are not members of the sponsoring denomination). It was believed that each of these groups had a unique position from which to report the environment of this college.

Faculty-Administration. This group was defined to include all full-time administrators, full-time faculty members, and members of the Dean of Students' staff who are involved full-time in supervision of student life. All of these persons are members of the sponsoring denomination. An additional stipulation was employment at the college for at least one year prior to the time of the study. The total population of this group was 55, and the number meeting the criteria was 45. This selected group constituted the entire eligible population. The number of returns was 40 as indicated in Table 3.3.

Student Classes. Samples were taken from each of the four academic classes. The criteria for these groups were: members of their respective classes as reported by the Registrar's office, those who listed church membership as Assemblies of God, and Seniors, Juniors, and Sophomores who had attended Evangel College at least two years and Freshmen who had attended one term prior to this study.

An alphabetical list of eligible students by classes was provided by the Registrar's office. Numbers were assigned to these names and 100 names were selected from each class using a table of

Table 3.3 SUMMARY OF POPULATION, SAMPLE, AND RETURNS  
FOR EACH OF THE SELECTED GROUPS

Group	Total Population N	Selected Population* N	Sample N	Total Returns N	Total Returns %	Returns Used N	Returns Used %
Faculty- Admin.	55	45	45	40	88	40	88
Seniors	124	114	100	80	80	80	80
Juniors	157	136	100	81	81	80	80
Sophomores	190	172	100	82	82	80	80
Freshmen	247	223	100	84	84	80	80
Non-A/G	(57)**	50	50	45	90	40	80
Part-time Students	<u>55</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>
Totals	828	740	495	412	83%	400	81%

\*As defined on pages 38 and 40.

\*\*Counted in class groups.



random numbers. The total enrolled populations, the eligible populations and the percentages of returns are given in Table 3.3. The selected populations were 114 Seniors, 136 Juniors, 172 Sophomores, and 223 Freshmen. The percentages of returns ranged from 80 to 84 percent from the 100 selected from each class.

Non-A/G Students. This group consisted of all students who listed their church membership on their permanent records as being other than Assemblies of God. It was stipulated that these students to be eligible must have been enrolled at least one term prior to the study. Students meeting the criteria numbered 50 of which 45 responded as reported in Table 3.3. These students were almost evenly divided among the four academic classes.

Total Sample. The total college population, the selected population, and the number of returns are given in Table 3.3. The aggregate total was 828, the total selected or defined population was 740 from which a total sample of 495 was drawn. The number of returns for all groups was 412 for a 83 percent return. Since the numbers in the Faculty-Administration group and the non-A/G group were so close, and the numbers in the four class groups were so close, numbers were randomly dropped to give identical sizes in the two small groups and identical sizes in the four large groups. This step facilitated the utilization of a one-way analysis of variance with equal groups. A total sample of 400 was used which is 81 percent of the total selected population.

### Administration of Instruments

The instruments administered to all groups were the Religious Environment Scales (see Appendix A) and the College and University Environment Scales (see Appendix C). Students also responded to a questionnaire on demographic data (see Appendix E).

These instruments were administered the last week of April, 1968. Two procedures were used in securing the data: the researcher administered the instruments during announced group sessions, and the instruments were distributed individually. The student body was informed of the project by announcement in chapel. Students chosen by random selection were notified by campus mail of scheduled sessions. Most of the data were secured during these sessions. The instruments were distributed in person to the Faculty-Administration group and to those students who could not or did not report to the announced sessions. Eighty-three percent of the returns were collected during the final week of April. The remainder of the returns were secured by followup of the Dean of Students' Office.

### Scoring the RES

Items were answered as being True or False indicating perceptions of what was generally characteristic or not characteristic of the campus. Responses were scored by the key prepared by the researcher as being correct or incorrect. The answer sheets were mechanically processed and the data punched on computer cards.

Two methods of tabulating the scores for the RES are used in this

study following the methods suggested by Pace (55: 36) for scoring the CUES. The "66 plus" method counts the number of items in a scale answered in the keyed-direction by 66 percent or more of the respondents. The more familiar method determines the number of correct answers by individuals and computes group averages for each scale.

### Statistical Analysis

"66 Plus" Method. The first treatment of the data in Chapter IV is the tabulation of responses by the "66 plus" method. This method utilizes the rationale of opinion polling with a ratio of two to one set as the level of consensus. Each item of a scale is scored as "correct" or "valid" when 66 percent or more of the respondents agree with the keyed-answer. The number of items out of a possible 15 in each scale answered in the keyed-direction by 66 percent or more constitutes a "positive consensus". The raw number provides the institutional or group score on that scale. Additional information is provided by determining the "negative consensus" or the number of items in a scale for which 66 percent or more answered in the opposite direction to the keyed-answers. These data were secured by the ACT program on the CDC 3600 Computer at Michigan State University.

Descriptive Statistics. The null hypotheses formulated for this study were tested after the number of right answers for each scale was determined and group means were computed. Differences between group means were computed using analysis of variance. The tests were

run on the CDC 3600 Computer.

Assumptions of Analysis of Variance. According to Lindquist (36: 73-78), there are four basic requirements that must be met when using analysis of variance:

1. Observations within groups must be mutually independent so that each observation is in no way related to any other observation. The laws of chance must operate unrestricted which occurs when random sampling is used.

The groups in this study were either total, discrete populations or were randomly selected.

2. The variance of the criterion measures is the same for each of the treatment populations. This assumption of homogeneous variance can be violated without serious risk according to research by Norton (36: 73). Hays (32: 379) agrees with this conclusion as long as the size of each sample group is the same. When the sizes are different, a test is necessary to determine homogeneity of variance.

In testing the hypothesis of no difference in the mean scores of the six groups, no test for homogeneity was necessary since equal sized groups were used. The four student classes were randomly reduced in number to equal the size of the two small groups of 40 each.

In investigating differences in mean scores based on selected variables, there were unequal groups which necessitated the use of a test for homogeneity of variance. The F max test discussed by Walker and Lev (84: 191) was first used to determine if the variances were equal. If the F max test indicated they were not equal, the more exact test of Bartlett's (84: 193) was used.

3. The distribution of criterion measures for each treatment population is normal. This requirement is not critical according to Lindquist (36: 81) and Hays (32: 378) when the size of each sample is relatively large.

All of the groups used in testing the first hypothesis numbered 40 each. Some of the groups used in the

investigation with selected variables were less than 20 but were checked to satisfy this requirement.

4. The mean of the criterion measures is the same for each treatment population.

This is the assumption to be tested in the null hypotheses stated earlier in this chapter.

Duncan's New Multiple Range Test. Finding significant differences among means by the analysis of variance does not tell how the means differ or which ones differ significantly from the others. One of the methods for making multiple comparisons among the means is Duncan's new multiple range test (27: 136ff).

The procedure with equal sized groups is to rank the means and then find the standard error of a single mean by the formula

$$s_{\bar{x}} = \frac{s}{\sqrt{n}}$$

where  $s$  is the square root of the error mean square of the analysis of variance and  $n$  is the number of observations on which the mean is based. Tabled values are provided for the "significant studentized ranges" which are read on the basis of the chosen level of significance and the appropriate number of degrees of freedom. The tabled values for each of the  $k$  number of groups is multiplied by the standard error of the mean. The resulting values are called the "shortest significant ranges."

The order of testing between pairs of means is the largest minus the smallest, the largest minus the second smallest, etc. Then the difference is found between the second largest minus the smallest, etc., until the second smallest minus the smallest is tested. Each difference

is significant if it exceeds the corresponding shortest significance range. It is possible by this method to show the means that are significantly different from other means.

An extension of Duncan's technique for the case of unequal  $n$ 's is given by Kramer (36: 307) and Duncan (23: 164). The procedure is the same as for equal sized groups in computing the significant studentized ranges for a given level of confidence. The formula used to compute each range is

$$(\bar{x}_a - \bar{x}_c) \sqrt{\frac{2 n_a n_c}{n_a + n_c}}$$

and the difference between these two means is significant if this obtained value exceeds the appropriate significant range factor. The order of testing is the same procedure of the largest minus the smallest and so on through each step to test the second smallest minus the smallest.

In designing the study the 5 percent level of significance was chosen as the point at which the null hypotheses would be rejected. In using Duncan's multiple range test, increased power is obtained by risking a lowered protection level as the number of means increases. This creates somewhat the possibility of making more Type I errors or rejecting the null hypothesis when actually no difference exists.

#### Psychometric Data about the RES

Validity. The validity claimed for this instrument is content validity. This claim is based on the procedure used in collecting the pool of items, the pretesting of the instrument, the use of authoritative sources in the literature, recommendations by recent

graduates of one denominational college, by students enrolled at two other such colleges, by selected ministers, laymen and faculty, and, ultimately, the judgment of the researcher. Face validity is also claimed for the RES as the items deal directly with the specific dimensions of the religious environment.

Reliability. Usually, reliability is a function of the dispersion of individual scores. But in this study where groups rather than individuals are to be compared, high reliability is not as critical. In reporting the profile of the institution or of groups within the institution by the "66 plus" method, the estimates of reliability most appropriate are those used in opinion polling or survey research (55: 48). These estimates are based on sampling theory and the standard error of a proportion. The formula used for determining the standard error of a proportion provides an indication of the limits within which the true proportion would lie. In this study with an N of 400, the standard error for the 95 percent level of confidence is  $\pm 4.64$ . Using the ratio of two to one, or 66 percent as the arbitrary level of consensus, the lower limit would be 61.36 percent for this level of confidence. Percentages which fall below this limit would be rather unlikely to change sufficiently to alter the institution's score.

When group mean scores are calculated and analysis of variance is utilized to determine differences between the means, a different approach to reliability is appropriate. The main focus is not on individual scores and their dispersion but on group scores or the mean score for each of the selected groups within the college.

Table 3.4 summarizes the estimates of individual score reliability and of group means for each scale. Individual score reliability was computed by analysis of variance as discussed by Hoyt (34: 153-160). Applying this test, the variance among students and the variance among items were subtracted from the total variance. Theoretically, the remainder estimates the discrepancy between obtained variance and true variance and is known as error variance. Thus, the coefficient of reliability for individual scores is:

$$r_{tt} = \frac{\text{Variance among individuals} - \text{error variance}}{\text{Variance among individuals}}$$

According to Lindquist (36: 357) the estimate of reliability of group means can also be estimated by using this same error variance. The formula is:

$$r_{tt} = \frac{\text{Variance among group means} - \text{error variance}}{\text{Variance among group means}}$$

The reliability coefficients for individual scores based on the administration of the RES at Evangel College range from .92 to .94 on the scales. This indicates a very high estimate of reliability. The reliability coefficients based on group means are even higher with all of the coefficients being .99. The reliability coefficients based on the group means indicate a high stability of scores.

### Correlations

Responses on the RES are correlated with the responses on the CUES to indicate what relationships exist between the scales of these instruments. The coefficients of correlation are presented



Table 3.4 RES RELIABILITY BASED  
ON INDIVIDUAL SCORES AND GROUP MEANS

Scale	Reliability* of Individual Scores	Reliability** of Group Means
Christian Faculty	.93	.99
Chapel	.93	.99
Denominational Relationship	.93	.99
Regulations	.92	.99
Religion Courses	.94	.99
Personal Life	.92	.99

\*Hoyt's estimate of reliability by analysis of variance.

\*\*Lindquist's estimate of reliability by analysis of variance.

in Table 3.5. There is almost no relationship between the six RES scales and Practicality of the CUES. There is only slight relationship between the six RES scales and Propriety on the CUES. There is low correlation between the six scales of the RES and Community on CUES with the exception of Christian Faculty which has a coefficient of .42. Awareness on the CUES has a low of .32 on Denominational Relationship but has substantial relationship on the other RES scales ranging from .41 to .48. Scholarship on CUES has substantial relationship with Chapel, Regulations, and a high of .51 on Personal Life.

The relationships between the scales of the RES and the CUES are not very high. They are high enough, however, to suggest that the instruments are probably measuring some things in common. They are low enough to indicate that the scales on the two instruments are measuring different things.

Table 3.6 presents the coefficients among the six scales of the RES. Christian Faculty scale has the lowest  $r$ 's of all with a .38 with Chapel and a .39 with Religion Courses. The coefficients with the other scales are .43, .45 and .45. The Chapel scale, apart from Christian Faculty, is just over .40 with Denominational Relationship, Regulations, and Religion Courses while it is .51 with Personal Life. The Denominational Relationship scale has coefficients over .40 with all scales and a high of .52 with Regulations. The Regulations scale is one of the highest over-all with coefficients of .43, .43 and .48 on Christian Faculty, Chapel, and Personal Life respectively;

Table 3.5 CORRELATION OF RES AND CUES SCALES\*

RES	<u>CUES</u>				
	Practi- cality	Communi- ty	Aware- ness	Pro- priety	Scholar- ship
Christian Faculty	.138	.423	.445	.270	.383
Chapel	.094	.358	.443	.225	.440
Denominational Relationship	-.002	.240	.322	.227	.261
Regulations	.063	.374	.407	.288	.429
Religion Courses	.059	.323	.461	.142	.375
Personal Life	.064	.383	.483	.285	.506

Table 3.6 INTER-CORRELATIONS OF RES SCALES\*

	Pers. Life	Rel. Courses	Regula- tions	Denom. Rela.	Chapel	Chris. Faculty
Christian Faculty	.451	.393	.435	.449	.377	1.00
Chapel	.509	.420	.433	.405	1.00	
Denominational Relationship	.397	.405	.519	1.00		
Regulations	.482	.510	1.00			
Religion Courses	.450	1.00				
Personal Life	1.00					

\*With an N of 400, an r greater than .10 is significant at the .05 level.

there is a coefficient of .51 on Religion Courses and .52 on Denominational Relationship. Religion Courses scale coefficients are close to .45 with a .40 on Denominational Relationship and a .51 on Chapel. There is an adequate relationship among the coefficients of the RES scales to indicate some cohesion among the scales without a relationship that is too high. High correlations would indicate that the scales measured the same things without a meaningful distinction between them. The data from this study suggest that the scales measure some things in common but also that they are measuring different things.

### Summary

The development of the RES as well as the specifics of the methodology and the design of the study are discussed in this chapter. The RES, CUES and a student questionnaire were administered to six selected groups at Evangel College, Springfield, Missouri.

The RES was modeled after Pace's CUES. The scales were theoretically derived and the individual items were selected from a pool of items accumulated from many sources - the writings of authorities, graduates, students and faculty members of three denominational colleges, selected ministers, laymen, and the judgment of the researcher. The final form has six scales with 15 items each.

Content validity is claimed for the RES based on the procedure utilized in securing the items and in pretesting and revising the instrument. Reliability is not important when the "66 plus" method is used since this method desires high consensus and low

variability. An estimate of reliability is given in this study when group means are compared. Hoyt's technique gives an estimate based on individual scores. The emphasis in this study, however, is on group scores so the most important estimate of reliability is the method suggested by Lindquist. Very high reliability is reported for each of the scales. Correlation coefficients between the CUES and the RES are high enough to indicate a cohesion among the scales but low enough to indicate that even though they measure some of the same things, the RES probably measures different things. The same thing can be said for the individual scales of the RES based on the coefficients among the scales of the RES.

The method of reporting an institutional profile by the "66 plus" method is discussed. The null hypotheses formulated for this study are also presented. The institution, the sample groups selected, and the statistical design are discussed. Significant differences among the groups are determined by analysis of variance. Duncan's new multiple range test is used to determine which means are significantly different.

In the following chapter the data secured from the administration of the RES are reported and analyzed.

## CHAPTER IV

### ANALYSIS OF THE DATA

The data collected in the administration of the RES are analyzed in this chapter. The chapter presents the profile of Evangel College as a whole and of the selected groups on the RES, gives the analyses conducted to test the null hypothesis of no difference among the means of the six selected groups on the RES, and reports the analyses conducted to test the null hypothesis of no difference among the mean scores of Assemblies of God students when compared on selected variables.

By way of brief review, the Religious Environment Scales (RES) is a set of six theoretically derived scales or dimensions along which the religious environment of church-controlled colleges is conceived. They are: Christian Faculty, Chapel, Denominational Relationship, Moral and Social Regulations, Religion Courses, and Students' Personal Religious Life. This instrument was administered to six selected groups at Evangel College: Faculty-Administration, Seniors, Juniors, Sophomores, Freshmen, and Non-A/G students. The responses on the RES provide an indication of the perceptions held of the religious environment and help define the institutional religious press.

#### Profile

This section presents the profile of the total institution on the

scales as well as the profiles of the groups. Group perceptions on individual items are also analyzed. The "66 plus" method of scoring the instrument is used in reporting the profile. Each item of a scale is scored by group and for the total sample indicating the percentages agreeing and disagreeing with the keyed-answers. Positive consensus occurs when 66 percent or more of the respondents agree with the keyed-answer; negative consensus occurs when 66 percent or more disagree with the keyed-answer. The score for each group and for the total institution is the number of items out of a possible 15 on each scale for which there is a positive consensus. Negative consensus is also reported for the additional information about perceptions of the religious environment. Scores are also reported using the standard error of a proportion at the .95 confidence level for a two to one proportion.

Institutional Scores. The institutional profile on the RES is presented in Table 4.1. The highest positive score (using the 66 percent minimum) is 12 on the Christian Faculty scale which has no negative consensus. The next highest score is +11 on the scale of Religion Courses with no negative score. A medium range score of +8 is reported on Regulations with a negative consensus score of 2. The institutional score for Personal Life is +5 and -3 using 66 percent as the minimum level for consensus. The scores on the Denominational Relationship scale are a positive score of 5 and a higher negative score of 6. The score on the Chapel scale is the lowest with a positive score of 3 and a negative score of 3. The institutional scores

Table 4.1 PROFILE OF EVANGEL COLLEGE ON THE  
RES BY GROUPS AND FOR THE TOTAL INSTITUTION

		<u>Groups</u>						
Scale		Fac.- Admin.	Srs.	Jrs.	Sophs.	Fresh.	Non- A/G	Total Institu.
Christian Fac.	66%	+12	+13	+12	+12	+13	+13	+12
		-0	-0	-0	-0	-0	-0	-0
	.95 level	+13	+14	+12	+12	+14	+13	+13
		-0	-0	-0	-0	-0	-0	-0
Chapel	66%	+7	+5	+2	+5	+6	+5	+3
		-2	-5	-5	-3	-2	-3	-3
	.95 level	+8	+7	+4	+7	+6	+7	+6
		-2	-6	-6	-4	-3	-3	-4
Denom. Rela.	66%	+5	+5	+6	+6	+8	+6	+5
		-5	-5	-6	-6	-5	-5	-6
	.95 level	+5	+6	+7	+6	+8	+6	+8
		-5	-6	-6	-6	-6	-6	-6
Regs.	66%	+11	+8	+8	+7	+8	+8	+8
		-3	-2	-1	-1	-1	-1	-2
	.95 level	+11	+8	+9	+7	+9	+9	+9
		-3	-2	-2	-2	-2	-1	-2
Religion Courses	66%	+10	+11	+11	+11	+10	+9	+11
		-1	-1	-1	-1	-2	-0	-0
	.95 level	+11	+11	+11	+11	+11	+10	+11
		-1	-1	-1	-2	-2	-1	-2
Personal Life	66%	+6	+5	+6	+6	+5	+7	+5
		-4	-3	-4	-3	-2	-1	-3
	.95 level	+8	+6	+6	+7	+7	+8	+7
		-4	-3	-5	-3	-4	-2	-4

66% = Positive (+) and negative (-) consensus of 66 percent or more.

.95 level = Positive (+) and negative (-) consensus of 61.36 percent or more.



range from a high of +12 on Christian Faculty to a low of +3 on Chapel.

When the standard error of a proportion at the .95 confidence level is used, the total scores are higher. Christian Faculty scale is highest with +13, Religion Courses next with +11, Regulations +9, Denominational Relationship +8, Personal Life +7, and Chapel is last with a +6. There is considerable negative consensus by the entire institution on Denominational Relationship with -6, Personal Life and Chapel each have -4, and Regulations and Religion Courses scales each have -2. If both positive and negative scores on a scale are added together, there is high consensus among the respondents with a combined score of 14 on the Denominational Relationship scale, 13 on Christian Faculty, 13 on Religion Courses, 11 on Regulations, 11 on Personal Life, and 10 on Chapel.

Group Scores. There is general agreement among the reported perceptions of the six groups on most of the scales as presented in Table 4.1. There is almost complete agreement on the Christian Faculty scale with scores of +12 and +13 (using 66 percent as the minimum). There are positive scores of 10 and 11 by the groups on the Religion Courses scale except for a low of 9 by the Non-A/G group. The groups have scores of +5 or +6 on the Denominational Relationship scale except for the high of +8 by the Freshmen. Four of the groups on the Regulations scale have a +8 score while the Sophomores have the low of +7; the Faculty-Administration group is quite different from the other groups on this scale with a score of +11. Most of the groups have scores on the Chapel scale of +5; the Juniors have the lowest

score on all scales of +2 on this scale, and the Faculty-Administration group again has the highest score with a +7.

There are substantial negative scores by the groups on the scales of Chapel, Denominational Relationship, and Personal Life. Seniors and Juniors on the Chapel scale report negative consensus of -5 while the other groups have -2 or -3. Juniors and Sophomores on the Denominational Relationship scale have a negative score of -6 while the other groups have -5. Faculty-Administration, Seniors, Juniors and Sophomores have scores of -3 or -4 on the Personal Life scale.

Analysis of Scales by Items. This section presents the percentages of each group answering True/False on each item of the six scales of the RES. Both positive and negative consensus of 66 percent or above as well as positive and negative consensus within the standard error interval at the .95 confidence level are given. This discussion of the results focuses primarily on the 66 percent minimum.

Table 4.2 gives the percentages of each group answering True/False on the items of the Christian Faculty scale. The institutional score is +12 though the percentage on item 34 is very close (65.66%) to the required minimum for consensus. Item 35 also received a substantial 60.55 percent by the entire group.

There is high consensus by all groups on items 1 through 5. These items deal with unity among the faculty, a balance between spiritual emphasis and academic emphasis, faculty as supporters of special religious activities, teachers confronting students with religious issues in their disciplines, and courses conducted in keeping with expectations at a Christian college. There is unanimous agreement on

Table 4.2 RES -- PERCENTAGES AND RAW SCORES BY GROUPS ON ITEMS AND TOTAL SCALE USING "66 PLUS" SCORING

## 1. Christian Faculty

Items	Fac.-Admin.	Seniors	Juniors	Groups		Freshmen	Non-A/G	Total
				Sophomores				
1.	90.00/10.00+	95.00/05.00+	91.25/08.75+	95.00/05.00+		92.50/07.50+	92.50/07.50+	93.00/07.00+
2.	87.50/12.50+	90.00/10.00+	90.00/10.00+	97.50/02.50+		91.25/08.75+	97.50/02.50+	92.25/07.75+
3.	80.00/20.00+	83.75/16.25+	80.00/20.00+	86.08/13.92+		93.75/06.25+	90.00/10.00+	85.71/14.29+
4.	95.00/05.00+	86.25/13.75+	86.08/13.92+	91.25/08.75+		88.61/11.39+	95.00/05.00+	89.45/10.55+
5.	30.00/70.00+	31.65/68.35+	27.50/72.50+	33.75/66.25+		22.78/77.22+	12.50/87.50+	27.39/72.61+
31.	100.00/00.00+	81.25/18.75+	77.50/22.50+	85.00/15.00+		83.75/16.25+	85.00/15.00+	84.00/16.00+
32.	100.00/00.00+	73.75/26.25+	78.75/21.25+	81.25/18.75+		91.25/08.75+	85.00/15.00+	83.50/16.50+
33.	62.50/37.50*	71.75/28.25+	80.00/20.00+	75.00/25.00+		70.89/29.11+	72.50/27.50+	72.93/27.07+
34.	75.00/25.00+	73.75/26.25+	55.00/45.00	61.25/38.75		70.89/29.11+	60.00/40.00	65.66/34.34*
35.	47.50/52.50	35.00/65.00*	41.25/58.75	44.30/55.70		36.71/63.29*	32.50/67.50+	39.45/60.55
61.	92.50/07.50+	82.28/17.72+	77.50/22.50+	85.00/15.00+		92.41/07.59+	80.00/20.00+	84.67/15.33+
62.	97.50/02.50+	95.00/05.00+	97.50/02.50+	97.50/02.50+		98.75/01.25+	95.00/05.00+	97.00/03.00+
63.	80.00/20.00+	71.25/28.75+	72.50/27.50+	68.75/31.25+		80.00/20.00+	75.00/25.00+	74.00/26.00+
64.	45.00/55.00	49.37/50.63	47.50/52.50	45.00/55.00		43.75/56.25	42.50/57.50	45.86/54.14
65.	85.00/15.00+	80.00/20.00+	78.75/21.25+	81.01/18.99+		91.25/08.75+	80.00/20.00+	82.71/17.29+
Group Raw Scores	+12 -0	+13 -0	+12 -0	+12 -0		+13 -0	+13 -0	+12 -0
Scores Using 95% level of confidence	+13 -0	+14 -0	+12 -0	+12 -0		+14 -0	+13 -0	+13 -0

+ = Positive consensus of 66% or more agreeing with the keyed-answer.

- = Negative consensus of 66% or more disagreeing with the keyed-answer.

\* = Positive consensus within .95 confidence interval of 61.36 - 70.64 for total group.

\*\* = Negative consensus within .95 confidence interval of 61.36 - 70.64 for total group.

item 31 about faculty interest in the total development of their students. All groups agree (item 32) that faculty members seek to make practical application of Christian principles to their courses. All groups except the Faculty-Administration agree that faculty support daily chapel by their attendance (item 33); the Faculty-Administration group is near the required percentage. Faculty-Administration, Seniors and Freshmen are the only groups who believe that faculty members have adequate academic freedom (item 34). Only the Non-A/G group is above 66 percent on item 35 reporting that the influence of some faculty members is NOT hindered by poor quality of their courses. Seniors and Freshmen are close to reporting the same perception but fall short of the 66 percent minimum. There is high positive consensus among the groups on items 61 to 63, and item 65. These items deal with the faculty being active in helping students with personal spiritual problems, giving support to the stated religious purposes of the college, and influencing students by the depth of their Christian commitment. Item 64 received almost equally divided "votes" among the six groups concerning whether or not a problem exists of keeping well-qualified faculty. None of the items in this scale received a negative consensus by any group.

Table 4.3 presents the percentages of each group answering True/False on each item of the Chapel scale. The total responses on the items of this scale are divided. The clear positive score is only 3 with the percentages on 3 additional items falling within the standard error interval. There is a clear negative score of 3 with 1 other item counted within the wider confidence interval. Five items received

Table 4.3 RES -- PERCENTAGES AND RAW SCORES BY GROUPS ON ITEMS AND TOTAL SCALE USING "66 PLUS" SCORING

11. Chapel		Groups						
Items	Fac.-Admin.	Seniors	Juniors	Sophomores	Freshmen	Non-A/G	Total	
6.	45.00/55.00	12.66/87.34-	13.75/86.25-	28.75/71.25-	35.90/64.10**	30.00/70.00-	25.69/74.31-	
7.	40.00/60.00	35.00/65.00**	31.25/68.75-	50.00/50.00	54.43/45.57	50.00/50.00	43.11/56.89	
8.	22.50/77.50+	37.50/62.50*	35.00/65.00+	27.50/72.50+	20.25/79.75+	28.21/71.79+	29.15/70.85+	
9.	60.00/40.00	27.50/72.50-	25.00/75.00-	34.18/65.82**	48.10/51.90	45.00/55.00	37.44/62.56*	
10.	32.50/67.50+	26.25/73.75+	35.00/65.00*	35.00/65.00*	43.04/56.96	32.50/67.50+	34.34/65.66*	
36.	52.50/47.50	71.25/28.75+	42.50/57.50	51.25/48.75	46.84/53.16	65.00/35.00*	54.14/45.86	
37.	65.00/35.00*	63.75/36.25*	56.25/43.75	68.75/31.25+	66.25/33.75+	57.50/42.50	63.25/36.75*	
38.	100.00/00.00-	93.75/06.25-	95.00/05.00-	88.75/11.25-	88.75/11.25-	95.00/05.00-	92.75/07.25-	
39.	75.00/25.00+	66.25/33.75+	61.25/38.75	71.25/28.75+	49.37/50.63	65.00/35.00*	63.66/36.34*	
40.	57.50/42.50	66.25/33.75-	61.25/38.75	50.00/50.00	32.91/67.09+	32.50/67.50+	51.13/48.87	
66.	70.00/30.00+	51.25/48.75	56.25/43.75	63.75/36.25*	73.42/26.58+	55.00/45.00	61.40/38.60*	
67.	82.50/17.50-	85.00/15.00-	90.00/10.00-	90.00/10.00-	95.00/05.00-	95.00/05.00-	89.75/10.25-	
68.	92.50/07.50+	47.50/52.50	35.44/64.56**	46.84/53.16	48.10/51.90	40.00/60.00	48.87/51.13	
69.	12.82/87.18+	21.25/78.75+	13.75/86.25+	20.00/80.00+	25.00/75.00+	15.00/85.00+	18.80/81.20+	
70.	25.00/75.00+	10.00/90.00+	08.75/91.25+	23.75/76.25+	22.78/77.22+	20.00/80.00+	17.54/82.46+	
Group Raw Scores	+7 -2	+5 -5	+2 -5	+5 -3	+6 -2	+5 -3	+3 -3	
Scores Using 95% level of confidence	+8 -2	+7 -6	+4 -6	+7 -4	+6 -3	+7 -3	+7 -4	

+ = Positive consensus of 66% or more agreeing with the keyed-answer.

- = Negative consensus of 66% or more disagreeing with the keyed-answer.

\* = Positive consensus within .95 confidence interval of 61.36 - 70.64 for total group.

\*\* = Negative consensus within .95 confidence interval of 61.36 - 70.64 for total group.

split responses by the total group.

Examination of the responses by groups shows contradictory perceptions on this scale. The Faculty-Administration group is split on item 6 concerning students seeing daily chapel as a necessary feature of the life of the college; the student groups report a negative consensus disagreeing with the statement. Only Juniors have a clear consensus (negative) on item 7 denying that speakers excite discussion about their topics; Seniors are close to the needed percentage to agree with the Juniors. There is consensus or near consensus by all groups on item 8 that students DO participate in planning and directing chapel services. Seniors and Juniors have a clear negative consensus on item 9 and Sophomores are close to agreeing with the perception that students do NOT believe that chapel effectively contributes to their spiritual growth. The Faculty-Administration group does not reach consensus but has a 60/40 percentage in the opposite direction to the students.

Only Seniors and Non-A/G students perceive chapel as being planned for the entire college community (item 36). Opinion is divided among the groups on item 37 about the frequency of speakers from outside the sponsoring denomination being invited to speak. There is unanimous negative consensus on item 38 that students are NOT satisfied with the frequency of required chapel attendance. Faculty-Administration, Seniors and Sophomores concur in positive consensus on item 39 with the Non-A/G group near the required level that a variety of forms and approaches are used in chapel worship. Lack of reverence in

chapel (item 40) is a problem according to Seniors and the Juniors almost agree with them; Freshmen and Non-A/G students report there is no problem, and Faculty-Administration and Sophomores do not achieve a consensus in either direction.

Faculty-Administration and Freshmen have consensus (item 66) and the Sophomores reach near consensus that students DO generally have an understanding of the underlying objective for chapel. There is complete negative consensus on item 67 that religious emphasis weeks ARE more meaningful than regular chapel services. Item 68 concerning the chapel services being generally stimulating has positive consensus only by the Faculty-Administration - a high percentage of 92.50. There is no clear consensus on this item by any other group though the Juniors almost attained a negative consensus. There is substantial agreement among all groups of positive consensus on items 69 and 70.

Table 4.4 presents the percentages of each group answering True/False on each item of the Denominational Relationship scale. The institutional score is contradictory. There is clear positive consensus on 5 items with near consensus on 3 other items. There is clear negative consensus on 6 items. Considerable fluctuation and variety occur among the reported perceptions of the six groups.

Freshmen and the Non-A/G students are the only groups (item 11) to reach consensus that the denomination utilizes the intellectual leadership of the faculty. There is almost unanimous consensus on item 12 (Freshmen have 65.82%) that the college administration is

Table 4.4 RES -- PERCENTAGES AND RAW SCORES BY GROUPS ON ITEMS AND TOTAL SCALE USING "66 PLUS" SCORING

III. Denominational Relationship		Groups					Total	
Items	Fac.-Adm'n.	Seniors	Juniors	Sophomores	Freshmen	Non-	A/G	Total
11.	42.50/57.50	58.75/41.25	56.25/43.75	60.00/40.00	78.75/21.25+	75.00/25.00+		62.50/37.50*
12.	82.05/17.95-	83.75/16.25-	75.00/25.00-	86.25/13.75-	65.82/34.18**	70.00/30.00-		77.39/22.61-
13.	70.00/30.00+	72.50/27.50+	72.50/27.50+	82.50/17.50+	85.00/15.00+	80.00/20.00+		77.50/22.50+
14.	40.00/60.00	51.25/48.75	62.50/37.50*	75.00/25.00+	72.15/27.85+	72.50/27.50+		63.41/36.59*
15.	55.00/45.00	11.25/88.75+	23.75/76.25+	18.75/81.25+	12.66/87.34+	22.50/77.50+		21.05/78.95+
41.	22.50/77.50+	30.00/70.00+	33.75/66.25+	43.75/56.25	41.77/58.23	47.50/52.50		36.84/63.16*
42.	76.92/23.08-	87.50/12.50-	73.75/26.25-	83.75/16.25-	77.50/22.50-	72.50/27.50-		79.45/20.55-
43.	84.62/15.38-	88.75/11.25-	78.75/21.25-	85.00/15.00-	74.68/25.32-	72.50/27.50-		81.16/18.84-
44.	50.00/50.00	34.18/65.82**	28.75/71.25-	31.65/68.35-	25.32/74.68-	35.00/65.00**		32.49/67.51-
45.	60.00/40.00	65.00/35.00*	66.25/33.75+	67.50/32.50+	75.00/25.00+	60.00/40.00		66.75/33.25+
71.	92.50/07.50+	84.81/15.19+	98.75/01.25+	92.50/07.50+	96.25/03.75+	82.50/17.50+		91.98/08.02+
72.	75.00/25.00-	81.25/18.75-	85.00/15.00-	80.00/20.00-	71.25/28.75-	67.50/32.50-		77.75/22.25-
73.	75.00/25.00+	41.25/58.75	41.03/58.97	53.75/46.25	67.09/32.91+	57.50/42.50		53.90/46.10
74.	20.00/80.00+	20.00/80.00+	11.25/88.75+	08.75/91.25+	29.11/70.89+	22.50/77.50+		18.05/81.95+
75.	92.50/07.50-	87.50/12.50-	82.50/17.50-	90.00/10.00-	75.95/24.05-	67.50/32.50-		83.21/16.79-
Group Raw Scores	+5 -5	+5 -5	+6 -6	+6 -6	+8 -5	+6 -5	+6 -5	+5 -6
Scores Using 95% level of confidence	+5 -5	+6 -6	+7 -6	+6 -6	+8 -6	+6 -6	+6 -6	+8 -6

+ = Positive consensus of 66% or more agreeing with the keyed-answer.

- = Negative consensus of 66% or more disagreeing with the keyed-answer.

\* = Positive consensus within .95 confidence interval of 61.36 - 70.64 for total group.

\*\* = Negative consensus within .95 confidence interval of 61.36 - 70.64 for total group.



overly sensitive because of criticism from pastors and churches. At the same time, there is unanimous agreement on item 13 that the denomination shows good interest in the college. There is divided opinion on item 14 about pastors being informed about the college with only Sophomores, Freshmen and Non-A/G groups agreeing that this is true. All student groups report (item 15) that it is not true that several faculty members are apologetic about the denomination which sponsors the college.

Faculty-Administration, Seniors and Juniors report positive consensus on item 41 that the denomination does NOT exercise considerable influence on the content of courses, while the other three groups have split opinions. There is unanimous consensus by all groups on item 42 that the student body IS kept aware of the denomination's interest in and control of the college. There is consensus by all groups on item 43 that the denomination DOES hold the college responsible for loss of spiritual interest by students. All groups except Faculty-Administration report negative consensus or near consensus on item 44 that it is NOT true the college is largely autonomous in setting its regulations. All groups reach consensus or near consensus on item 45 that denominational officials are frequently on campus.

There is high consensus by all groups on item 71 that students continue to attend churches of the sponsoring denomination upon leaving the college. There is high consensus by all groups as reported on item 72 that there is strong feeling on campus that the denomination exercises too much control over the college. Only

Faculty-Administration and Freshmen think (item 73) that students appreciate the opportunity at the college to meet denominational leaders and learn more about their denomination. Every group has consensus on item 75 that there are several faculty members who are more liberal in social practices and political views than the denomination in general.

Table 4.5 presents the percentages of each group answering True/False on each item of the Regulations scale. There is high positive consensus (item 16) that rules are in close agreement with views generally held in the denomination and that dismissing students for major violations (item 18) is effective in upholding the conduct code of the college. There is institutional consensus (item 20) that students participate in making the rules; the Freshmen group falls just short of the 66 percent minimum. Faculty-Administration, Seniors, and Juniors express negative consensus with Sophomores a near consensus (item 19) that rules are NOT interpreted by students as contributing to their moral growth.

Faculty-Administration and Seniors agree (item 46) that rules at the college are NOT more strict than in most homes and churches; there is split opinion among the other groups. There is unanimous agreement on item 47 that students who avoid getting caught for violations are NOT admired on campus. The Faculty-Administration group believes (item 48) that students feel that disciplinary action is fair and consistent with the violations; Juniors almost agree with this opinion. Seniors almost reach a negative consensus on

Table 4.5 RES -- PERCENTAGES AND RAW SCORES BY GROUPS ON  
ITEMS AND TOTAL SCALE USING "66 PLUS" SCORING

IV. Moral & Social Regulations

Items	Fac.-Admin.	Seniors	Juniors	Groups			Non-A/G	Total
				Sophomores	Freshmen			
16.	87.50/12.50+	100.00/00.00+	96.25/03.75+	97.50/02.50+	95.00/05.00+	92.50/07.50+	95.75/04.25+	
17.	97.50/02.50+	81.01/18.99+	81.01/18.99+	78.75/21.25+	90.00/10.00+	75.00/25.00+	83.42/16.58+	
18.	82.50/17.50+	73.42/26.58+	73.75/26.25+	72.50/27.50+	85.00/15.00+	75.00/25.00+	76.69/23.31+	
19.	27.50/72.50-	22.50/77.50-	27.50/72.50-	35.00/65.00**	48.75/51.25	45.00/55.00	34.00/66.00-	
20.	72.50/27.50+	71.25/28.75+	66.25/33.75+	75.00/25.00+	64.56/35.44*	69.23/30.77+	69.60/30.40+	
46.	30.00/70.00+	26.25/73.75+	40.00/60.00	43.75/56.25	52.50/47.50	42.50/57.50	39.75/60.25	
47.	32.50/67.50+	22.50/77.50+	26.25/73.75+	25.00/75.00+	21.52/78.48+	25.00/75.00+	24.81/75.19+	
48.	80.00/20.00+	38.75/61.25	62.50/37.50*	52.50/47.50	60.76/39.24	56.41/43.59	56.53/43.47	
49.	90.00/10.00+	70.00/30.00+	75.00/25.00+	75.00/25.00+	82.28/17.72+	72.50/27.50+	76.69/23.31+	
50.	51.28/48.72	47.50/52.50	53.75/46.25	43.75/56.25	63.75/36.25**	57.50/42.50	52.63/47.37	
76.	92.50/07.50+	60.00/40.00	73.75/26.25+	53.75/46.25	78.75/21.25+	70.00/30.00+	69.50/30.50+	
77.	33.33/66.67+	10.00/90.00+	08.75/91.25+	12.50/87.50+	15.19/84.81+	17.50/82.50+	14.32/85.68+	
78.	72.50/27.50-	73.75/26.25-	65.00/35.00**	70.00/30.00-	57.50/42.50	67.50/32.50-	67.25/32.75-	
79.	80.00/20.00+	56.25/43.75	56.25/43.75	58.75/41.25	73.75/26.25+	65.00/35.00*	63.50/36.50*	
80.	67.50/32.50-	55.00/45.00	60.00/40.00	60.00/40.00	67.50/32.50-	60.00/40.00	61.25/38.75	
Group Raw	+11	+8	+8	+7	+8	+8	+8	
Scores	-3	-2	-1	-1	-1	-1	-2	
Scores Using 95% level of confidence	+11	+8	+9	+7	+9	+9	+9	
	-3	-2	-2	-2	-2	-1	-2	

+ = Positive consensus of 66% or more agreeing with the keyed-answer.

- = Negative consensus of 66% or more disagreeing with the keyed-answer.

\* = Positive consensus within .95 confidence interval of 61.36 - 70.64 for total group.

\*\* = Negative consensus within .95 confidence interval of 61.36 - 70.64 for total group.

this question while the other groups are divided. All groups agree (item 49) that the college seeks to interpret the moral or spiritual principles behind its regulations. Opinion is split among all groups on item 50 about difficulty in getting regulations changed. Freshmen are within the .95 confidence level (63.75%) reporting the perception that it is almost impossible to get rules changed.

Faculty-Administration, Juniors, Freshmen and Non-A/G students report (item 76) that students in general agree with and abide by the official conduct code. There is unanimous consensus on item 77 that students do NOT feel the need for closer supervision in order for the code of the college to be upheld. There is negative consensus by Faculty-Administration, Seniors, Sophomores and Non-A/G with near consensus by Juniors (item 78) that students do NOT see a connection between the Christian religion and many of the rules enforced at the college. Only Faculty-Administration and Freshmen achieve consensus on item 79 with Non-A/G students near consensus that action against violators is intended to help the student mature and accept responsibility for his actions. There is negative consensus by Faculty-Administration and Freshmen on item 80 reporting that the college DOES attempt to get students to adopt the conduct code as their own personal convictions.

Table 4.6 presents the percentages of each group answering True/False on each item of the Religion Courses scale. All groups agree (item 21) that teachers in the religion department are as well prepared academically as other teachers. There is split opinion on

Table 4.6 RES -- PERCENTAGES AND RAW SCORES BY GROUPS ON ITEMS AND TOTAL SCALE USING "66 PLUS" SCORING

V. Religion Courses

Items	Fac.-Admin.	Seniors	Juniors	Group		Freshmen	Non-A/G	Total
				Sophomores	"			
21.	95.00/05.00+	95.00/05.00+	95.00/05.00+	96.25/03.75+		95.00/05.00+	97.50/02.50+	95.50/04.50+
22.	55.00/45.00	60.00/40.00	68.75/31.25-	71.25/28.75-		67.50/32.50-	65.00/35.00**	65.50/34.50**
23.	92.50/07.50+	70.00/30.00+	75.00/25.00+	70.00/30.00+		78.48/21.52+	82.50/17.50+	76.19/23.81+
24.	55.00/45.00	38.75/61.25	43.75/56.25	35.00/65.00**		45.00/55.00	40.00/60.00	42.00/58.00
25.	57.50/42.50	38.75/61.25	48.10/51.90	38.75/61.25		55.00/45.00	65.00/35.00*	48.37/51.63
51.	35.00/65.00*	27.50/72.50+	18.75/81.25+	26.25/73.75+		36.71/63.29*	45.00/55.00	29.82/70.18+
52.	17.50/82.50-	30.00/70.00-	46.84/53.16	50.00/50.00		20.25/79.75-	45.00/55.00	35.68/64.32*
53.	92.50/07.50+	81.25/18.75+	92.50/07.50+	87.50/12.50+		90.00/10.00+	95.00/05.00+	89.00/11.00+
54.	80.00/20.00+	70.00/30.00+	68.75/31.25+	68.75/31.25+		81.25/18.75+	82.50/17.50+	74.00/26.00+
55.	25.00/75.00+	20.00/80.00+	20.00/80.00+	25.00/75.00+		31.65/68.35+	32.50/67.50+	25.06/74.94+
81.	21.05/78.95+	28.75/71.25+	23.75/76.25+	15.00/85.00+		31.65/68.35+	32.50/67.50+	25.19/74.81+
82.	76.92/23.08+	77.50/22.50+	77.50/22.50+	82.50/17.50+		86.25/13.75+	67.50/32.50+	79.20/20.80+
83.	71.05/28.95+	77.50/22.50+	73.75/26.25+	82.50/17.50+		80.00/20.00+	80.00/20.00+	77.89/22.11+
84.	75.00/25.00+	76.25/23.75+	70.00/30.00+	75.95/24.05+		67.50/32.50+	57.50/42.50	71.18/28.82+
85.	18.42/81.58+	16.25/83.75+	11.25/88.75+	12.50/87.50+		15.19/84.81+	25.00/75.00+	15.37/84.63+
Group								
Group Raw	+10	+11	+11	+11	+11	+10	+9	+11
Scores	-1	-1	-1	-1	-1	-2	-0	-0
Scores Using 95% level of confidence	+11	+11	+11	+11	+11	+11	+10	+11
	-1	-1	-1	-1	-2	-2	-1	-2

+ = Positive consensus of 66% or more agreeing with the keyed-answer.  
 - = Negative consensus of 66% or more disagreeing with the keyed-answer.  
 \* = Positive consensus within .95 confidence interval of 61.36 - 70.64 for total group.  
 \*\* = Negative consensus within .95 confidence interval of 61.36 - 70.64 for total group.

item 22 about students believing there are too many required religion courses; Juniors, Sophomores and Freshmen have negative consensus with the Non-A/G near consensus that students DO feel there are too many required religion courses. All groups agree on item 23 that religion courses give adequate emphasis to distinctive doctrines of the denomination. There is split opinion among the groups on item 24 about religion courses being among the most intellectually stimulating courses on campus; Sophomores have a near negative consensus on this question. There is split opinion on item 25 concerning religion courses being perceived as contributing to students' general education.

There is consensus or near consensus by all of the groups except the Non-A/G students on item 51 denying that emphasis in religion courses is upon personal religious commitment. Faculty-Administration, Seniors and Freshmen reach consensus (item 52) that most students are familiar with the names of selected contemporary religious leaders. All groups have high consensus on item 53 that the teachings of the Bible are viewed as an integrating force on the campus. All groups agree (item 54) that religion courses are effective in helping students develop into more mature and intelligent Christians. There is unanimous consensus on item 55 that teachers in religion courses are NOT dogmatic in telling students what they are expected to believe.

All groups achieve positive consensus on item 81 in denying that contemporary trends in the religious world are ignored in religion courses. There is unanimous high consensus (item 82) that

students in religion courses are not told what to believe but are expected to arrive at their own conclusions. All groups agree on item 83 that required religion courses give an adequate exposure to major divisions of religious thought. There is unanimous agreement on item 84 that conflicting religious views are presented objectively in religion courses. Unanimous consensus was achieved on item 85 that students can express liberal religious ideas in religion courses without being censored by other students.

Table 4.7 presents the percentages of each group answering True/False on each item of the Personal Religious Life scale. There is unanimous consensus on item 26 agreeing that students can find a fellow-student to help with a spiritual problem. Only Faculty-Administration report (item 27) a consensus that students believe it is easier to live the Christian life at this college than at a public institution. There is unanimous agreement on item 28 that most students who graduate from this college are committed Christians. Only Non-A/G students have a consensus on item 29 (Faculty-Administration group has a 62.50%) denying that there are many students at the college who do not profess to be Christians, a fact which adversely affects the spiritual life of the college. All groups agree on item 30 that students are concerned about the relevance of religious beliefs to racial problems of the day.

There is near consensus by the student groups on item 56 that many students meet regularly in small groups for religious study and devotion; the Faculty-Administration report a strong perception

Table 4.7 RES -- PERCENTAGES AND RAW SCORES BY GROUPS ON ITEMS AND TOTAL SCALE USING "66 PLUS" SCORING

VI. Personal Life	Groups							
	Items	Fac.-Admin.	Seniors	Juniors	Sophomores	Freshmen	Non-A/G	Total
26.	70.00/30.00+	70.00/30.00+	70.00/30.00+	70.89/29.11+	76.25/23.75+	81.25/18.75+	80.00/20.00+	74.69/25.31+
27.	70.00/30.00-	41.25/58.75	41.25/58.75	50.00/50.00	42.50/57.50	53.16/46.84	55.05/45.00	49.87/50.13
28.	97.50/02.50+	78.75/21.25+	78.75/21.25+	75.00/25.00+	67.09/32.91+	83.54/16.46+	77.50/22.50+	78.39/21.61+
29.	37.50/62.50*	45.00/55.00	45.00/55.00	42.50/57.50	55.00/45.00	48.75/51.25	25.00/75.00+	44.50/55.50
30.	70.00/30.00+	66.25/33.75+	66.25/33.75+	67.50/32.50+	69.62/30.38+	68.75/31.25+	70.00/30.00+	68.42/31.58+
56.	85.00/15.00+	60.00/40.00	60.00/40.00	60.00/40.00	65.00/35.00*	62.03/37.97*	61.54/38.46*	64.07/35.93*
57.	65.00/35.00*	48.10/51.90	48.10/51.90	41.25/58.75	55.00/45.00	54.43/45.57	57.50/42.50	52.01/47.99
58.	48.72/51.28	36.25/63.75*	36.25/63.75*	33.75/66.25+	27.50/72.50+	36.71/63.29*	32.50/67.50+	34.92/65.08*
59.	80.00/20.00-	61.25/38.75	61.25/38.75	65.00/35.00**	60.00/40.00	66.25/33.75-	62.50/37.50**	64.75/35.25**
60.	60.00/40.00	43.75/56.25	43.75/56.25	33.75/66.25-	41.25/58.75	46.84/53.16	50.00/50.00	44.11/55.89
86.	92.50/07.50+	66.25/33.75+	66.25/33.75+	75.00/25.00+	75.00/25.00+	81.01/18.99+	70.00/30.00+	75.69/24.31+
87.	90.00/10.00-	91.25/08.75-	91.25/08.75-	87.34/12.66-	90.00/10.00-	81.25/18.75-	75.00/25.00-	86.47/13.53-
88.	50.00/50.00	18.75/81.25-	18.75/81.25-	16.25/83.75-	18.75/81.25-	34.18/65.82**	42.50/57.50	26.82/73.18-
89.	75.00/25.00-	81.01/18.99-	81.01/18.99-	75.95/24.05-	77.22/22.78-	65.00/35.00**	57.50/42.50	73.05/26.95-
90.	76.92/23.08+	74.68/25.32+	74.68/25.32+	70.89/29.11+	75.95/24.05+	66.67/33.33+	70.00/30.00+	72.34/27.66+
Group Raw Scores	+6 -4	+5 -3	+5 -3	+6 -4	+6 -3	+5 -2	+7 -1	+5 -3
Scores Using 95% level of confidence	+8 -4	+6 -3	+6 -3	+6 -5	+7 -3	+7 -4	+8 -2	+7 -4

+ = Positive consensus of 66% or more agreeing with the keyed-answer.

- = Negative consensus of 66% or more disagreeing with the keyed-answer.

\* = Positive consensus within .95 confidence interval of 61.36 - 70.64 for total group.

\*\* = Negative consensus within .95 confidence interval of 61.36 - 70.64 for total group.



that this is true. There is divided opinion among the groups on item 57 that there is interest in the relationship of Christian teachings to the problems of poverty and the population explosion (Faculty-Administration did achieve a positive 65%). Juniors, Sophomores and Non-A/G achieve consensus on item 58 while Seniors and Freshmen have near consensus reporting that most students do NOT feel that only Christians should be admitted to this college. There is near negative consensus by all groups on item 59 which indicates there is considerable pressure for a student's religious experience to conform to the pattern of the majority. The Faculty-Administration group reports (item 60) a substantial 60 percent that student religious organizations ARE active with many students participating; Juniors report a negative consensus on this question while the other groups are divided in their opinion.

There is unanimous consensus on item 86 that most students believe their spiritual life has matured at this institution in a way not possible at a public institution. All groups agree on item 87 that many students with little interest in spiritual matters enroll because of pressure to do so from their parents. Seniors, Juniors and Sophomores have a negative consensus on item 88 with Freshmen near consensus that strong student interest in world missions does NOT exist. Faculty-Administration, Seniors, Juniors and Sophomores have a negative consensus on item 89 with Freshmen almost agreeing that church attendance by students generally declines while they are enrolled at this college. All groups report positive consensus on

item 90 that spiritual subjects are frequent topics of student conversation.

The institutional score on the RES ranges from a high of +12 on Christian Faculty to a low of +3 on Chapel. The group profiles have been discussed. Group perceptions as reported on individual items have also been presented.

#### Analysis of Difference Among Group Mean Scores

The testable hypothesis concerning the six group mean scores as stated earlier is:

No difference will be found in the mean scores of the selected groups at Evangel College on the individual scales of the Religious Environment Scales.

To test this hypothesis individual scores were combined to secure group mean scores. Differences in perceptions as indicated by group mean scores are determined by analysis of variance as reported in Table 4.8. The assumptions to be met in using analysis of variance were discussed in Chapter III. Since equal sized groups of 40 were used, no test of homogeneity of variance was necessary. The other requirements were met or not seriously violated. When significant differences among mean scores are found, Duncan's new multiple range test (37: 136-140) is used to report which means differ significantly.

The mean scores on the Christian Faculty scale range from 11.70 for Seniors to 12.50 for Freshmen. The F statistic for this scale is .859 which is less than the critical region at the .05 level. Therefore, the null hypothesis of no difference among the group mean scores

Table 4.8 ANALYSIS OF VARIANCE OF THE GROUP MEAN  
SCORES ON THE INDIVIDUAL SCALES OF THE RES

\*F ( 05) = 2.25

Scale		Fac- Admin.	Groups					Total	F*
			Srs	Jrs.	Sophs	Fresh.	Non-A/G		
Christian Faculty	M	12.23	11.70	11.88	11.70	12.50	12.20	12.03	.859
	S	2.18	2.59	2.07	2.19	1.97	2.28	2.22	
Chapel	M	8.65	7.25	6.93	8.00	8.23	7.88	7.82	2.39†
	S	2.41	2.63	2.21	2.72	2.77	2.78	2.63	
Denom. Rela.	M	7.20	6.88	7.40	7.65	8.45	8.20	7.63	2.31
	S	2.89	2.43	2.34	2.07	2.50	2.67	2.53	
Regs.	M	10.20	9.30	9.55	9.47	10.27	9.47	9.71	1.00
	S	2.27	2.66	2.58	2.23	2.51	3.34	2.62	
Religion Courses	M	10.45	10.00	10.55	10.25	10.32	10.12	10.28	.219
	S	2.78	2.79	2.40	2.89	2.60	3.00	2.73	
Personal Life	M	8.65	7.87	7.57	7.95	8.50	8.70	8.21	1.33
	S	2.25	2.77	2.23	2.72	2.34	3.00	2.58	

M = Mean Score  
S = Standard Deviation

on the Christian Faculty scale is accepted.

The group mean scores on the Chapel scale as reported in Table 4.8 range from 6.93 for Juniors to 8.65 for Faculty-Administration. The F statistic is 2.391 which falls within the critical region for rejection at the .05 level. The null hypothesis of no difference among the group means on the Chapel scale is rejected.

The group mean scores on the Denominational Relationship scale range from 6.88 for Seniors to 8.45 for Freshmen. The F ratio for this scale is 2.31 which falls within the critical region for rejection at the .05 level. Therefore, the null hypothesis of no difference among the group means on the Denominational scale is rejected.

The group mean scores on the Regulations scale range from 9.30 for Seniors to 10.27 for Freshmen. The F ratio is 1.00 which is less than the critical value required for rejection of the hypothesis and it is therefore accepted.

The mean scores on the Religion Courses scale range from 10.00 for Seniors to 10.55 for Juniors. The F statistic is .219 which is less than the critical value. The null hypothesis of no difference among the group mean scores for the Religion Courses scale is accepted.

The group mean scores on the Personal Religious Life scale range from 7.57 for Juniors to 8.70 for Non-A/G students. With a F ratio of only 1.33 the null hypothesis of no difference among group mean scores on the Personal Religious Life scale is accepted.

There are significant differences among the mean scores of the

six groups on only two of the six scales of the RES: Chapel and Denominational Relationship. Duncan's new multiple range test is applied to the mean scores to determine which ones are significantly different from the others. The underlines beneath the ranked means are read by columns from right to left. Mean scores connected by a continuous underline are not significantly different. Duncan's test will be presented following each scale for which significant differences were found by analysis of variance.

Using Duncan's "studentized significant ranges", the differences among the mean scores on the Chapel scale are indicated below:

Jrs.	Srs.	Non-A/g	Soph.	Fresh.	Fac.-Admin
6.93	7.25	7.88	8.00	8.23	8.65
<hr/>					
<hr/>				<hr/>	
<hr/>					

As graphically demonstrated there is a significant difference at the .05 level between the mean scores of the Faculty-Administration and the Juniors, the Faculty-Administration and the Seniors, and between the mean scores of the Freshmen and the Juniors on the Chapel scale.

Duncan's new multiple range test as applied to the mean scores on the Denominational Relationship scale are indicated below:

Srs.	Fac.-Admin.	Jrs.	Soph.	Non-A/G	Fresh
6.85	7.20	7.40	7.65	8.20	8.45
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Reading the columns from right to left, mean scores connected by a continuous underline are not significantly different. Thus, there is a significant difference at the .05 level between the mean scores of the Freshmen and the Seniors, the Freshmen and the Faculty-Administration, and between the mean scores of the Non-A/G and the Seniors on the Denominational Relationship scale.

#### Analysis of Difference Among Students When Compared on Selected Variables

The testable hypothesis concerning comparisons among students based on selected variables as stated earlier is:

No difference will be found in the mean scores of Assemblies of God students at Evangel College on the individual scales of the RES when compared on the following variables:

- A. Sex
- B. Academic ability
- C. Geographical area of student's home
- D. Spiritual influence of parents
- E. Size of home church
- F. Level of pastor's education
- G. Spiritual influence of home church

To test this major hypothesis the items were scored as correct or incorrect and individual scores were combined to secure group means. Differences in perceptions as indicated by groups mean scores are determined by analysis of variance. Since the group sizes are unequal on each of the individual scales, a test of homogeneity was necessary.

Some of the variances could be checked by the F max test (84: 191) while others were checked by Bartlett's test (84: 193). Most of the scales have homogeneous variances at the more powerful level of .90 while three scales have homogeneous variances at the .95 level. The other assumptions of analysis of variance were met or not seriously violated. When significant differences among mean scores were found, an extension of Duncan's new multiple range test to unequal sized groups was made (23: 164).

Table 4.9 presents the analysis of mean scores on the variable of sex. There is significant difference between men and women students at the .01 level on the scales of Christian Faculty, Chapel, Denominational Relationship, and Regulations. Women students have higher mean scores on all of the scales of the Religious Environment Scales. The F statistics on the Religion Courses scale and the Personal Life scale are less than the critical value necessary to reject the null hypothesis of no difference.

Table 4.10 reports the analysis of students on the scales of the RES when grouped by academic ability. Students were grouped by their ACE Total scores into intervals of 0 - 25 percentile scores, 26 - 50 percentile scores, 51 - 75 percentile scores, and 75 - 99 percentile scores. The group mean scores on the Christian Faculty scale range from 11.52 for the upper quartile to 12.67 for the lower quartile. The F statistic for this scale is 2.66 which is within the critical region at the .05 level. The null hypothesis of no difference among the group mean scores is rejected for this scale. The mean scores

Table 4.9 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF SEX

\*\*F (.01) = 6.74  
\*F (.05) = 3.88

Scale	Categories	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.
Christian Faculty	Male	11.40	44.46	5.93	7.49	18318	Reject **
	Female	12.15					
Chapel	Male	6.91	76.61	6.66	11.50	18318	Reject **
	Female	7.89					
Denom. Rela.	Male	7.06	110.69	5.57	19.87	18318	Reject **
	Female	8.25					
Regs.	Male	8.99	91.43	6.84	13.37	18318	Reject **
	Female	10.06					
Religion Courses	Male	9.97	18.88	7.90	2.39	18318	Accept
	Female	10.46					
Personal Life	Male	7.61	11.85	6.94	1.71	18318	Accept
	Female	8.00					



Table 4.10 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF ACADEMIC ABILITY

<div> <div>**F (.01) = 3.86</div> <div>*F (.05) = 2.63</div> </div>						
Scale	Percentile Intervals	N	$\bar{X}$	Between Categories	Within Categories	Null Hypo.
Christian Faculty	0-25	49	12.67	15.91	5.97	38298
	26-50	82	11.87		2.66	Reject
	51-75	76	11.62			*
	76-100	95	11.52			
Chapel	0-25	49	7.98	4.72	7.06	38298
	26-50	82	7.35		0.67	Accept
	51-75	76	7.45			
	76-100	95	7.40			
Denom. Rela.	0-25	49	8.59	18.08	5.74	38298
	26-50	82	7.82		3.15	Reject
	51-75	76	7.62			*
	76-100	95	7.32			



Table 4.10 (continued)

Scale	Percentile Intervals	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.
Regs.	0-25	49	10.63	27.08	6.91	3.92	3&298	Reject
	26-50	82	9.80					
	51-75	76	9.42					**
	76-100	95	9.11					
Religion Courses	0-25	49	10.24	5.05	7.91	.64	3&298	Accept
	26-50	82	10.41					
	51-75	76	10.57					
	76-100	95	10.00					
Personal Life	0-25	49	9.06	33.33	6.71	4.96	3&298	Reject
	26-50	82	7.73					
	51-75	76	7.72					**
	76-100	95	7.33					

\* F (.05) = 2.63

\*\* F (.01) = 3.86

for the Chapel scale range from 7.35 for the 26 - 50 percentile group to 7.98 for the lower quartile group. The F ratio is less than the critical value to reject the hypothesis so the null hypothesis of no difference among the group means is accepted. The group mean scores on the Denominational Relationship scale range from 7.32 for the upper quartile group to 8.59 for the lower quartile group. The F statistic for this scale is 3.15 which is within the critical region at the .05 level so the null hypothesis of no difference in the mean scores on this scale is rejected.

The mean scores for students grouped on the variable of academic ability range from 9.11 to 10.63 on the Regulations scale. The F ratio of 3.92 is large enough to fall within the critical region at the .01 level so the null hypothesis of no difference between mean scores is rejected for this scale. The mean scores on the Religion Courses scale range from 10.00 to 10.24 with a F statistic too small to reject the null hypothesis. The group mean scores on the Personal Life scale range from 7.33 for the upper quartile group to 9.06 for the lower quartile group. The F statistic for this scale is 4.96 and is within the critical region at the .01 level of confidence. Therefore, the null hypothesis of no difference among the mean scores on the Personal Life scale is rejected.

The analysis of variance of the group means when students are grouped by academic ability has shown that the null hypothesis of no difference among group means is rejected on the scales of Christian Faculty, Denominational Relationship, Regulations, and

Personal Religious Life. Significant differences do exist among the four groups on these scales.

Duncan's new multiple range test for unequal groups is applied to the differences among group mean scores on each of the scales found to have significant differences when students were compared on academic ability. Using the "studentized significant ranges", the differences on the Christian Faculty scale is indicated below:

Group	76-100%	51-75%	26-50%	0-25%
N	95	76	82	49
$\bar{X}$	11.52	11.62	11.87	12.67
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The mean scores connected by a continuous underline are not significantly different. There is a significant difference at the .05 level between the mean scores of the lower quartile group and the two upper quartile groups.

Using the "studentized significant ranges" the differences on the Denominational Relationship scale are indicated below:

Group	76-100%	51-75%	26-50%	0-25%
N	95	76	82	49
$\bar{X}$	7.32	7.62	7.82	8.59
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As demonstrated graphically, there is significant difference at the



.05 level between the mean scores of the lower quartile group and the two upper quartile groups on the Denominational Relationship scale.

Duncan's new multiple range test as applied to the differences among the mean scores on the Regulations scale is reported below:

Group	76-100%	51-75%	26-50%	0-25%
N	95	76	82	49
$\bar{X}$	9.11	9.42	9.80	10.63
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The lines are read from right to left so that the mean scores connected by a continuous underline are not significantly different. There is significant difference at the .01 level between the mean scores of the lower quartile group and the two upper quartile groups.

The differences among group scores on the Personal Life scale as measured by Duncan's test are indicated below:

Group	76-100%	51-75%	26-50%	0-25%
N	95	76	82	49
$\bar{X}$	7.33	7.72	7.73	9.06
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As shown by the underlines, there is significant difference at the .01 level between the mean scores of the lower quartile group and the other three groups on this scale.

Table 4.11 reports the analysis of variance of student mean scores on the scales of the RES when grouped by geographical regions. The eight

Table 4.11 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF GEOGRAPHICAL REGION

*F (.05) = 2.04						
Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F* df Null Hypo.
Christian Faculty	N. East	55	12.02	9.11	5.99	1.52 7&308 Accept
	S. East	12	12.00			
	G. Lakes	95	11.58			
	Gulf	50	12.30			
	S. Central	28	12.25			
	N. Central	61	11.67			
	N. West	6	11.67			
	S. West	9	9.78			
Chapel	N. East	55	7.35	3.36	6.97	0.48 7&308 Accept
	S. East	12	7.58			
	G. Lakes	95	7.28			
	Gulf	50	7.54			
	S. Central	28	8.11			
	N. Central	61	7.38			
	N. West	6	8.00			
	S. West	9	6.67			
Denom. Rela.	N. East	55	7.49	2.79	5.97	0.47 7&308 Accept
	S. East	12	8.08			
	G. Lakes	95	7.61			
	Gulf	50	7.86			
	S. Central	28	7.89			
	N. Central	61	7.95			
	N. West	6	7.33			
	S. West	9	6.78			



Table 4.11 (continued)

Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.
Regs.	N. East	55	9.30	2.31	7.22	0.32	7&308	Accept
	S. East	12	9.75					
	G. Lakes	95	9.44					
	Gulf	50	9.90					
	N. Central	28	9.71					
	S. Central	61	9.66					
	N. West	6	10.17					
	S. West	9	9.11					
Religion Courses	N. East	55	10.04	6.70	8.02	0.83	7&308	Accept
	S. East	12	10.50					
	G. Lakes	95	10.37					
	Gulf	50	10.32					
	N. Central	28	10.89					
	S. Central	61	10.03					
	N. West	6	11.17					
	S. West	9	8.67					
Personal Life	N. East	55	7.93	8.79	6.92	1.27	7&308	Accept
	S. East	12	8.17					
	G. Lakes	95	7.43					
	Gulf	50	8.66					
	N. Central	28	8.14					
	S. Central	61	7.62					
	N. West	6	8.00					
	S. West	9	7.11					

regions chosen represent the organizational division of the Assemblies of God by geographical region. The mean scores of the eight groups on each of the scales are quite close. The Southwest Area with an N of 9 is the lowest mean score on each of the scales. The F statistics for each scale are small - smaller than the critical region necessary to reject the null hypothesis. Therefore, the null hypothesis of no difference in the mean scores of Assemblies of God students on the individual scales of the RES when compared on the variable of geographical region is accepted.

The next variable in the hypothesis to be analyzed is the spiritual influence of parents. Table 4.12 reports the analysis of variance of student group mean scores on the individual scales of the RES when compared on this variable. The categories range from "Strong" influence to "Parents Not Christians". It is assumed that these five categories are equal intervals. No one group consistently has the lowest or the highest mean score. The means on the Christian Faculty scale range from 11.25 for the "Negative" group to 12.44 for the "Parents Not Christians" group. The F ratio is only 1.07 and is less than the critical value for the .05 level. Therefore, the null hypothesis of no difference among the mean scores of students grouped by spiritual influence of parents on the Christian Faculty scale is accepted. The F ratios on the Denominational Relationship scale, the Regulations scale, the Religion Courses scale, and the Personal Life scale are less than the required critical region at the .05 level. The null hypothesis of no difference among the mean scores of students

Table 4.12 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF SPIRITUAL INFLUENCE  
OF PARENTS

*F (.05) = 2.40						
Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F# df Null Hypo.
Christian Faculty	Strong	172	12.05	6.37	5.96	1.07 4&312 Accept
	Important	98	11.49			
	Unimportant	30	11.90			
	Negative	8	11.25			
	Not Christians	9	12.44			
Chapel	Strong	172	7.90	18.13	6.70	2.71 4&312 Reject
	Important	98	7.03			
	Unimportant	30	6.90			
	Negative	8	6.25			
	Not Christians	9	7.56			
Denom. Rela.	Strong	172	7.91	6.65	5.83	1.14 4&312 Accept
	Important	98	7.34			
	Unimportant	30	7.93			
	Negative	8	8.38			
	Not Christians	9	8.11			

Table 4.12 (continued)

Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.
Regs.	Strong	172	9.85	6.21	7.01	0.89	4&312	Accept
	Important	98	9.29					
	Unimportant	30	9.50					
	Negative	8	9.88					
	Not Christians	9	9.00					
Religion Courses	Strong	172	10.60	16.58	7.65	2.17	4&312	Accept
	Important	98	10.21					
	Unimportant	30	9.27					
	Negative	8	9.75					
	Not Christians	9	9.00					
Personal Life	Strong	172	8.00	3.18	7.01	0.45	4&312	Accept
	Important	98	7.57					
	Unimportant	30	7.90					
	Negative	8	7.50					
	Not Christians	9	8.00					

grouped by spiritual influence of parents on these scales is accepted. The F statistic on the Chapel scale is 2.71 which does fall within the critical region at the .05 level. The null hypothesis of no difference among students grouped by spiritual influence of parents is rejected on the Chapel scale.

Duncan's new multiple range test is applied to the mean scores on the Chapel scale to determine which ones are significantly different. The data are given below:

Group	Negative	Unimportant	Important	Not Chris.	Strong
N	8	30	98	9	172
$\bar{X}$	6.25	6.90	7.03	7.56	7.90

The underlines are interpreted from right to left and mean scores not underlined ARE significantly different. The mean score of students who reported "Strong" spiritual influence of parents is significantly different at the .05 level from the mean score of students who reported "Important" parental influence. The group score of the students whose parents were "Not Christians" is significantly different from the score of students who reported "Important" parental spiritual influence on the Chapel scale.

Table 4.13 reports the analysis of variance of student mean scores on the individual scales of the RES when grouped on the variable of size of home church. The mean scores of the five groups are very close. No category is consistently high or low. The F

Table 4.13 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF SIZE OF HOME CHURCH

*F (.05) = 2.40						
Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F* df Null Hypo.
Christian Faculty	Under 100	94	11.57	4.42	6.03	0.73 48311 Accept
	100-250	103	11.83			
	251-500	89	12.17			
	501-750	14	11.57			
	Over 750	16	12.00			
Chapel	Under 100	94	7.43	1.84	6.99	0.26 48311 Accept
	100-250	103	7.53			
	251-500	89	7.45			
	501-750	14	6.93			
	Over 750	16	7.88			
Denom. Rela.	Under 100	94	7.68	3.66	5.93	0.62 48311 Accept
	100-250	103	7.67			
	251-500	89	7.72			
	501-750	14	8.71			
	Over 750	16	7.56			

Table 4.13 (continued)

Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.
Regs.	Under 100	94	9.52	11.81	7.08	1.67	48311	Accept
	100-250	103	9.64					
	251-500	89	9.42					
	501-750	14	8.93					
	Over 750	16	11.13					
Religion Courses	Under 100	94	10.26	1.24	8.00	0.16	48311	Accept
	100-250	103	10.11					
	251-500	89	10.42					
	501-750	14	10.14					
	Over 750	16	10.38					
Personal Life	Under 100	94	7.70	3.45	7.06	0.49	48311	Accept
	100-250	103	7.92					
	251-500	89	7.88					
	501-750	14	7.21					
	Over 750	16	8.44					

statistic on each scale is quite low with none approaching the critical region. Therefore, the null hypothesis of no difference in the mean scores of students on the individual scales of the RES when compared on the variable of size of home church is accepted.

Table 4.14 reports the analysis of variance of student mean scores on the individual scales of the RES when grouped on the variable of pastor's level of education. For the purposes of this analysis it is assumed that these categories are equal intervals. The mean scores on the scales of Chapel, Denominational Relationship, Regulations, Religion Courses and Personal Life are very similar. Only the Christian Faculty scale has significantly different mean scores. However, it is noted that the category "Less than High School" consistently has the lowest mean score; this group also has the fewest number. The group mean scores on the Christian Faculty scale range from 9.83 for the "Less than High School" group to 12.31 for the "Some College or Bible College" group. The F ratio for this scale is 3.06 which is within the critical region at the .05 level. Therefore, the null hypothesis of no difference in the mean scores of students on the Christian Faculty scale when grouped by pastor's education is rejected.

Duncan's new multiple range test is applied to the mean scores on the Christian Faculty scale as indicated on page 96:



Table 4.14 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF PASTOR'S EDUCATION

*F (.05) = 2.40						
Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F* df Null Hypo.
Christian Faculty	Less than H.S.	12	9.83	16.35	5.34	3.06 4&282 Reject *
	H.S. grad.	26	11.77			
	Some college or B. College	49	12.31			
	B. College grad.	134	12.09			
	College grad.	66	11.77			
Chapel	Less than H.S.	12	6.92	3.68	6.83	0.54 4&282 Accept
	H.S. grad.	26	7.65			
	Some college or B. College	49	7.20			
	B. College grad.	134	7.45			
	College grad.	66	7.79			
Denom. Rela.	Less than H.S.	12	6.83	7.79	5.85	1.33 4&282 Accept
	H.S. grad.	26	7.96			
	Some college or B. College	49	7.55			
	B. College grad.	134	8.04			
	College grad.	66	7.44			

Table 4.14 (continued)

Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.
Regs.	Less than H.S.	12	8.25	7.79	7.02	1.11	4&282	Accept
	H.S. grad	26	10.15					
	Some college or B. College	49	9.76					
	Bible College grad. College grad.	134 66	9.58 9.56					
Religion Courses	Less than H.S.	12	9.42	7.06	8.05	0.88	4&282	Accept
	H.S. grad.	26	9.46					
	Some college or B. College	49	10.35					
	Bible College grad. College grad.	134 66	10.40 10.33					
Personal Life	Less than H.S.	12	7.25	2.47	7.05	0.35	4&282	Accept
	H.S. grad.	26	7.58					
	Some college or B. College	49	8.08					
	Bible College grad. College grad.	134 66	7.90 7.74					



Group	Less than H.S.	H.S. Grad.	Coll. Grad.	Bible Coll. Grad.	Some Coll. or B. Coll.
N	12	26	66	134	49
$\bar{X}$	9.83	11.77	11.77	12.09	12.31
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		<hr/>		<hr/>	
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As shown by the underlines, the mean score of the group whose pastors have "Some College or Bible College" is significantly different at the .05 level from the mean score of students whose pastors have "Less than High School" education. The mean score of students whose pastors are "Bible College Graduates" is significantly different from the mean scores of students whose pastors have "Less than High School" schooling and whose pastors are "College Graduates". The mean score of students whose pastors are "High School Graduates" is significantly different from the mean score of students whose pastors have "Less than High School" education on the Christian Faculty scale. The small number in the group "Less than High School" may be influencing the results.

The next variable in the hypothesis to be analyzed is the influence of the student's home church. Table 4.15 presents the analysis of variance of student group mean scores on the individual scales of the RES when compared on this variable. The categories range from "Strong" to "Negative" influence, and it is assumed that these five categories are equal intervals. The "Negative" influence group has consistently the lowest score, the "So-So" influence group has the

Table 4.15 ANALYSIS OF VARIANCE OF GROUP MEANS ON THE RES  
WHEN GROUPED BY VARIABLE OF INFLUENCE OF HOME  
CHURCH

								**F (.01) = 3.38	*F (.05) = 2.40
Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo.	
Christian Faculty	Strong	79	12.44	44.55	5.52	8.08	48311	Reject	
	Important	122	12.34						
	So-So	81	10.93						
	Unimportant	13	11.77						
	Negative	21	10.29						
Chapel	Strong	79	8.14	22.30	6.71	3.32	48311	Reject	
	Important	122	7.60						
	So-So	81	6.81						
	Unimportant	13	7.85						
	Negative	21	6.62						
Denom. Rela.	Strong	79	8.76	50.27	5.29	9.50	48311	Reject	
	Important	122	7.85						
	So-So	81	6.99						
	Unimportant	13	8.00						
	Negative	21	5.90						
								**	

Table 4.15 (continued)

Scale	Categories	N	$\bar{X}$	Between Categories	Within Categories	F*	df	Null Hypo
Regs.	Strong	79	10.43	75.24	6.18	12.17	48311	Reject
	Important	122	10.14					
	So-So	81	8.77					**
	Unimportant	13	8.85					
	Negative	21	6.95					
Religion Courses	Strong	79	11.29	60.51	7.17	8.44	48311	Reject
	Important	122	10.52					
	So-So	81	9.58					**
	Unimportant	13	10.00					
	Negative	21	7.95					
Personal Life	Strong	79	8.47	32.36	6.69	4.84	48311	Reject
	Important	122	8.10					
	So-So	81	7.27					**
	Unimportant	13	7.85					
	Negative	21	6.10					

\* F (.05) = 2.40

\*\* F (.01) = 3.38

next to lowest score on each scale, and the "Strong" influence group has the highest score on each scale.

The mean scores on the Christian Faculty scale range from 10.29 for the "Negative" influence group to 12.44 for the "Strong" influence group. The F statistic for this scale is 8.08 which is well within the critical region at the .01 level. The null hypothesis of no difference in the mean scores of Assemblies of God students on the Christian Faculty scale of the RES when compared on the variable of the influence of home church is rejected. The mean scores on the Chapel scale range from 6.62 for the "Negative" influence group to 8.14 for the "Strong" influence group. The F ratio for this scale is 3.32 which exceeds the critical value for the .05 level of confidence. The null hypothesis of no difference in the mean scores of students on the Chapel scale is rejected. The group mean scores on the Denominational Relationship scale range from 5.90 to 8.76. The F statistic for this scale is 9.50 which exceeds the critical value for the .01 level. Therefore, the null hypothesis of no difference in the mean scores of students on the Denominational Relationship scale when compared on the influence of home church is rejected.

The mean scores on the variable of influence of home church range from 6.95 to 10.43 on the Regulations scale. The F statistic for this scale is 12.17 and falls within the critical region at the .01 level. The null hypothesis of no difference in the group mean scores on the Regulations scale when compared on the influence of home church is rejected. The group mean scores on the Religion Courses





scale range from 7.95 for the "Negative" influence group to 11.29 for the "Strong" influence group. The F ratio for this scale is 8.44 which is well within the critical region at the .01 level of confidence. The null hypothesis of no difference when compared on the influence of home church is rejected at the .01 level. The mean scores of the five groups on the Personal Life scale of the RES range from 6.10 to 8.47. The F statistic for this scale is 4.84 which is again in excess of the required critical value. The null hypothesis of no difference in the mean scores of the Personal Life scale when compared on the influence of the home church is rejected at the .01 level. This means that the null hypothesis on the variable of influence of home church is rejected for each of the individual scales of the RES.

Duncan's new multiple range test is applied to the mean scores on the Christian Faculty scale as indicated below:

Group	Negative	So-So	Unimportant	Important	Strong
N	21	81	13	122	79
$\bar{X}$	10.29	10.93	11.77	12.34	12.44

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Reading the lines from right to left, the mean score of students who reported "Strong" influence by the home church is significantly different at the .05 level from the mean scores of the group reporting "Negative" influence and the group reporting "So-So" influence. The mean score of the group reporting "Important" influence of the home church is significantly different from the mean scores of the group

reporting "Negative" influence and the group reporting "So-So" influence on the Christian Faculty scale.

The new multiple range test is applied to the mean scores on the Chapel scale as indicated below:

Group	Negative	So-So	Important	Unimportant	Strong
N	21	81	122	13	79
$\bar{X}$	6.62	6.81	7.60	7.85	8.14

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As graphically presented, the mean score of students who reported "Strong" influence is significantly different at the .05 level on the Chapel scale from the mean scores of the group reporting "Negative" influence and the group reporting "So-So" influence by home church.

The new multiple range test of Duncan's is applied to the mean scores on the Denominational Relationship scale as indicated below for the variable of influence of home church:

Group	Negative	So-So	Important	Unimportant	Strong
N	21	81	122	13	79
$\bar{X}$	5.90	6.99	7.85	8.00	8.76

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Reading the columns from right to left, mean scores connected by a continuous underline are not significantly different. The mean score of students who reported "Strong" influence by home church is significantly

different at the .05 level on the Denominational Relationship scale from the scores of the group reporting "Negative" influence, the group reporting "So-So" influence, and the group reporting "Important" influence. The mean score of students who reported "Unimportant" influence by home church is significantly different at the .05 level from the score of the group reporting "Negative" influence. The mean score of the group reporting "Important" influence by home church is significantly different on the Denominational Relationship scale from the group reporting "Negative" influence and the group reporting "So-So" influence.

Duncan's new multiple range test is applied to the mean scores of the variable of influence of home church on the Regulations scale as indicated below:

Group	Negative	So-So	Unimportant	Important	Strong
N	21	81	13	122	79
$\bar{X}$	6.95	8.77	8.85	10.14	10.43

The mean score of students who reported "Strong" influence by home church is significantly different at the .05 level on the Regulations scale from the scores of the groups reporting "Negative" influence, "So-So" influence, and "Unimportant" influence. The mean score of students who reported "Important" influence by home church is significantly different from the scores of the group reporting "Negative" influence and the group reporting "So-So" influence. The mean score

of students who reported "Unimportant" influence by home church is significantly different from the mean score of the group reporting "Negative" influence. The mean score of students who reported "So-So" influence by home church is significantly different at the .05 level on the Regulations scale from the score of the group reporting "Negative" influence.

Duncan's new multiple range test is applied to the mean scores of the variable of influence of home church on the Religion Courses scale as indicated below:

Group	Negative	So-So	Unimportant	Important	Strong
N	21	81	13	122	79
$\bar{X}$	7.95	9.58	10.00	10.52	11.29

Mean scores connected by a continuous underline are not significantly different. The mean score of students who reported "Strong" influence by home church is significantly different at the .05 level on the Religion Courses scale from the scores of the group reporting "Negative" influence and the group reporting "So-So" influence. The mean score of students who reported "Important" influence by home church is significantly different from the scores of the group reporting "Negative" influence and the group reporting "So-So" influence. The mean score of students who reported "Unimportant" influence is significantly different from the score of the group reporting "Negative" influence.

Duncan's new multiple range test is applied to the mean scores on the Personal Life scale as indicated below for the variable of influence of home church.

Group	Negative	So-So	Unimportant	Important	Strong
N	21	81	13	122	79
$\bar{X}$	6.10	7.27	7.85	8.10	8.47

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Mean scores connected by a continuous underline are not significantly different. The mean score of students who reported "Strong" influence by home church is significantly different at the .05 level on the Personal Life scale from the scores of the group reporting "Negative" influence and the group reporting "So-So" influence. The mean score of students who reported "Important" influence by home church is significantly different from the scores of the group reporting "Negative" influence and the group reporting "So-So" influence.

### Summary

The institutional profile of Evangel College on the RES has a positive score of 12 on the Christian Faculty scale, 11 on Religion Courses scale, 8 on the Regulations scale, 5 on the Personal Religious Life scale, 5 on the Denominational Relationship scale, and 3 on the Chapel scale. When the standard error of proportion for a two to one consensus is used, the scores are Christian Faculty 13, Religion Courses 11, Regulations 9, Denominational Relationship 8, Personal Religious

Life 7 and Chapel 6. There is also negative consensus at the 66 percent minimum of 6 on the Denominational Relationship scale, 3 on the Chapel scale and Personal Religious Life scale, and 2 on the Regulations scale.

The scores among the six groups are within 2 points of each other in the Christian Faculty scale at the 66 percent minimum, 2 points on the Religion Courses scale, 2 points on the Personal Religious Life scale, and 3 points on the Denominational Relationship scale. On the Regulations scale Sophomores have a low score of 7, Faculty-Administration 11, and the other groups 8. On the Chapel scale the Juniors have a low score of 2, Faculty-Administration have a high of 7.

An analysis of the responses of the six groups on each individual item of the scales is given using the "66 plus" method of scoring. Much information is provided by this analysis of the similarities and differences in the perceptions of the selected groups.

The null hypothesis of no difference in the mean scores of the selected groups on the individual scales of the RES may be rejected at the .05 level only for the scales of Chapel and Denominational Relationship. Duncan's new multiple range test was used to determine which group means differed significantly from the other means.

The null hypothesis of no difference in the mean scores of Assemblies of God students at Evangel College on the individual scales of the RES when compared on selected variables can be rejected only in part. Using the variable of sex, the null hypothesis can be rejected at the .01 level for the scales of Christian Faculty,

Chapel, Denominational Relationship, and Regulations. Using the variable of academic ability, the null hypothesis of no difference in the group mean scores can be rejected at the .05 level for the scales of Christian Faculty and Denominational Relationship; the null hypothesis can be rejected at the .01 level for the scales of Regulations and Personal Religious Life.

The null hypothesis of no difference among students when grouped on the variable of influence of home church may be rejected at the .01 level for five of the six scales of the RES and at the .05 level for the other scale. Using the variable of spiritual influence of parents, the null hypothesis may be rejected at the .05 level only for the Chapel scale. Using the variables of geographical region and church size, the null hypothesis can not be rejected for any of the six scales of the RES. Duncan's test was used to determine which means were significantly different on the scales that were found to have significant differences among mean scores.

## CHAPTER V

### SUMMARY AND CONCLUSION

In this chapter the study is summarized, conclusions are discussed and implications for future research are presented.

#### Summary

This study reports the development of an experimental instrument, the Religious Environment Scales (RES), which was constructed to assess the perceptions of the religious environment at denominational colleges. Also reported are the results obtained by the administration of the RES at a selected church-controlled college - Evangel College, Springfield, Missouri.

Design and Procedure. The RES was designed to measure the perceptions of the religious press at a denominational college along six theoretically derived dimensions: Christian Faculty, Chapel, Denominational Relationship, Moral and Social Regulations, Religion Courses, and Students' Personal Religious Life. Persons who live in the environment were asked to serve as reporters about the religious features, activities and characteristics of their campus. By answering TRUE or FALSE to the 15 statements in each scale, respondents described the religious characteristics of their institution. The religious characteristics of the environment that respondents were aware of and reported with reasonable unanimity as true or not true about the college constitutes the effective religious environment.



The RES was scored by two different methods. The "66 plus" method based on opinion polling techniques counts an item "correct" or "valid" when 66 percent or more of the respondents answer in agreement with the keyed-answer. This constitutes positive consensus. The score on each scale is the number of items out of a possible 15 points which has positive consensus. Items answered by 66 percent or more in disagreement to the keyed-answer constitutes negative consensus. The RES was also scored by the more familiar method of computing individual scores and combining them to determine group mean scores. Differences among the group mean scores were then determined by the technique of analysis of variance.

Content validity is claimed for the RES based upon the procedures used in collecting the items and pretesting and revising the instrument. Reliability for the RES when "66 plus" scoring is used can be estimated by indicating the standard error of a proportion for 66 percent. This gives the interval around this proportion within which the "true" proportion can be expected to occur. The lower limit of the interval at the .95 level of confidence for a two to one ratio is 61.36. When the instrument is scored by individual scores and group means, an estimate of reliability can be calculated by the analysis of variance techniques suggested by Hoyt and Lindquist. The reliabilities estimated for each scale using group mean scores were all .99 . RES scale scores are correlated with scale scores on the CUES. The coefficients indicate the two instruments to some degree measure things in common but also that they measure quite different things. The

coefficients among the scales of the RES indicate that there is cohesion among the scales but that they also measure quite different things.

The RES was administered to selected groups at Evangel College during the last week of April, 1968. These groups were full-time members of the Faculty-Administration; Seniors, Juniors, Sophomores and Freshmen students who are members of the sponsoring denomination; and Non-A/G students (students not members of the Assemblies of God). The number of returns used was 400, an 81 percent of the total sample selected. There were 80 from each of the academic classes and 40 from each of the Faculty-Administration and Non-A/G groups.

Profile and Hypotheses. One of the major purposes of this study was to discover the profile of the religious environment at Evangel College as measured by the individual scales of the RES. Using the "66 plus" method of scoring, comparative scores on the six scales are reported for the entire institution and for the six selected groups. The maximum value of analysis is through examination of the reported perceptions on each item. The responses on the individual items of the scales are therefore given for each group.

Two major testable hypotheses were formulated for this study using mean scores as the indication of a group's perception of the religious environment. The first hypothesis stated in null form was:

No difference will be found in the mean scores of the selected groups at Evangel College on the individual scales of the Religious Environment Scales.

The second major hypothesis stated in null form was:

No difference will be found in the mean scores of Assemblies of God students at Evangel College on the individual scales of the RES when compared on the following variables:

- A. Sex
- B. Academic ability
- C. Geographical area of student's home
- D. Spiritual influence of parents
- E. Size of home church
- F. Level of pastor's education
- G. Spiritual influence of home church

Analysis of variance was used to test for difference among the group mean scores on the individual scales of the RES. The F max test and Bartlett's test were used to assure homogeneity of variance among the groups. When significant difference was found among groups on the scales by analysis of variance, Duncan's new multiple range test was utilized to determine which group means were significantly different. In testing these hypotheses the decision was made to reject the null hypotheses at the .05 level of significance.

### The Analysis and Conclusions

Institutional Profile. The institutional profile is described in terms of the scores on each scale using 66 percent as the minimum for consensus. Positive consensus occurs when 66 percent or more answer in agreement with the keyed-answers; negative consensus occurs when 66 percent or more answer in disagreement with the keyed-answers. The effective religious environment consists of the characteristics which respondents are aware of and report with reasonable unanimity of a two to one ratio.

The institutional scores in rank order are: Christian Faculty +13, Religion Courses +11, Regulations +8, Denominational Relationship +5, Personal Religious Life +5, and Chapel +3. There are no negative consensus scores on the Christian Faculty or Religion Courses scales. The negative consensus scores on the other scales are: Regulations -2, Personal Religious Life -3, and Chapel -3 (the same score as positive consensus). The Denominational Relationship scale has a negative score of -6 which is higher than the positive score on this scale.

It is concluded that the dimensions of Christian Faculty and Religion Courses are perceived as strong elements in the effective religious environment of Evangel College as measured by the RES. This fact can be encouraging to this college as an educational institution within the Christian tradition. The dimension of Moral and Social Regulations is perceived as of medium strength in the effective religious environment. The scales of Personal Religious Life, Denominational Relationship, and Chapel are perceived as weak elements in the effective religious environment at Evangel College as measured by the RES. The positive score of +5 on Personal Religious Life is countered by the negative score of -3. The positive consensus of +5 on Denominational Relationship is negated by the negative score of -6. The lowest positive score is +3 on the Chapel scale which is offset by the negative score of -3. The negative scores on these three scales counteract the positive scores so that considerable ambiguity is experienced between the positive and negative directions

in the field forces of the environmental press of these dimensions.

Examination of these three scales leads to selected observations. Concerning the Personal Religious Life scale, there was no agreement as to whether it is easier to live the Christian life at this institution than at a secular institution. Negative consensus is expressed that there is pressure for religious experiences to conform to the majority, that church attendance declines while students are enrolled at the college, and student interest in world missions is lacking.

Concerning the Denominational Relationship scale, there was negative consensus that the college administration is too sensitive about what happens at the college as the result of criticism from the denomination, that the college is held responsible for loss of spiritual interest by students, and that in various ways the denomination exercises too much control over the college.

Concerning the Chapel scale, chapel is not perceived by students as a necessary feature of the life of the college nor as contributing to their spiritual life. Students are not satisfied with the frequency of required attendance. There is divided opinion about reverence in chapel being a problem, about students understanding the basic objective for chapel, and about chapel services being generally stimulating.

Group Scores. The scores of the selected groups are compared on the individual scales of the RES using 66 percent as the minimum for consensus. There is general agreement among the six groups on the Christian Faculty scale. The groups are within two points on the

Religion Courses scale and on the Personal Religious Life scale. The groups are within three points on the Denominational Relationship scale; the Freshmen have the highest score of +8 while the Faculty-Administration group and the Seniors have the low scores of +5. Larger differences among group scores occur on the Regulations scale and the Chapel scale. On the Regulations scale the Faculty-Administration group has the high score of +11 and the Sophomores have the low score of +7; the Faculty-Administration perception on this scale is sharply different from that of the students. The scores on the Chapel scale range from +7 for the Faculty-Administration to +2 for the Juniors. It is not readily apparent why the Juniors are so different from the other groups on this scale.

It is concluded that some difference in perception occurs among the groups but in a limited way. There is no pattern of any group being consistently high or low on the scales.

Analysis of Mean Scores of Selected Groups. The null hypothesis of no difference in the mean scores of the selected groups on the individual scales of the RES was tested by analysis of variance. Statistically significant difference among the group means was found at the .05 level on only two of the six scales of the RES: Chapel and Denominational Relationship. Duncan's multiple range test shows that the Faculty-Administration group is significantly higher on the Chapel scale than the Juniors and Seniors, the Freshmen higher than the Juniors. This fact has already been observed in the analysis of the profile. Apparently the Faculty-Administration group holds

different perceptions, expectations or attitudes towards chapel than the upperclassmen who have attended chapel services at this college for two years or more. Freshmen students have the highest mean score of the student groups which may reflect a halo effect or an idealism not yet dulled by more than one year of required chapel experiences or altered to fit current upperclass attitudes towards chapel.

The null hypothesis was also rejected for the Denominational Relationship scale. Duncan's multiple range test applied to this scale shows that the Freshmen are significantly higher than the Seniors and the Faculty-Administration, and the Non-A/G students higher than the Seniors. This suggests that the two groups least informed about the relationship between the college and the denomination - the Freshmen and the Non-A/G students - are reporting expectations rather than perceptions of the actual relationship. Seniors and the Faculty-Administration group have the two lowest mean scores on this scale - the two groups which presumably are the best informed or have the longest time of observing the inter-relationships between the denomination and the college.

In comparing groups by their mean scores, no trend was found among the relationships of scores on the scales. There is no trend from Freshmen to Seniors, or other consistent pattern among the classes. Perceptions of the Non-A/G group are not markedly different from the other groups. With one or two exceptions, the Faculty-Administration group is not different from the other groups.

Analysis of Student Mean Scores on Selected Variables. The null hypothesis of no difference in the mean scores of students on the individual scales of the RES when compared on selected variables was tested by analysis of variance. No statistically significant difference was found at the .05 level of confidence when students were grouped by geographical region of home or by size of home church.

Statistically significant difference was found at the .05 level on only one of the six scales when students were grouped by the variable of spiritual influence of parents. The difference was found on the Chapel scale. Since two of the groups have N's of 8 and 9, and since significant difference was found on only one of the scales, little importance is attached to the findings on this variable. There is reason at this point to question the appropriateness of the categories for this variable and the assumption that they are equal intervals. Students whose parents were not Christians may be very devout Christians themselves and reflect their commitment rather than any parental influence on their reported perceptions of the religious environment.

Significant difference was found at the .05 level on only one of the six scales when students were grouped by level of pastor's education. The difference was found on the Christian Faculty scale. Since there were only 12 in the group with the lowest mean score, and since only one scale shows any significant difference, little importance is attached to the results on this variable. It is concluded that factors other than pastor's level of education very likely influenced the responses of



these 12 whose pastors had "Less than High School" level of education.

The null hypothesis of no difference in the mean scores when students are grouped by sex was rejected for four of the scales. Women students have significantly higher scores at the .01 level on the scales of Christian Faculty, Chapel, Denominational Relationship, and Regulations. The mean scores of women students are also higher on the other two scales though the difference between the means is not statistically significant. Women students have a more favorable perception of the religious environment at Evangel College than do the men students.

The null hypothesis of no difference in the mean scores when students are grouped by academic ability was rejected for four of the six scales. Students were grouped by their ACE Total percentile scores into quartiles. Significant difference was found at the .05 level among the mean scores on the scales of Christian Faculty and Denominational Relationship. Difference was found at the .01 level among the mean scores on the scales of Regulations and Personal Religious Life. There is an inverse relationship between academic ability rank and scores on the scales of the RES. The group in the lower quartile is significantly higher than the two upper quartiles on each of the four scales. Apparently the students with the higher academic ability are more critical and independent in their thinking, less docile and accepting of the status quo.

The null hypothesis of no difference in the mean scores when students are grouped by spiritual influence of home church was rejected

for all six scales. The hypothesis was rejected on the Chapel scale at the .05 level and the rest of the scales at the .01 level. The five categories for this variable ranged from "Strong", "Important", "So-So", "Unimportant" to "Negative". Students were asked to indicate their perception of the degree of spiritual influence by their home church. A pattern is seen on five scales with the same order of category means occurring. In descending rank order they are: "Strong", "Important", "Unimportant", "So-So" and "Negative". The only exception to this order is on the Chapel scale where the order of the groups "Important" and "Unimportant" are reversed. This pattern of ranked means follows the ranked order of categories given in the questionnaire except for the reversal of positions by the groups "So-So" and "Unimportant". It is unclear why on these five scales the group identifying itself as having the next to the lowest degree of influence has a higher mean than the "So-So" group. This may reflect a problem in semantics of the labels of categories chosen or perhaps reflects subtle influences by personality types of self-concepts.

It is concluded that the students who described themselves as having had "Strong" spiritual influence by their home churches have significantly higher scores on the scales of the RES than do the students who describe their home church influence as being "So-So" or "Negative". The same conclusion is made for the groups which reported "Important" or "Unimportant" spiritual influence by their home church.

Conclusions. Major conclusions to be drawn from this study can

be summarized as follows:

1. The institutional profile scores at Evangel College are high on the Christian Faculty and Religion Courses scales, medium range on the Regulations scale, and low on Personal Religious Life, Denominational Relationship, and Chapel scales. Group profile scores are very similar on most of the scales. The Faculty-Administration scores are high on the Regulations and Chapel scales and are markedly different from the other groups; the Juniors are very low on the Chapel scale and Freshmen are a little higher than the other groups on the Denominational Relationship scale.

2. Significant difference among the mean scores of the six selected groups occurs on only two of the six scales of the RES: Chapel and Denominational Relationship.

3. Significant difference among the mean scores of Assemblies of God students at Evangel College on the individual scales of the RES does occur on certain variables. On the variable of sex, women students have significantly higher scores than men students on the four scales of Christian Faculty, Chapel, Denominational Relationship, and Regulations. On the variable of academic ability, students in the lower quartile have significantly higher scores than the two highest quartile groups on the scales of Christian Faculty, Denominational Relationship, Regulations, and Personal Religious Life. On the variable of influence of home church, the mean score of the group reporting "Strong" spiritual influence is significantly higher on all the scales of the RES than the groups reporting "So-So" or "Negative" influence.

4. The Religious Environment Scales are useful in providing a description of the perceptions of the religious dimensions at a denominational college. Comparative scores on the scales give information about the college not possible by other means. Group profiles on the RES provide insight into the perceptions of these various groups within the institution.

5. The use of the demographic variables in this study provides ambiguous results. No difference was found on the variables of geographical region or size of home church; doubtful difference was found on only one scale on the variables of level of pastor's education and spiritual influence of parents. Difference on four scales were found on the variables of sex and of academic ability; difference on all six scales was found on the variable of spiritual influence of home church. One conclusion of this study is the uncertainty of what is being measured when students are asked to indicate their perceptions on categories of certain variables, i.e., level of pastor's education and spiritual influence of parents. It is unclear at this time whether the variable being reported is influencing the student's responses or whether his responses reflect other unidentified factors or reflect his own personality or attitudes.

The possibility of certain variables influencing the perceptions of the religious environment - or being the result of the personality or attitude of the respondent - raises a question about the extent to which environmental press determines perceptions and directs behavior. The tentative conclusion of this study is that perceptions



of the religious environment as measured by the RES are influenced by factors other than the environmental press. What students report about their environment may be influenced by their sex, by their academic ability, by the spiritual influence of their home church - or is it the personality or attitudes which the respondent brought with him to the environment?

#### Implications for Further Research

1. The results from the administration of this research instrument at one institution must be regarded as tentative. If the RES is to be useful to other denominational colleges, a replication of this study or a similar study administering the RES to other church-controlled colleges is necessary. Comparisons of institutional profiles on the individual scales and of groups within institutions would be valuable. It is possible that data collected through the administration of the RES to other institutions would permit refinement of the instrument and items within the scales.

2. Perceptions of the religious environment as measured by the RES based on the variables of sex, academic ability, and spiritual influence of home church need further investigation to determine if other measures would agree with the results of this study. A study on the perception of the degree of influence of home church offers a potentially productive area for further investigation for the church-controlled college. The problem of what is being measured as discussed above needs to be pursued: are these perceptions primarily



expectations rather than observed perceptions? do they reflect what the student brings with him to the college environment? do the perceptions reflect the environmental press?

3. The institutional scores on the Regulations scale, the Personal Religious Life scale, and particularly the Denominational Relationship scale and the Chapel scale, indicate the need for additional study at Evangel College to verify these findings by replication of this study or by other measures. In light of these findings and in view of the institution's religious goals, the responses on the items of these four scales need careful examination to consider what the respondents are saying about their college. For example, it is reported that Chapel is perceived as not contributing to the religious development of the students. Why? Is required chapel essential to the religious purposes of the church-controlled college? If so, then what changes can and should be made in order for chapel to be part of the "effective" religious environment?

An item by item analysis can profitably be made with the college president, the faculty, and the governing board, to examine the perceptions reported, and the perceptions that are held by various groups within the institution.



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APPENDIX A

RELIGIOUS ENVIRONMENT  
SCALES AND KEY

# RELIGIOUS ENVIRONMENT SCALES

Thurman Vanzant

Michigan State University

## Directions:

The atmosphere of a church-controlled college includes religious features and dimensions that are held to be unique and strategic to the purposes of such institutions.

Since you have lived in its environment, observed its religious features, and participated in its religious activities, you are asked to be a reporter about your school. What are the characteristics of its religious dimensions?

There are 90 statements in this booklet. You are to mark them TRUE or FALSE using the answer sheet provided. There are no right or wrong answers.

If you feel the statement is TRUE or generally characteristic of your school, as you have experienced it or as you think it is, then blacken space T on the answer sheet. If you feel the statement is FALSE or generally not characteristic of your school, as you have experienced it or as you think it is, then blacken space F on the answer sheet.

## RELIGIOUS ENVIRONMENT SCALES

1. There is a strong feeling of unity within the faculty on this campus growing out of their shared religious convictions.
2. The faculty is as much concerned about the spiritual emphasis here as the academic emphasis.
3. Faculty members generally are strong supporters of special religious activities such as Religious Emphasis Weeks.
4. Teachers confront students with religious and ethical issues arising within their subjects.
5. The way some courses are conducted one would not know he was in a Christian college.
6. Students see daily chapel as a vital and necessary feature of the life of this college.
7. Chapel speakers frequently excite a great deal of discussion on campus about their topics.
8. One of the main weaknesses of chapel on this campus is inadequate student participation in planning and directing the services.
9. Students generally believe that chapel effectively contributes to their spiritual growth and understanding.
10. Many of the students feel that the type of worship in chapel is too "formal".
11. The denomination which sponsors this school utilizes the intellectual leadership of the college in various denominational programs and committees.
12. Criticism from pastors and churches has made the college administration more sensitive than it should be about what happens here.
13. On the whole the denomination shows good interest for this college and gives good financial support.
14. Most pastors in the denomination are informed about the programs and regulations at this college.
15. Several faculty members are apologetic about the denomination which sponsors this college.



16. Rules here regulating moral conduct are in close agreement with the views generally held in the denomination.
17. Students who violate a major rule such as drinking are immediately expelled from this college.
18. Dismissing students for major violations is seen here as being effective in upholding the conduct code of the college.
19. Rules are seen by students as contributing to their moral growth and to their personal development in making ethical choices.
20. Students participate in the making and revising of regulations dealing with conduct.
21. Teachers in the religion department are as well prepared academically as teachers in other departments.
22. Most students feel there are too many required religion courses at this school.
23. Religion courses give adequate emphasis to the distinctive doctrines of this denomination.
24. Courses in religion are among the most intellectually stimulating courses on campus.
25. Most students see their religion courses as contributing to their general education in a broadening sense.
26. Students with a spiritual problem can easily find a fellow-student who is spiritually mature and willing to help them.
27. Students believe it is easier to live the Christian life here than at a state college.
28. Most students who graduate from here are committed Christians.
29. There are many students here who do not profess to be Christians, a factor which adversely affects the spiritual life of the college.
30. Many students at this college are concerned about the relevance of their religious beliefs to the racial problems of our day.
31. Most faculty members take personal interest in the total development of their students including their character development.
32. Teachers help students see the practical application of Christian principles to their courses.

THINK IN TERMS OF WHAT IS GENERALLY TRUE OR FALSE. RESPOND IN TERMS OF WHAT YOU HAVE EXPERIENCED OR THE WAY YOU THINK THINGS ARE.

33. Most faculty members give their support to daily chapel by their regular attendance.
34. Faculty members have all the academic freedom here needed to perform as scholars.
35. The Christian influence of some faculty members is hindered because of the poor quality of their courses.
36. Chapel services are planned for the entire college community and not just for students.
37. Religious leaders from outside the sponsoring denomination are frequently invited to speak in chapel.
38. There is considerable sentiment among students to have chapel attendance required less frequently.
39. One of the strengths of chapel services here is the use of various forms of worship and a variety of approaches.
40. Lack of reverence in chapel by students is a problem on this campus.
41. The denomination exercises considerable direct influence on the content of the courses taught here.
42. The student body is kept aware that the denomination owns and operates this college and that its wishes must be observed.
43. There is a feeling on campus that pastors and churches hold the college responsible for the apparent loss of spiritual interest by some students after they enroll here.
44. The college is largely autonomous in the regulations it establishes without having direct control by the denomination.
45. Elected officials of the denomination are frequently on campus as speakers.
46. Rules governing student conduct are more strict here than the practices permitted in most churches and homes from which the students come.
47. Students who avoid getting caught for violations are admired by many students.

48. Most students feel that disciplinary action here is fair and consistent with the violations.
49. Efforts are made by the college to interpret the moral, ethical or spiritual principle behind its regulations.
50. Regulations governing moral and social conduct are firmly established and it is almost impossible to get the college to make any changes.
51. The emphasis in religion courses is upon a student's personal religious commitment rather than religious knowledge.
52. Most students on campus are familiar with the names and general views of such religious leaders as P. Tillich, C. S. Lewis, Bonhoeffer, and Harvey Cox.
53. The Bible and its teachings are viewed as an integrating force on this campus.
54. Religion courses are effective in helping students develop into more mature and intelligent Christians.
55. Teachers in religion courses tend to be dogmatic in telling students what they are expected to believe.
56. Many students meet regularly with small groups for religious study and devotions.
57. There is considerable interest on campus concerning the relationship of Christian teachings to the contemporary problems of poverty and the population explosion.
58. Most students feel that only students who make profession of faith as Christians should be admitted here.
59. There is considerable pressure for one's religious experience to conform to the pattern of the majority.
60. Student religious organizations are very active at this school with participation by many students.
61. Faculty members are active in counseling and helping students with personal spiritual problems.
62. Faculty members here give their support to the stated religious purposes of this college.
63. Students are impressed and influenced by the depth of Christian commitment of most faculty members.

THINK IN TERMS OF WHAT IS GENERALLY TRUE OR FALSE. RESPOND IN TERMS OF WHAT YOU HAVE EXPERIENCED OR THE WAY YOU THINK THINGS ARE.

64. A problem at this school is keeping well-qualified faculty.
65. Having teachers who share common religious beliefs increases the religious impact on the students.
66. Students at this college generally have a clear understanding of the underlying objective for chapel.
67. Religious emphasis weeks or revivals are more meaningful to the spiritual lives of the students than are regular chapel services.
68. Chapel services are generally stimulating, challenging and worthwhile on this campus.
69. One of the weaknesses of chapel programming is the inclusion of non-religious activities such as student government programs.
70. Most chapel services are of an intellectual nature rather than of a devotional or inspirational nature.
71. Most students when they leave here continue to attend a church of the denomination which sponsors this school.
72. There is considerable feeling on campus that the denomination exercises too much control over the college.
73. Students appreciate the opportunity here to meet denominational leaders and to learn more about the total program and activities of their denomination.
74. Student criticism about denominational policies or practices would be completely out of place on this campus.
75. Several of the full-time faculty members are more "liberal" in social practices and political views than the denomination in general.
76. Students in general agree with and abide by the official code of conduct.
77. Many student feel that students need closer supervision in order to keep them from engaging in practices condemned by the college.
78. Many students see no connection between the Christian religion and many of the rules enforced here.



79. Action taken for violation of regulations has as its main purpose helping the student mature and learn to accept increased responsibility for his actions.
80. Attempts are made by the college to get students to adopt the code of conduct of the college as their own personal convictions.
81. There is little attention given in religion courses to the trends of contemporary thinking in the religious world.
82. Students are not told what to believe in religion courses but are expected to face basic religious questions and arrive at their own conclusions.
83. Required religion courses are arranged and organized to give an adequate and comprehensive exposure to major divisions of religious thought.
84. Conflicting religious and philosophical views are objectively presented in religion courses.
85. Students expressing "liberal" religious ideas in religion courses would be ostracized by other students.
86. Most students believe their spiritual life has developed and matured while they have been at this school in a way which would not have been likely at a public college or university.
87. Many students who have little or no interest in spiritual matters enroll at this school because their parents pressure them to do so.
88. There is strong, widespread student interest in world missions.
89. Church attendance by students generally declines while they are enrolled here.
90. Spiritual subjects and questions are frequent topics of students' informal conversation.

## RELIGIOUS ENVIRONMENT SCALES

## KEY

1.	T	16.	T	31.	T	46.	F	61.	T	76.	T
2.	T	17.	T	32.	T	47.	F	62.	T	77.	F
3.	T	18.	T	33.	T	48.	T	63.	T	78.	F
4.	T	19.	T	34.	T	49.	T	64.	F	79.	T
5.	F	20.	T	35.	F	50.	F	65.	T	80.	F
6.	T	21.	T	36.	T	51.	F	66.	T	81.	F
7.	T	22.	F	37.	T	52.	T	67.	F	82.	T
8.	F	23.	T	38.	F	53.	T	68.	T	83.	T
9.	T	24.	T	39.	T	54.	T	69.	F	84.	T
10.	F	25.	T	40.	F	55.	F	70.	F	85.	F
11.	T	26.	T	41.	F	56.	T	71.	T	86.	T
12.	F	27.	F	42.	F	57.	T	72.	F	87.	F
13.	T	28.	T	43.	F	58.	F	73.	T	88.	T
14.	T	29.	F	44.	T	59.	F	74.	F	89.	F
15.	F	30.	T	45.	T	60.	T	75.	F	90.	T

APPENDIX B

DESCRIPTION OF THE INDIVIDUAL  
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## DESCRIPTION OF THE INDIVIDUAL SCALES OF THE RES

The individual scales of the Religious Environment Scales can be described in the following manner:

**Scale 1. Christian Faculty** (Items 1-5, 31-35, and 61-65)

A high score indicates unity among the faculty based on shared religious beliefs, faculty support for the religious objectives of the college shown through support given to religious activities and personal interest taken in students' spiritual needs; academic and spiritual emphasis are perceived as balanced with a thought-out integration of Christian beliefs and academic disciplines; the faculty is perceived as having high Christian character which is a positive influence upon the students.

**Scale 2. Chapel** (Items 6-10, 36-40, and 66-70)

A high score suggests general student satisfaction with the type and frequency of chapel services, forms of worship used, degree of student participation, and participation by religious leaders both from within and without the denomination; chapel is perceived an important aspect of campus life, contributing to personal spiritual development, and to the sense of community on the campus.

**Scale 3. Denominational Relationship** (Items 11-15, 41-45, and 71-75)

A high score on this scale suggests a constructive, mutually co-operative relationship; interest and support is shown by the denomination, reasonable expectations about the college and its influence on the students are held, and there is appropriate denominational control and visibility on campus without undue external control; the denomination is perceived as having confidence in the college responsibly fulfilling the purposes for which it was established.

**Scale 4. Moral and Social Regulations** (Items 16-20, 46-50, and 76-80)

A high score suggests that regulations are perceived as having the aim of giving moral direction, assisting the students' growth and development in becoming self-regulating and self-directing persons; regulations are perceived as consistent with the standards generally held by the denomination, as appropriate to the purposes of the college, as being generally respected and observed by students, as effective in influencing behavior, and as being impartially enforced.

Scale 5. Religion Courses (Items 21-25, 51-55, and 81-85).

A high score on this scale indicates student satisfaction with the number of required courses, the scope of the courses, and the quality of both courses and faculty; emphasis is on religious knowledge and understanding with proper emphasis given to the distinctive doctrines of the denomination; the approach is educative and broadening, not narrow nor mere indoctrination. There is adequate attention to competing religious ideas and beliefs so the student is confronted with ideas different from those customarily held and is able to arrive at his own conclusions.

Scale 6. Students' Personal Religious Life (Items 26-30, 56-60, and 86-90)

A high score indicates the perception that students experience development in their personal religious life as a result of living in this environment and being influenced by other students; there is concern for the spiritual development of other students, religious disciplines are part of students' regular habits of living, there is concern for relating Christian belief to contemporary problems, and there is active interest and participation in various Christian ministries.

APPENDIX C

COLLEGE AND UNIVERSITY  
ENVIRONMENT  
SCALES

# CUES

COLLEGE & UNIVERSITY ENVIRONMENT SCALES

BY C. ROBERT PACE  
UNIVERSITY OF CALIFORNIA  
LOS ANGELES



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## Directions

Colleges and universities differ from one another in many ways. Some things that are generally true or characteristic of one school may not be characteristic of another. The purpose of College & University Environment Scales (CUES) is to help define the general atmosphere of different schools. The atmosphere of a campus is a mixture of various features, facilities, rules and procedures, faculty characteristics, courses of study, classroom activities, students' interests, extracurricular programs, informal activities, and other conditions and events.

You are asked to be a reporter about your school. You have lived in its environment, participated in its activities, seen its features, and sensed its attitudes. What kind of place is it?

There are 150 statements in this booklet. You are to mark them TRUE or FALSE, using the answer sheet given you for this purpose. Do not write in the booklet.

Two different forms of answer sheets may be used. If your answer sheet has the notation Form X-1S in the upper right hand corner, read the instructions below, "*Instructions for Form X-1S Answer Sheets Only*." If your answer sheet has the notation Form X-1 in the upper right hand corner, please read "*Instructions for Form X-1 Answer Sheets Only*" on the following page.

### Instructions for Form X-1S Answer Sheets Only

1. PENCILS. Use any type of soft lead pencil. *Do not* use an ink or ball-point pen.
2. MARK ONLY ON THE ANSWER SHEET. All answers are to be recorded on the separate answer sheet. Please make no marks in the questionnaire booklet. The booklet will be used again by other students.
3. IDENTIFYING INFORMATION. Certain identifying information must be entered on the answer sheet.
  - A. At the top left-hand corner of the answer sheet find the section headed "Print last name . . .". Starting at the arrow on the left, print as many letters of your last name as will fit (up to thirteen) in the large boxes of the LAST NAME section. Print one letter in each large box. Do not go beyond the heavy line that separates last name and first name sections even if you cannot complete your last name. If your last name has fewer than thirteen letters, use as many boxes as you need and leave the rest blank. After you have finished printing as many letters of your last name as will fit in the boxes to the left of the heavy line, print as many letters of your first name as will fit (up to seven) beginning at the heavy line and stopping at the last box on the right. Print one letter in each box. If your first name has fewer than seven letters, use as many boxes as you need and leave the rest blank.
  - B. Now look at the columns under each letter you have printed. Each column has a small box for each letter of the alphabet. Go down the column under each letter you have printed, find the small box labeled with the corresponding letter, and blacken that small box. Do this for each letter you have printed in the large boxes across the top.
  - C. Note the section on the answer sheet where Identification Number, sex, age, and educational status are requested. Copy the Identification Number (printed in red) into the boxes below the printed number by blackening the appropriate boxes. Under "sex," mark Male or Female, as appropriate; then indicate your age and educational status in the same way.



4. **MARKING THE ANSWER SHEET.** Find question 1 on the next page and the space on the answer sheet for recording the answer. Record your answer by blackening the box marked T or F as is shown in the sample below:

**Sample Item:** (A) Students are generally pretty friendly on this campus.

(A)



**F**

Proceed to answer every item of the 150 given. Blacken T on the answer sheet when you think the statement is generally characteristic or TRUE of your college, is a condition which exists, an event which occurs or might occur, is the way people generally act or feel.

Blacken space F on the answer sheet when the statement is generally FALSE or not characteristic of your college, is a condition which does not exist, an event which is unlikely to occur, or is not the way people generally act or feel.

### Instructions for Form X-1 Answer Sheets Only

1. **PENCILS.** Use any type of soft lead pencil. *Do not* use an ink or ball-point pen.
2. **MARK ONLY ON THE ANSWER SHEET.** All answers are to be recorded on the separate answer sheet. Please make no marks in the questionnaire booklet. The booklet will be used again by other students.
3. **IDENTIFYING INFORMATION.** Fill in the identifying information on the right hand side of the answer sheet. Print your name, sex, age, institution, major, and today's date. Check the appropriate box for your class.
4. **MARKING THE ANSWERS.** Find question 1 on the next page and the space on the answer sheet for recording the answer. Record your answer by completely filling the spaces between the dotted lines for T or F as shown in the sample below.

**Sample Item:** (A) Students are generally pretty friendly on this campus.

(A) **T** **F**

Proceed to answer every item of the 150 given. Blacken space T on the answer sheet when you think the statement is generally characteristic or TRUE of your college, is a condition which exists, an event which occurs or might occur, is the way people generally act or feel.

Blacken space F on the answer sheet when the statement is generally FALSE or not characteristic of your college, is a condition which does not exist, an event which is unlikely to occur, or is not the way people generally act or feel.

1. Students quickly learn what is done and not done on this campus.
2. Students must have a written excuse for absence from class.
3. There are lots of dances, parties, and social activities.
4. Students are encouraged to criticize administrative policies and teaching practices.
5. Campus buildings are clearly marked by signs and directories.
6. There is a lot of apple-polishing around here.
7. New fads and phrases are continually springing up among the students.
8. Student organizations are closely supervised to guard against mistakes.
9. Religious worship here stresses service to God and obedience to His laws.
10. It's important socially here to be in the right club or group.
11. The professors regularly check up on the students to make sure that assignments are being carried out properly and on time.
12. Student rooms are more likely to be decorated with pennants and pin-ups than with paintings, carvings, mobiles, fabrics, etc.
13. Some of the professors react to questions in class as if the students were criticizing them personally.
14. Education here tends to make students more practical and realistic.
15. New jokes and gags get around the campus in a hurry.
16. It is fairly easy to pass most courses without working very hard.
17. Most of the professors are very thorough teachers and really probe into the fundamentals of their subjects.
18. Students almost always wait to be called on before speaking in class.
19. Laboratory facilities in the natural sciences are excellent.
20. Learning what is in the text book is enough to pass most courses.
21. A lecture by an outstanding scientist would be poorly attended.
22. Students set high standards of achievement for themselves.
23. The professors really push the students' capacities to the limit.
24. Class discussions are typically vigorous and intense.
25. Everyone knows the "snap" courses to take and the tough ones to avoid.
26. Long, serious intellectual discussions are common among the students.
27. Personality, pull, and bluff get students through many courses.
28. Standards set by the professors are not particularly hard to achieve.
29. Careful reasoning and clear logic are valued most highly in grading student papers, reports, or discussions.
30. Students put a lot of energy into everything they do—in class and out.
31. Students spend a lot of time together at the snack bars, taverns, and in one another's rooms.
32. There is a great deal of borrowing and sharing among the students.
33. There are definite times each week when dining is made a gracious social event.
34. Faculty members rarely or never call students by their first names.
35. Students commonly share their problems.
36. The professors go out of their way to help you.
37. Most students respond to ideas and events in a pretty cool and detached way.
38. There are frequent informal social gatherings.

39. Most people here seem to be especially considerate of others.
40. Students have many opportunities to develop skill in organizing and directing the work of others.
41. Very few things here arouse much excitement or feeling.
42. Many upperclassmen play an active role in helping new students adjust to campus life.
43. This school has a reputation for being very friendly.
44. The history and traditions of the college are strongly emphasized.
45. It's easy to get a group together for card games, singing, going to the movies, etc.
46. Tutorial or honors programs are available for qualified students.
47. Public debates are held frequently.
48. Quite a few faculty members have had varied and unusual careers.
49. Many of the social science professors are actively engaged in research.
50. There is a lot of interest here in poetry, music, painting, sculpture, architecture, etc.
51. The student newspaper rarely carries articles intended to stimulate discussion of philosophical or ethical matters.
52. The library has paintings and phonograph records which circulate widely among the students.
53. A lecture by an outstanding literary critic would be poorly attended.
54. Channels for expressing students' complaints are readily accessible.
55. There are paintings or statues of nudes on the campus.
56. Course offerings and faculty in the social sciences are outstanding.
57. Students are actively concerned about national and international affairs.
58. There would be a capacity audience for a lecture by an outstanding philosopher or theologian.
59. There are many facilities and opportunities for individual creative activity.
60. A controversial speaker always stirs up a lot of student discussion.
61. Students rarely get drunk and disorderly.
62. There are a number of prominent faculty members who play a significant role in national or local politics.
63. Most students show a good deal of caution and self-control in their behavior.
64. Students here learn that they are not only expected to develop ideals but also to express them in action.
65. Many students drive sports cars.
66. The person who is always trying to "help out" is likely to be regarded as a nuisance.
67. Nearly all students expect to achieve future fame or wealth.
68. Students often start projects without trying to decide in advance how they will develop or where they may end.
69. Some of the most popular students have a knack for making witty, subtle remarks with a slightly sexy tinge.
70. Students are conscientious about taking good care of school property.
71. Student publications never lampoon dignified people or institutions.
72. Student parties are colorful and lively.
73. People here are always trying to win an argument.
74. Society orchestras are more popular here than jazz bands or novelty groups.
75. Drinking and late parties are generally tolerated, despite regulations.

76. Many courses stress the speculative or abstract rather than the concrete and tangible.
77. Many students try to pattern themselves after people they admire.
78. The big college events draw a lot of student enthusiasm and support.
79. Frequent tests are given in most courses.
80. In many classes students have an assigned seat.
81. Student elections generate a lot of intense campaigning and strong feeling.
82. There is an extensive program of intramural sports and informal athletic activities.
83. The college offers many really practical courses such as typing, report writing, etc.
84. Anyone who knows the right people in the faculty or administration can get a better break here.
85. Student pep rallies, parades, dances, carnivals or demonstrations occur very rarely.
86. Students take a great deal of pride in their personal appearance.
87. Everyone has a lot of fun at this school.
88. There is a recognized group of student leaders on this campus.
89. The values most stressed here are open-mindedness and objectivity.
90. The important people at this school expect others to show proper respect for them.
91. Students who work hard for high grades are likely to be regarded as odd.
92. There is a lot of interest in the philosophy and methods of science.
93. There are so many things to do here that students are busy all the time.
94. Students are sometimes noisy and inattentive at concerts or lectures.
95. Most courses require intensive study and preparation out of class.
96. Course offerings and faculty in the natural sciences are outstanding.
97. Few students here would ever work or play to the point of exhaustion.
98. Most courses are a real intellectual challenge.
99. Courses, examinations, and readings are frequently revised.
100. Students are very serious and purposeful about their work.
101. People around here seem to thrive on difficulty—the tougher things get, the harder they work.
102. Professors usually take attendance in class.
103. Examinations here provide a genuine measure of a student's achievement and understanding.
104. There is very little studying here over the week-ends.
105. The school is outstanding for the emphasis and support it gives to pure scholarship and basic research.
106. There is a lot of excitement and restlessness just before holidays.
107. Students often run errands or do other personal services for the faculty.
108. Graduation is a pretty matter-of-fact, unemotional event.
109. The college regards training people for service to the community as one of its major responsibilities.
110. All undergraduates must live in university approved housing.
111. When students run a project or put on a show everybody knows about it.
112. Students are expected to work out the details of their own programs in their own way.
113. Students' mid-term and final grades are reported to parents.
114. Students exert considerable pressure on one another to live up to the expected codes of conduct.
115. There is a lot of group spirit.

116. Students are frequently reminded to take preventive measures against illness.
117. Most of the faculty are not interested in students' personal problems.
118. Proper social forms and manners are important here.
119. The school helps everyone get acquainted.
120. Resident students must get written permission to be away from the campus overnight.
121. Most of the professors are dedicated scholars in their fields.
122. Modern art and music get little attention here.
123. Many students here develop a strong sense of responsibility about their role in contemporary social and political life.
124. Many famous people are brought to the campus for lectures, concerts, student discussions, etc.
125. An open display of emotion would embarrass most professors.
126. Many of the natural science professors are actively engaged in research.
127. Special museums or collections are important possessions of the college.
128. Few students are planning post-graduate work in the social sciences.
129. To most students here art is something to be studied rather than felt.
130. The expression of strong personal belief or conviction is pretty rare around here.
131. Concerts and art exhibits always draw big crowds of students.
132. There are a good many colorful and controversial figures on the faculty.
133. The school offers many opportunities for students to understand and criticize important works in art, music, and drama.
134. There is considerable interest in the analysis of value systems, and the relativity of societies and ethics.
135. Students are encouraged to take an active part in social reforms or political programs.
136. Students occasionally plot some sort of escapade or rebellion.
137. Students pay little attention to rules and regulations.
138. Instructors clearly explain the goals and purposes of their courses.
139. Bermuda shorts, pin-up pictures, etc., are common on this campus.
140. Spontaneous student rallies and demonstrations occur frequently.
141. There always seem to be a lot of little quarrels going on.
142. Most student rooms are pretty messy.
143. Few students bother with rubbers, hats, or other special protection against the weather.
144. It is easy to take clear notes in most courses.
145. Students frequently do things on the spur of the moment.
146. Rough games and contact sports are an important part of intramural athletics.
147. Students are expected to report any violation of rules and regulations.
148. Dormitory raids, water fights and other student pranks would be unthinkable here.
149. Many students seem to expect other people to adapt to them rather than trying to adapt themselves to others.
150. Students ask permission before deviating from common policies or practices.



APPENDIX D

DESCRIPTION OF THE INDIVIDUAL  
SCALES OF THE CUES

## DESCRIPTION OF THE INDIVIDUAL SCALES OF THE CUES

The following description of the five scales in the College and University Environment Scales is taken from the manual (55: 24-25) prepared by C. Robert Pace.

Scale 1. Practicality (Items 1-15 and 76-90)

A high score on this scale suggests a practical, instrumental emphasis. Organization, system, and procedures and supervision are important. Status, in relation to authority and to peers, is important. Personal, social, and practical benefits are obtainable from the program and from campus activities.

Scale 2. Community (Items 31-45 and 106-120)

A high score on this scale suggests a friendly, cohesive, group oriented campus. The environment is supportive and sympathetic. There is strong sense of group welfare and group loyalty that embraces the college as a whole. The college is a closely knit community.

Scale 3. Awareness (Items 46-60 and 121-135)

A high score on this scale suggests a concern for three sorts of meaning - personal, poetic, and political. Emphasis is upon self-understanding, a wide range of esthetic experience and appreciation, and for the condition of man in the modern world. The accent is awareness of self, of society, and esthetic sensitivity.

Scale 4. Propriety (Items 61-70 and 136-150)

A high score suggests an environment that is polite and considerate. It is characterized by caution, thoughtfulness, and decorum. A low score, by contrast, indicates an atmosphere that is more daring than cautious, more assertive and demonstrative than polite and mannerly.

Scale 5. Scholarship (Items 16-30 and 91-105)

A high score indicates an academic and scholarly environment. The emphasis is upon competitively high academic achievement and a serious interest in knowledge and theories for their own sake.



## APPENDIX E

### STUDENT QUESTIONNAIRE

## STUDENT QUESTIONNAIRE

Using the appropriate answer sheet, please answer the following questions concerning biographical data. Start with answer blank number 91. Give only one answer for each item. (And please answer all questions.)

Item 91. Father's occupation

- (1) Craftsman, tradesman or technician
- (2) Farming and related work
- (3) Selling - wholesale or retail
- (4) Business or management
- (5) Teaching

Item 92. Father's occupation (continued)

- (1) Unskilled
  - (2) Minister
  - (3) Father not living
- (If some other category is needed, please write in occupation lightly across space for this item.)

Item 93. Mother's occupation

- (1) Housewife and does not work outside of home
- (2) Sales work
- (3) Secretary or office worker
- (4) Teacher
- (5) Unskilled

Item 94. Mother's occupation (continued)

- (1) Business or management
  - (2) Nurse
  - (3) Mother not living
- (If some other category is needed, please write in the occupation very lightly within space for this item.)

Item 95. Father's highest attainment of formal education

- (1) Less than high school graduate
- (2) Graduated from high school
- (3) Some college
- (4) Some Bible College
- (5) Graduated from Bible College

Item 96. Father's education (continued)

- (1) Graduated from college
- (2) Graduate work beyond four-year degree
- (3) Graduate degree

- Item 97. Mother's highest attainment of formal education
- (1) Less than high school graduate
  - (2) Graduated from high school
  - (3) Some college
  - (4) Some Bible College
  - (5) Graduated from Bible College
- Item 98. Mother's education (continued)
- (1) Graduated from college
  - (2) Graduate work beyond four-year degree
  - (3) Graduate degree
- Item 99. Pastor's highest attainment of formal education (pastor of home church when you enrolled at Evangel College)
- (1) Less than high school graduate
  - (2) Graduated from high school
  - (3) Some college
  - (4) Some Bible College
  - (5) Graduated from college
- Item 100. Pastor's education (continued)
- (1) Graduated from Bible College
  - (2) Attended seminary
  - (3) Don't know and unwilling to guess
- Item 101. Geographical location of home church
- (1) Northeast Area: New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia
  - (2) Southeast Area: Alabama, Florida, Georgia, North Carolina, South Carolina
  - (3) Great Lakes Area: Michigan, Illinois, Indiana, Kentucky, Ohio, West Virginia
  - (4) Gulf Area: Missouri, Arkansas, Louisiana, Tennessee, Mississippi
  - (5) South Central Area: Kansas, New Mexico, Texas, Oklahoma
- Item 102. Geographical location of home church (continued)
- (1) North Central Area: Iowa, North Dakota, South Dakota, Nebraska, Minnesota, Wisconsin
  - (2) Northwest Area: Alaska, Washington, Idaho, Oregon, Montana, Wyoming
  - (3) Southwest Area: California, Nevada, Arizona, Utah, Colorado

- Item 103. Size of your hometown (hometown when you enrolled at EC)
- (1) Lived on a farm
  - (2) Under 25,000
  - (3) Between 25,001 and 100,000
  - (4) Between 100,001 and 500,000
  - (5) Over 500,000
- Item 104. Parents' annual income before taxes (combined if both work)
- (1) under \$5,000
  - (2) Between \$5,001 and \$8,000
  - (3) Between \$8,001 and \$12,000
  - (4) Between \$12,001 and \$15,000
  - (5) Over \$15,000
- Item 105. Christian influence of family
- (1) Both parents exemplary Christians ("parent" if only one living)
  - (2) Father but not mother exemplary Christian
  - (3) Mother but not father exemplary Christian
  - (4) Both parents inconsistent in Christian living
  - (5) Parents not Christians
- Item 106. Regularity of church attendance by parents
- (1) Both parents very regular
  - (2) Father but not mother attends regularly
  - (3) Mother but not father attends regularly
  - (4) Both parents attend irregularly
  - (5) Parents do not attend church
- Item 107. How do you evaluate the spiritual influence of your family upon your life?
- (1) Very strong and positive
  - (2) Quite important
  - (3) Not very important
  - (4) A negative influence
  - (5) Parents not Christians
- Item 108. How do you evaluate your parents' theological beliefs?
- (1) Very conservative
  - (2) Conservative
  - (3) Moderate
  - (4) Liberal
  - (5) Very liberal

- Item 109. How strict were your parents in what they permitted you to do?
- (1) Very restrictive
  - (2) Strict
  - (3) Moderate
  - (4) Liberal or permissive
  - (5) Very liberal or very permissive
- Item 110. How do you evaluate the spiritual influence of your home church upon your life?
- (1) Very strong and positive
  - (2) Quite important
  - (3) So-so, not really good nor bad
  - (4) Not very important nor positive
  - (5) A negative influence or very weak
- Item 111. Average Sunday School attendance of your home church
- (1) Under 100
  - (2) Between 101 and 250
  - (3) Between 251 and 500
  - (4) Between 501 and 750
  - (5) Over 750

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