



1984

The Longitudinal Impact of a Small, Religiously Oriented, Liberal Arts College on the Dogmatism and Selected Value Related Attitudes and Behaviors of Its Graduates

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THE LONGITUDINAL IMPACT OF A SMALL,
RELIGIOUSLY ORIENTED, LIBERAL ARTS
COLLEGE ON THE DOGMATISM
AND SELECTED VALUE RELATED
ATTITUDES AND BEHAVIORS OF
ITS GRADUATES

by

James Hume Barnes III

A Dissertation Submitted to the Faculty of the Graduate
School of Education of Loyola University of Chicago
in Partial Fulfillment of the Requirements for the
Degree of Doctor of Education

January

1984

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THE LONGITUDINAL IMPACT OF A SMALL,
RELIGIOUSLY ORIENTED, LIBERAL ARTS COLLEGE
ON THE DOGMATISM AND SELECTED
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OF ITS GRADUATES

This investigation studies changes occurring over an 11 year period in the dogmatism and selected value related attitudes and behaviors in the graduates of a selective, religiously oriented, liberal arts college. Previous studies conducted in 1969 and 1971 document that dogmatism significantly decreased in the sample group during the years of college attendance and that certain attitudes about the college experience, people of other races, nonmarital sexual intercourse, use of marijuana, and use of alcohol were clearly present in the sample group at the end of the senior year. In the present study the Rokeach Dogmatism Scale, Form E, and the 1969 Wheaton College Senior Questionnaire were administered 11 years after graduation to a stratified random sample of 150 members of the Wheaton College class of 1969. Additional questions were added to the Senior Questionnaire to permit comparisons between respondents based on demographic factors such as income level, home or work environment, and

possession of an advanced degree. Questions were also added related to the assessment of attitudes toward moral issues such as abortion, discrimination, divorce, and consumption of resources.

The data from the current investigation were compared with data from 108 Senior Questionnaires and 105 Rokeach Dogmatism Scale scores obtained from the same sample in the spring of 1969. The Chi Square test was used selectively to analyze the categorical responses on the Senior Questionnaire and the t test was used to selectively analyze the responses on the Dogmatism Scale. Results from the present study indicate that decreases in dogmatism that occurred during college were maintained in the 11 years following college. The 1969 to 1980 comparisons generated by the Senior Questionnaire indicate little change in attitude toward the college. Significant changes are noted in increased religiosity and in more liberal attitudes toward the use of alcohol and tobacco, premarital intercourse, and the role of women. All things considered, the findings indicate a generally positive and persistent impact of the undergraduate experience. They also present a number of challenges to the college in the area of goal attainment, the role of college rules in moral development, and long term product research.

ACKNOWLEDGEMENTS

As this study comes to a joyful conclusion, I am deeply aware that it would not have been accomplished without the help and support of many people. My committee, chaired patiently by Dr. John Wellington, prodded, adjusted, and critiqued in a kind and helpful way. To doctors Wellington, Morgan, and Williams, my heart-felt "Thanks!" is offered.

Without the help of friends and colleagues at both Messiah College and Wheaton College I probably would never have gotten beyond Chapter I. To Jake Thiessen, Dave Brandt, Sam Shellhamer, Milt Loyer, countless student friends who prayed, President D. Ray Hostetter who gave me needed time off, and my Student Development Staff who picked up the slack, my deepest gratitude is given.

Finally, a special debt is owed to my family. Both sets of parents are living examples of moral development at its highest level. My own parents have been a special example and encouragement throughout my life. My wife, Barbara, and my children, Rebecca, James, and Mark, have walked hand-in-hand with me through this long process.

I look forward to spending the rest of life hand-in-hand with them. To them, for the evenings alone, for the prayers at bedtime, and the hugs when needed, my unwavering love.

Gloria in excelsis Deo!

VITA

The author, James Hume Barnes III, is the son of James H. Barnes, Jr., and Priscilla B. Barnes. He was born in New York, New York on February 11, 1947. He and his three younger siblings grew up primarily in the midwest.

His elementary education was obtained in both public and private schools in Georgia, Michigan, and Illinois. He was graduated from Wheaton Academy in 1965. In September, 1965, he entered Wheaton College as a mathematics major. While attending the college, he was active in the Christian Service Council and intercollegiate athletics. He was graduated from Wheaton College in June, 1969, with a Bachelor of Science degree in mathematics and a secondary education teaching certificate. Following his undergraduate work, he enrolled in the Master of Arts program in Guidance and Counseling at the University of Connecticut. While enrolled he worked as a member of the university residence staff. After receiving his degree in June, 1970, he taught at the Black Forest Academy in Germany for one semester prior to entering active duty in the United States Army. He attained the rank of first lieutenant while serving as the Personnel Psychologist at the Armed Forces Examining and Entrance Station at Ft. Hamilton, Brooklyn, New York.

During his tour of duty he was married to Barbara Anne Johnson of Woodstock, Connecticut. The author and his wife have three children.

After receiving his honorable discharge, he returned to the Black Forest Academy where he taught and served as principal for the Junior-Senior High School. After four years in Germany he accepted a position on the student development staff at Wheaton College. In September, 1976, he enrolled in the Doctor of Education program in College Student Personnel at Loyola University of Chicago. Since July, 1980, he has been Vice President for Student Development at Messiah College, Grantham, Pennsylvania. In addition to his administrative responsibilities he has, in conjunction with his wife, taught and conducted seminars in the areas of human sexuality and marriage preparation. He has served on the executive board of the Association for Christians in Student Development. His professional affiliations also include the National Association of Student Personnel Administrators, Phi Delta Kappa, the American College Personnel Association, and the Association for Religious and Value Issues in Counseling.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
VITA	iv
LIST OF TABLES	viii
Chapter	
I. INTRODUCTION	1
II. REVIEW OF THE LITERATURE	20
Change During the College Years	24
Change After the College Years	49
III. METHOD	61
Hypotheses	61
Subjects	67
Procedure	74
IV. RESULTS	87
Dogmatism	92
Senior Questionnaire	96
Ancillary Data	124
V. DISCUSSION	149
Summary	150
Findings	157
Comparisons	173
Implications	182
REFERENCES	200
APPENDIX A	209
APPENDIX B	218
APPENDIX C	222
APPENDIX D	236

APPENDIX E 240
APPENDIX F 243
APPENDIX G 245

LIST OF TABLES

Table	Page
1.	Analysis of the 1969 Student Sample for the Senior Questionnaire 69
2.	Analysis of the 1969 Student Sample for the Rokeach Dogmatism Scale, Form E . . . 70
3.	Analysis of the 1980 Alumni Sample for the Senior Questionnaire and the Rokeach Dogmatism Scale, Form E 73
4.	Summary Table Analysis of Dogmatism Scores Across Majors 88
5.	Summary Table Comparing Responses by Major in the 1969 Senior Sample and the 1980 Alumni Sample on the Rokeach Dogmatism Scale, Form E 90
6.	Summary Table Comparing Responses by Sex in the 1969 Senior Sample and the 1980 Alumni Sample on the Rokeach Dogmatism Scale, Form E 91
7.	A Comparative Analysis of Responses of the 1969 Senior Sample and the 1980 Alumni Sample to the Question: "At What Age Did You Accept Christ as Savior?" 91
8.	A Comparative Summary of Mean Scores for the 1969 Senior Sample and the 1980 Alumni Sample on the Rokeach Dogmatism Scale, Form E 94
9.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of Recommending Attendance at Wheaton College 97
10.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses Evaluating the Opportunity to Develop Social Competence at Wheaton College 97

11.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses Evaluating the Undergraduate Experience in Helping to Integrate Life Into a Christ Centered Pattern	99
12.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses Evaluating Changes in Interest in Spiritual Matters During College	100
13.	Summary Table Comparing 1980 Alumni Perceptions of Growth in Spiritual Interest During College With Growth After College	100
14.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses Evaluating Changes in Interest in Missions During College	102
15.	Summary Table Comparing 1980 Alumni Perceptions of Growth in Interest in Missions During College With Growth After College	102
16.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Frequency of Sunday Morning Church Attendance	103
17.	Summary Table Comparing 1960 Senior Responses With 1980 Alumni Responses on Frequency of Sunday Evening Church Attendance	105
18.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Frequency of Sunday School Attendance	105
19.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Perceptions of Faculty Sensitivity to Students	107
20.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Perceptions of Student Sensitivity to Other Students	107

21.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Perceptions of Student Personnel Deans' Sensitivity to Students	108
22.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Perceptions of the Administration's Sensitivity to Students	108
23.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of Occasional Use of Marijuana	110
24.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of Unmarried Cohabitation With a Member of the Opposite Sex	110
25.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of Adoption of Liberal Attitudes Toward Sex, Drugs, and Alcohol	112
26.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of the Woman's Role in Determining Nonmarital Sexual Intimacy	112
27.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Perceived Benefit of Premarital Sexual Intercourse for Marital Adjustment	113
28.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Frequency of Participation in Dancing Before College With After College	115
29.	Summary Table Comparing 1980 Alumni Responses on Frequency of Participation in Dancing During College With After College	115
30.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Frequency of Participation in Smoking Before College With After College	117

31.	Summary Table Comparing 1980 Alumni Responses on Frequency of Participation in Smoking During College With After College	117
32.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Frequency of Use of Alcohol Before College With After College	118
33.	Summary Table Comparing 1980 Alumni Responses on the Frequency of Use of Alcohol Before College With During College	118
34.	Summary Table Comparing 1971 Alumni Responses With 1980 Alumni Responses on the Frequency of Use of Alcohol	120
35.	Summary Table Comparing 1980 Alumni Responses on the Frequency of Use of Alcohol During College With After College	120
36.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Frequency of Use of Playing Cards Before College With After College	122
37.	Summary Table Comparing 1980 Alumni Responses on the Frequency of Use of Playing Cards During College With After College	122
38.	Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Perceived Changes in Attitudes Toward Other Races	123
39.	1980 Alumni Ranking of Factors Having the Most Impact During the Undergraduate Experience	126
40.	Summary Table Comparing Mean Income Levels of Those Who Tithe With Those Who Do Not Tithe	131

41.	Summary Table Comparing Mean Dogmatism Scores of Those Who Tithe With Those Who Do Not Tithe	131
42.	Summary Table of Analysis of Dogmatism Scores Across Academic Degree	133
43.	Summary Table Comparing Mean Dogmatism Scores on Responses to the Question, "Approximately What Percentage of the Following Groups Would Generally Agree With the Statement of Faith and Standards of Conduct at Wheaton College?"	134
44.	Summary Table Comparing Mean Dogmatism Scores With Frequency of Participation in Alcohol, Tobacco, Social Dancing, and Playing Cards	138
45.	Summary Table Comparing Mean Dogmatism Scores Across Living Environment	140
46.	Summary Table of Factors Used to Predict Dogmatism	141
47.	Summary Table Comparing 1980 Alumni Responses of Self-Descriptive Social/Political Label During College With Current Social/Political Label	144
48.	Summary Table Comparing 1980 Alumni Responses of Self-Descriptive Political Party Preference During College With Current Political Party Preference	144

CHAPTER I

INTRODUCTION

One of the primary goals of the small, religiously oriented, liberal arts college is the inculcation of a specific and lasting value orientation and lifestyle in its students. This is to be accomplished through the careful selection of the student body and faculty, the creation in the classrooms and residences of an atmosphere that leads to critical and thoughtful value development, the incorporation of religious studies and philosophy in the curriculum, and group adherence to specific behavioral and attitudinal guidelines. This carefully developed environment is designed to promote the adoption of certain values, attitudes, and behaviors that will last beyond the college years. Even though the postcollege work environment may be substantially different from the college environment, it is hoped that the college environment will have a long term impact on the student that supercedes the impact of the postcollege work environment.

In a sense, all institutions of higher education promote lasting changes in the lives of their students. The fact that this change occurs has been documented in a

number of sources (Jones, 1938; Newcomb, 1943; Trent and Medsker, 1968, Feldman and Newcomb, 1969; Astin, 1977). However, the type of change sought by the small, religiously oriented, liberal arts college is different in significant ways from the type of change sought by the typical nonreligious college or university. The religiously oriented college in this study classifies itself as evangelical. Some of the distinguishing marks of an evangelical are the belief that a "born again" experience is vital, a commitment to encourage other people to believe in Jesus Christ, and a belief in the absolute authority of the Bible as a guide in faith and living (Gallup, 1982, p. 31). Those in this evangelical subculture are more likely than the general population to be involved in charitable activities, to favor a ban on abortion, to oppose the hiring of homosexuals as teachers in public schools, to follow a strict moral code, to read the Bible regularly, and to attend church at least weekly (Gallup, 1982 p. 33). This group of "highly spiritually committed" individuals tends to be more satisfied with its lot in life, to be more family oriented, to be more tolerant of persons of different races and religions, and to be concerned about the betterment of society (Gallup, 182, p. 4). The moral code prevalent in this subculture often prohibits or discourages the use of beverage alcohol, the use of tobacco, participation in social dancing, or participation

in gambling. The Ten Commandments as well as the Sermon on the Mount are taken as guidelines for daily living. The religiously oriented college attempts to develop values, attitudes, and behaviors that reflect and support the constituent subculture. This subculture contrasts with the broader culture and with the typical postcollege work environment in ways that distinctly reflect its underlying values. In light of this contrast, and in light of the goals of the religiously oriented college in the area of value development, it is legitimate to ask if the value changes which the college seeks to promote do occur, and if they are maintained after college when the work environment may not be as supportive of those values.

The need for research in this area of value development at the small, religiously oriented, liberal arts college is clear for a number of reasons. First, it is important to investigate whether or not the college is achieving its goals in this area of value formation and maintenance. This is important not only for the college to know, but also for prospective students to know. Second, it is important to investigate whether or not the college is making a lasting impact on its students. While it may be possible to demonstrate that students know more when they leave the college than when they came into college, it may be more important to demonstrate that the knowledge gained and the values transmitted have a long term impact on the

student. Third, since this type of college attempts to promote certain types of values that are not a primary focus at other types of colleges, it is important to investigate whether or not these distinctive changes in individual students really occur. This is particularly important in light of increased costs at private institutions and decreased numbers of potential students through the 1980's. If the college cannot empirically establish that it makes a distinct contribution to personal growth and development, its viability may be threatened.

In addition to these reasons for pursuing research in the area of value development at the small, religiously oriented, liberal arts college, there are reasons to pursue the study of dogmatism, a concept which is central to the formation of a belief system. Milton Rokeach, in reviewing the study of authoritarianism and intolerance, attempts to define a concept of authoritarianism and intolerance which is not bound to a particular political system or to a particular historical setting.

In examining the nature of beliefs and disbeliefs and the way they are organized, Rokeach notes that they are not always clearly articulated, but often need to be inferred from actions as well as verbalizations.

The belief system is conceived to represent all the beliefs, sets, expectancies, or hypotheses, conscious or unconscious, that a person at a given time accepts as true of the world he lives in...The disbelief system is composed of a series of subsystems rather than merely a single one, and contains all the disbeliefs, sets, expectancies, conscious and unconscious, that, to one degree or another, a person at a given time rejects as false. (1960, p. 33)

After describing belief and disbelief systems, Rokeach goes on to characterize them as being relatively open or relatively closed. An open belief-disbelief system displays the following characteristics: the disbelief system is relatively low in magnitude by comparison to the belief system, there is communication of parts within and between the belief and disbelief systems, the richness of detail in each system is comparable, the perception of the basic surroundings is friendly, the basic view of authority figures is one in which authority is not absolute, and the systems cover a relatively broad time perspective (1960, pp. 55, 56). In a broad sense, a system of belief is open or closed to the extent that a person can "receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside" (1960, p. 57).

Belief and disbelief systems are important in daily functioning. The way people gather additional knowledge, interact with others, and approach new situations depends,

in part, on the degree of openness in the system. As Rokeach (1960) states

All belief-disbelief systems serve two powerful and conflicting motives at the same time: The need for a cognitive framework to know and to understand and the need to ward off threatening aspects of reality. (p. 67)

Thus, the need to know and the need to defend oneself against a perceived threat jointly determine the extent to which the system is open or closed. "A person will be open insofar as possible and closed insofar as it is necessary" (p. 68).

Thus, Rokeach comes from a study of the nature of belief-disbelief systems to a definition of dogmatism. Dogmatism is defined in terms of closed-mindedness and resistance to change in a total belief system. People who are low in dogmatism have a more open belief-disbelief system and are more open to change than people who are high in dogmatism. It is important to emphasize that the resistance to change is not just in single tasks or beliefs but in a total system of beliefs. On the basis of Rokeach's work in the area of dogmatism more than 120 studies have been carried out in which dogmatism is a key variable (Lindberg, 1971, p. 68).

The need to investigate dogmatism at the religiously oriented, liberal arts college springs from the assumption noted by Keeton and Hilberry (1969) that "no one who

accepts arbitrary limitations on his behavior, or who publicly subscribes to a religious platform, can be well educated and intellectually alive" (p. 21). It is legitimate to ask if the declines in dogmatism that one typically notes during the college years (Katz, 1976 quoted in Pace, 1979, p. 4) apply to the religiously oriented college. According to research reported by Lindberg (1971), significant declines in dogmatism do occur at the college in the present study. However, the maintenance of the decline in dogmatism in the years following college is an area where little research has been done. The question of what happens after graduation to the mean dogmatism scores of a group which has shown a significant decline in dogmatism during the college years has been identified for research in the present study.

As noted by Lindberg (1971), "The depth and persistence of attitude and value change as produced by the college experience have not been adequately researched" (p. 1). Since the religiously oriented liberal arts college notes this as one of its distinctive areas, the need for research at such colleges is important. The need for research on the long term impact of the college is important as well. Research indicates that changes in attitudes and values which occur during college persist in direct relationship to the degree of support found in the postcollege environment (Lindberg, 1971, p. 1). However,

the general postcollege environment for the graduate of the religiously oriented liberal arts college is often in conflict with the environment of the college years. This is demonstrated by the varying value systems noted by Gallup (1982) above and in data reported in this study. For example, in this study 61% of those who work outside the home report that less than 25% of their co-workers generally agree with the statement of faith and standards of conduct to which the college adheres. In addition, 41% of those responding in this study state that less than half of the people with whom they spend their leisure time adhere to the faith statement and standards of the college. Thus, there is an opportunity to investigate whether the changes promoted in the college environment are maintained when the environment is altered. "The central question for education...is how the settings in which people live and work favor or hamper personal development" (Sanford, 1980, p. 201).

The Purpose of This Study

In the long run, the best evaluation of a college education is likely to result from studies of alumni. What are college graduates like five, ten, twenty and thirty years after graduation? How have they been influenced by college experiences?

Few studies have been made in this important area. Most of the empirical studies center on gross sociological factors, such as the income of college graduates, the age at which they marry or the number of children they have. There are also general studies...that assess such factors as the aesthetic values of college graduates, their interests and opinions, and their attitudes toward various aspects of their college careers.

Rare indeed are studies of the same people as students in college and again as alumni. (Freedman in Sanford and Axelrod (eds.), 1979, pp. 129-130)

The overall purpose of the present investigation is to complete the type of study that Freedman suggests is needed. Wheaton College, located in Wheaton, Illinois, is in a suburban setting twenty-five miles west of Chicago. Its student body represents a cross section of conservative, evangelical Protestant churches in the United States. The campus environment is the type that enhances attitude and value development according to criteria identified by Jacob (1957) and Chickering (1969). In a typical year, the students are drawn from more than 45 states and 40 foreign countries. The students are typically above average academically, closely connected to a local church congregation, and consider themselves as "conservative evangelicals". During the college year, all members of the faculty, staff, and student body are required to adhere to a strict standard of behavior known

as the "Statement of Responsibilities" (see Appendix A). In spite of this rather strict code, research indicates that students become significantly less dogmatic during their career at Wheaton (Sprunger, 1969).

According to the Danforth Commission on church related higher education, Wheaton College is best described as an institution with a pervasive interest in religion even though it is not related to a particular religious body (Pattillo and Mackenzie, 1966, p. 19). It ranks high in sending graduates to seminary and to medical school (Pattillo and Mackenzie, 1966, p. 114). The undergraduate student body consists of approximately 2,100 students studying mainly in the liberal arts. Wheaton is considered academically selective and is acknowledged by its peers as a leader among colleges of its type. A primary concern of the college is to integrate faith, living, and learning. The historical position of the college is that it desires to produce an enthusiastic concern for truth, righteousness and beauty that allows faith to be applied to the needs of society. "Academic excellence and evangelical faith and practice are essential to that purpose" (Inform: Bulletin of Wheaton College, 1983, p. 4). The emphasis on academic excellence noted by the Danforth Commission in the early 1960's continues to the present. In a survey of undergraduate sources of doctoral degrees between 1920 and 1973, Wheaton ranked thirteenth when compared to other

undergraduate institutions which do not have doctoral programs (Mitchell, 1976).

Perhaps one of the most helpful descriptions of Wheaton College comes from a study of private colleges funded by the Carnegie Corporation during the 1965-1966 school year (Keeton and Hilberry, 1969) as part of the Carnegie Series on Higher Education. The class of 1969, the focal point of the current study, entered the college as the Carnegie Study began. Of the 12 colleges in the study, Wheaton was selected to represent the conservative, Protestant religious position.

There is a determination on the part of the college to keep this religious position central in the life of the institution, as indicated by Keeton and Hilberry (1969):

The college is determined not to go the way of some other colleges by allowing the religious cast, of first the student body, then of the faculty, and finally of the administration and trustees to be eroded away. Though Wheaton's constituency is interdenominational, there is nothing uncertain about its position. Members of the faculty subscribe annually to a nine-point doctrinal statement, distinguished by its emphasis on the Scriptures "as verbally inspired by God, and inerrant in the original writings, and...of supreme and final authority in faith and life," by its expectation of the "immanent return" of Christ, and by its conviction "that man was created by a direct act of God and not from previously existing forms of life and that all men are descended from the historical Adam and Eve, first parents of the entire human race." (pp. 17, 18)

Although students are not required to sign this statement, all trustees, administrators, and staff sign it in addition to the faculty. All members of the community, including

students, are required to sign and adhere to The Statement of Responsibilities, which describes a life style characterized by obedience to the "Lordship of Christ over all life and thought" (Inform: Bulletin of Wheaton College, 1983, p. 17). In addition, the statement describes certain Biblical principles, college rules, and areas of discretion for the community to follow. At the time of the Carnegie study, the statement prohibited gambling, social dancing, attendance at theaters, the use of playing cards, alcoholic beverages, or tobacco, and membership in secret societies. In spite of these restrictions, Keeton and Hilberry (1969) challenge the

unquestioned assumption that no one who accepts arbitrary limitations on his behavior or who publicly subscribes to a religious platform can be educated or intellectually alive. Wheaton's restrictions on behavior and belief do create strains, but there is little question of Wheaton's academic respectability and vigor. (p. 21)

This system of belief does not appear to be a passive one. Approximately one-half of the student body regularly participates in voluntary service or religious activities such as inner-city tutoring and club work, skid-row ministries in urban Chicago, hospital and convalescent home visitation, mental health center assistance, and traditional church work. During the summer more than 40 students are sent by the college as representatives to assist missionaries working in other cultures or to work as

evangelists in youth hostels throughout Europe. All funds for these programs are raised by the students.

On campus and off, Wheaton lays before its students a landscape of ideas and experiences more various than most of them have seen before. The toppling and rebuilding of convictions, the basic re-examination of religious and intellectual positions essential to these students' growth seems to begin, usually, with course work...There are "no unaskable questions"...Instructors ask students to read and take seriously non-evangelical theologians like Paul Tillich or Karl Barth, and existentialist writers like Camus or Sartre. Some are willing to discuss, without evasion or oversimplification, the problems that persistently trouble students...However they emerge, Wheaton students are obliged to put together belief and conduct in a systematic way. Through a remarkable combination of intellectual stimulation and tenacious opposition (on the part of the President, the trustees, and some faculty) to any departure from Evangelical faith or practice, the college creates discussion as intense, perhaps, as any to be found on American campuses, and as consistently directed to ultimate issues. (Keeton and Hilberry, 1969, pp. 38-40)

While no specific measure of religious attitudes of entering students exists, the vast majority came from a conservative evangelical perspective. Keeton and Hilberry define evangelicalism as the "belief in the Bible as the inspired and inerrant word of God, acceptance of the vicarious atonement of Jesus Christ, and expectation of the Second Coming" (p. 37). These beliefs lead to a concern for personal piety and a way of seeing life from a religious perspective that is uncommon among college students. This, of course, leads to an interesting and spirited exchange of ideas as students discover that conservative evangelicals come in more varieties than had been previously recognized.

A student whose church claimed to have a corner on Biblical truth is confronted by students of other denominations and somewhat different beliefs whose conviction and skill in Biblical exegesis match his own. (Keeton and Hilberry, 1969, p. 38)

In addition to concern about religious commitment, the college has a strong investment in maintaining academic quality. As noted in the Carnegie Study, the median student scores are close to the 600 mark on both the verbal and mathematical sections of the Scholastic Aptitude Test. In addition, 61 percent of the men and 82 percent of the women come from the top tenth of their high school classes. At the end of their college careers, Wheaton students score consistently above the mean on the Graduate Record Examination (Keeton and Hilberry, 1969, p. 21).

In assessing student life, the Carnegie Study finds Wheaton's campus to be a very formal one. Several clearly discernable groups exist on campus and become the focal point for personal interaction and identity. A great deal of structure is subtly imposed on the students by their choice of group identification. This formality appears to be nothing new to the majority of students. According to Keeton and Hilberry (1969), "most of them come from families that imposed a good deal of order on their lives, and they may operate best, for the time being, in a setting where structure is conspicuous" (p. 35). This structure is not without its problems. For some students, at least, the

formalism makes it more difficult to develop healthy male-female relationships. Interaction becomes largely prearranged and stylized. When the sense of urgency to find a mate that many Wheaton students sense during the college years intersects the formal dating atmosphere, excessive anxiety is created for some students (p. 35).

In spite of the handicaps of formality, Keeton and Hilberry (1969) report that

Wheaton's formality does not mean coldness or indifference. On the contrary, formality is associated with unusual friendliness...On the College and University Environment Scale, Wheaton ranks in the 90th percentile...on "propriety," or orderliness of behavior; but also, it ranks at the 96th percentile on "community." Students may feel confined at Wheaton, but they do not feel the anonymity or aimlessness that sometimes besets students on less formal campuses, the feeling that the world is equally indifferent to their presence or absence. (p. 36)

In summary, a picture emerges of Wheaton College and its student body that focuses on religious commitment, intellectual challenge and social formality. While tensions continue to exist as these factors interact in the lives of students, the college continues to be a place where faith, living, and learning come together. While the college may have changed since the Carnegie Study was completed, this description gives a good picture of the forces at work in the lives of the students (who are now alumni) who are the focus of this study. The role of the atmosphere of the college on the key questions of changes in dogmatism and

value related behaviors during the college years is clear. The type of environment in which attitude and value development has been promoted has been identified. The long term results of this type of college experience and environment are described, in part, by this study.

In 1971, Lindberg summarized research that had been done on the class of 1969 at Wheaton College. The focus of Lindberg's study is the difference in adherence to the Statement of Responsibilities and the maintenance of decreased dogmatism from the spring of the senior year to a point 19 months after graduation by selected members of the class of 1969. Lindberg's instruments include the 1969 Wheaton College Senior Questionnaire (Alumni Revision) and the Rokeach Dogmatism Scale, Form E (Rokeach, 1960). Lindberg finds no significant difference in the mean scores on the Dogmatism Scale or the Senior Questionnaire during the almost two year interval between the administration of the instruments during the spring of 1969 by the college and his administration of the instruments to alumni during the winter of 1970-71. Lindberg's findings indicate an initial maintenance of the changes which occurred during college for the immediate postcollege adjustment period.

The present study is designed to investigate the continuing impact of Wheaton College on its graduates. The major focus is on the change or lack of change which occurred during the eleven years following graduation from

college as measured by instruments administered 11 years apart. Comparisons are made between the mean scores obtained in 1969 and the mean scores obtained in 1980 on the Rokeach Dogmatism Scale, Form E and the 1969 Wheaton College Senior Questionnaire (Alumni Revision). Additional information is gathered through analyzing certain responses on the Dogmatism Scale and the Senior Questionnaire according to selected demographic information gathered from the subjects.

In the present study it is hypothesized that no significant difference is evident between the mean dogmatism scores of the sample group when tested in 1969 and when retested in 1980. In examining the results of the Senior Questionnaire it is also hypothesized that no significant differences are evident in the mean responses for the 22 areas of comparison of attitudes and value related behaviors between the 1969 administration of the Senior Questionnaire and the 1980 readministration of the Senior Questionnaire.

The results of this study are intended to offer potentially important data to the group of small, religiously oriented, liberal arts colleges of which Wheaton College is a part. The data give information about the adjustment of graduates from a college with a carefully structured, religiously oriented environment with specific lifestyle expectations to a postcollege environment more

characteristically faced by the broad cross-section of graduates from other types of colleges. With the dual pressures of increased competition for students and increased costs, the data should provide information to aid in the evaluation of the persistence of values encouraged during the college years. If the college experience at the religiously oriented institution does have a lasting impact on individual values and behaviors, then students who wish to be impacted in this way may feel that the extra costs of attending these institutions are worthwhile.

In evaluating the present study, a number of strengths and a number of limitations are noted. That this study provides longitudinal comparisons in the areas of dogmatism and specific value related attitudes and behaviors is significant. As a systematic replication of a previous study, the comparisons generated here provide potentially beneficial information. However, the fact that the present investigation is a systematic replication of a previous study is also a weakness. Whatever limitations or methodological problems exist in the original study also exist in the current study. The number of null hypotheses and the number of statistical tests performed raise questions about the independence of the groups being compared and about the possibility of obtaining spurious results by chance. The wording in certain questions also raises definitional problems. It is not clear that the

questions were understood in the same way by each respondent, particularly on the Senior Questionnaire. Finally, a concern exists about the equivalency of the 1969 and 1980 subject groups. Although the two groups compare favorably by major, sex, and timing in the "born again" experience (see Chapter IV), other key differences may exist which may effect the interpretation of the data. Since individual data from 1969 were not preserved and since only limited demographic data were gathered in 1969, more extensive comparisons to assure group equivalency are not possible. With these potential strengths and limitations in mind, the data reported in Chapter IV may be evaluated more appropriately.

CHAPTER II

REVIEW OF THE LITERATURE

The major research on changes in dogmatism and value related attitudes in American college students is reviewed in two major sections consisting of three parallel subsections. The first part of this chapter focuses on change during the college years, while the second part focuses on change after the college years. Each major section is divided to focus on studies that are comprehensive in nature, studies that focus more narrowly on changes in value related attitudes and behaviors, and studies that focus on dogmatism and related concepts. While this historical review builds on Lindberg's (1971) analysis for the period prior to 1971, it cites material not covered by Lindberg prior to 1971, in addition to significant findings since 1970.

While some of the early studies have significant methodological flaws, a vast body of data has been developed to describe the changes which occur during the college years. Landmark studies by Feldman and Newcomb (1969a, 1969b); Katz (1968); Astin (1977); Pace (1941, 1979); and Webster, Freedman, and Heist (1979) chronicle the process of maturation and learning that occurs for most

collegians. Other studies by Jones (1938), Arsenian (1943), Newcomb (1943), Jacob (1957), Sanford (1962), Trent and Medsker (1968), and Chickering (1969) suggest the direction of value change during the college years and factors in the college environment that relate to that change. In the final part of the first section a number of studies are cited using Rokeach's (1960) Dogmatism Scale. The studies vary widely from research conducted at Santa Clara (Foster, Stanek, and Krossowski, 1961), a small Catholic College, to research conducted at the Michigan State University (Lehman and Dressel, 1962, 1963).

Studies on change after college are more limited in number. Comprehensive analyses by Astin (1977) and Pace (1979) summarize results from a number of different studies, some of which have thousands of subjects at hundreds of institutions. As is noted below, a number of significant trends can be identified in the years following graduation. Studies focusing more narrowly on value related attitudes and behaviors have been done by Bugelski and Lester (1940), Nelson (1954), Hoge and Bender (1974), Newcomb (1967), and Freedman and Bereiter (1963). The studies focusing on postcollege change in dogmatism and related concepts are extremely limited. Lindberg's (1971) study offers the most helpful comparisons.

Since the concept of dogmatism was developed by Rokeach, a number of studies have been done which link it

to other concepts. Vacchiano, Strauss, and Hochman (1969) analyzed 120 studies using dogmatism as a variable and conclude that,

dogmatism has been a fruitful concept, particularly as a generalized theory of authoritarianism. Research has demonstrated, through studies of dependency on authority and political ideology, that this authoritarianism is basically independent of ideological content. (p. 268)

Lindberg (1971) cites several studies which indicate that the Dogmatism Scale is a measure of general authoritarianism, rather than a measure of right authoritarianism as measured by the California F Scale (p. 68).

One of the important studies conducted in this area was done by Kerlinger and Rokeach (1966) on 1,239 students at three universities. The study attempts to determine if authoritarianism and dogmatism are distinct or related concepts. After analyzing the data, Kerlinger and Rokeach conclude:

Fascistic authoritarianism and dogmatism, as measured, both seem to be parts of one underlying unity and, at the same time, discriminate entities...There is little doubt...that the F and D Scales are related phenomenon with, probably, a common core of authoritarianism. Within this broad unity there are also distinguishable subunities, syndromes, or factors...The evidence of this study shows that the F and D Scales are factorally discriminable, even though both are measures of authoritarianism. (p. 396)

The findings of this study clearly suggest that dogmatism,

as conceived by Rokeach and as measured by the Dogmatism Scale, deals with the structure of belief systems rather than the content of belief systems.

A second important study deals with the relationship between dogmatism and leftist bias. Simons and Berkowitz (1969), in comparing dogmatism scores of self-proclaimed liberals and self-proclaimed conservatives, conclude that the Dogmatism Scale is free of leftist bias (p. 463).

Lindberg (1971) reviews a number of studies dealing with dogmatism and personality patterns. In studies involving at least eight personality tests and the Dogmatism Scale, Lindberg notes that personality, self-concept, personal adjustment, parent-child relationships, and socioeconomic status are related to dogmatism (p. 71).

In addition to personality variables and dogmatism, Lindberg notes studies dealing with the relationship between belief acquisition, learning and academic performance, and dogmatism. While some contradictory results are noted, the general trend of the research supports the idea that high dogmatism scores are positively correlated with difficulty in learning new beliefs (p. 72).

Change During the College Years

Change during the college years has been extensively investigated. The findings presented here are summarized in three categories: comprehensive studies, studies focusing on value related attitudes and behaviors, and studies focusing on dogmatism and related concepts.

Comprehensive Studies. Corey (1936) summarizes collegiate research prior to 1936. Studies dealing with religion, with attitudes toward the church, pacifism, racism, the deity, and with changes in degree of liberality are all criticized for methodological limitations. Reliance on cross-sectional comparisons among classes produces distorted results based on the natural attrition from freshman year to senior year. Corey states that, "The popularity of the method of measuring changes in student attitudes by administering attitude scales to individuals with different degrees of academic training lies, very likely, in its convenience" (p. 329). He goes on to call for longitudinal studies that will provide a more accurate picture of the impact of college on students.

The four decades of research following Corey's call for better research are summarized by Feldman and Newcomb (1969a, 1969b). They review and categorize more than 1500 studies dealing with the impact of college on students. Feldman and Newcomb (1969a) summarize their findings with the following statements:

1. Freshman to senior changes in several characteristics have been occurring with considerable uniformity in most American colleges and universities in recent decades. (Among the typical changes are decreases in authoritarianism, dogmatism, prejudice, and conservatism toward social issues, as well as increases in independence, self-confidence, and sensitivity to aesthetic experiences). (p. 326)

2. The degree and nature of different colleges' impacts vary with their student inputs--that is, entering students' characteristics, which differ among types of colleges in patterned ways. (p. 327)

3. Within the same college, experiences associated with the pursuit of different academic majors typically have effects over and beyond those that can be accounted for by initial selection into those major fields. (p. 329)

4. The maintenance of existing values or attitudes which, apart from certain kinds of college experience, might have been weakened or reversed, is an important kind of impact. (p. 329)

5. Though faculty members are often individually influential, particularly in respect to career decisions, college faculties do not appear to be responsible for campus wide impact, except in settings where the influence of student peers and faculty complement and reinforce one another. (p. 330)

6. The conditions for campus wide impacts appear to have been provided most frequently in small, residential, four year colleges. (p. 331)

7. College impacts are conditioned by the background and personality of the student. (p. 332)

8. Attitudes held by students on leaving college tend to persist thereafter, particularly as a consequence of living in postcollege environments that support those attitudes. (p. 332)

9. Whatever the characteristics of an individual that selectively propel him toward particular educational settings--(they) are apt to be reinforced and extended by the experiences incurred in those selected settings. (p. 333)

A second comprehensive review of research was done by Katz (1968). On the basis of his own research and on the basis of the research of others, he notes nine typical directions of change during the college years:

(1) authoritarianism declines; (2) autonomy grows; (3) self-esteem increases; (4) the capacity for relatedness becomes enlarged; (5) greater political sophistication is shown; (6) the conscience is humanized; (7) impulses are expressed more freely; (8) esthetic capacity grows; and finally, (9) students have a broader grasp of theoretical issues. (in Pace, 1979, p. 4)

These findings appear to be supported by cross-sectional surveys, longitudinal studies, and interview case studies (Pace, 1979, p. 4).

In 1966, the Cooperative Institutional Research Program was launched under the direction of Alexander Astin. Longitudinal data was gathered from over 200,000 students at over 300 institutions of higher education. The data from the first ten years of study is summarized by Astin (1977) in seven major areas: student change during college, differences in change, impact of student involvement, impact of academic involvement, impact of major fields, impact of different types of colleges, and patterns of student development.

Astin (1977, p. 212) notes that students typically develop a more positive self-image; more liberal political views and attitudes toward social issues; less religiousness and altruism; and reduced interest in athletics, business, music, and status. They show a decline in religious behavior and an increase in hedonistic behavior. Some of these changes appear to be due to maturational factors (decreased need for status and reduced

interest in music and athletics), while others appear to be related to the impact of attending college.

Astin notes that not all students change the same way and that sex, race, ability, and age differentiate, in part, the direction of change. Colleges do not reduce many of the stereotypic differences between the sexes except in the area of liberalism, where men and women converge (1977, p. 216). Thus, Astin notes that the typical curriculum and programs tend to preserve the "stereotypic differences between men and women in behavior, personality, aspirations, and achievement" (p. 216).

In the area of ability, differences at the point of entry tend to persist or expand with time.

High ability students are more politically liberal, substantially less religious, and have much higher aspirations than middle or low ability students at the time of the college entry; these differences become even greater during college. (pp. 216-217)

When race is considered, black students become more liberal politically, are more likely to abandon traditional religious affiliation, show greater increases in self-esteem, and are more likely to strengthen their altruistic tendencies than are white students (p. 217).

In the matter of age, younger students are more likely than older students to abandon traditional religious beliefs and to increase hedonistic tendencies during college (p. 218).

In addition to these factors, the degree of student involvement is a key factor in individual change. Factors such as place of residence, participation in an honors program, participation in undergraduate research, membership in social fraternity or sorority, working hard on studies, interacting with faculty members, involvement with athletic activities or student government, and verbal aggressiveness seem to impact the student in ways that cannot be attributed simply to maturation (p. 220).

The degree of academic achievement is another factor which differentiates the impact of the college among students. Those who show higher academic achievement show greater increases in intellectual self-esteem, smaller increases in hedonism, persistence in college and success in implementing career goals (p. 225).

The impact of a student's major field of study appears to influence a number of things. Starting salaries, political liberalism, and undergraduate grades are among the things typically related to a choice of major. However, the choice of major also affects increases in self-esteem, altruism, religious apostasy, chances of pursuing an advanced degree, and the prospects of attaining a career objective. (p. 226).

Astin also notes the impact of the type of college on the student. Selectivity, size, type of control, sexual makeup, number of years in the curriculum, religiosity,

racial makeup, and geographic location are among the factors influencing the direction of personal development (p. 227).

In summary, Astin notes patterns of student involvement and the typical outcomes in the lives of students who select those patterns. The first pattern of student involvement is the pattern of maximum interpersonal involvement. Students in this pattern typically major in the humanities or social sciences, become active in student government or other organizations, and become politically active during times of campus unrest. Students who choose this pattern of involvement typically show larger personality and behavioral changes than any other group of students. Astin notes that they become more liberal politically, more hedonistic, less religious, less interested in business, and more interested in music and art. They typically have stronger altruistic commitments as well as stronger needs for status (p. 240).

A second pattern is represented by the students who are highly involved academically. The degree of personal and behavioral change is limited due to isolation from peers. Astin notes that one of the most pronounced effects of high academic involvement is a substantial reduction of hedonism (p. 240).

A third pattern of development is noted for those who choose high athletic involvement. Just as high academic

involvement results in a degree of isolation from the main peer group, high athletic involvement results in isolation, although not to the same extent. The result is greater personality and behavior change than the academically involved student, but less change than the interpersonally involved student. Students in this category show moderate increases in liberalism, moderate decreases in business interests, and mixed changes in hedonistic tendencies (p. 240).

All three patterns of involvement have a positive impact on the chances of completing college, implementing career objectives and being satisfied with the undergraduate experience (p. 241). Just the opposite is the case for the uninvolved student.

Another comprehensive study was conducted by C. Robert Pace. Pace has had a 40 year personal commitment to research on college populations going back to studies conducted on college alumni at the University of Minnesota (Pace 1941). In Measuring Outcomes of College (1979), Pace attempts to summarize some 50 years of findings of college research, focusing primarily on the results of standardized testing and descriptive information about changes in students during college. The results of Pace's (1979) summary are not surprising.

During the college years, students learn a lot. Sophomores know more than freshmen. Seniors know more than sophomores. What they know is related to what they

study and how much they have studied it. They know more about subjects that are closely related to their major field than about subjects less closely related to it. Nevertheless, their knowledge tends to increase from freshman to senior year in all subjects, except highly specialized ones...moreover, from some of these achievement test studies, we know that comparisons of groups of students at different levels (cross-sectional studies) produce conclusions similar to those from comparisons of the same group at two points in time (longitudinal studies). (pp. 36-37)

Pace's initial summary information focuses most clearly on academic achievement. He documents his conclusions with the Pennsylvania Study (Learned and Wood, 1938), the Tests of General Education sponsored by the Carnegie Foundation in the 1940's, the Graduate Record Examination's Area Tests and Advanced Tests in the 1950's and 1960's, the College Board's College Level Examination Program in the 1960's, and the Undergraduate Assessment Program developed by the Educational Testing Service in the 1970's. Pace also collected data on college alumni, which will be summarized later in this chapter.

The final comprehensive study to be noted was done by Webster, Freedman and Heist (1979). They observe that research during the past three decades shows that, "college students have changed toward greater liberalism in their political, social and religious outlooks" (p. 122). In addition, their review of the research indicates an increase in social maturity as shown through declines in authoritarianism, compulsiveness, rigidity, punitiveness, submissiveness, conventionalism, cynicism,

anti-intellectualism, and emotional suppression (p. 124). Another change from freshman to senior year is increased impulse expression. This shows itself in increased readiness to express impulses, to seek gratification of them, and to act autonomously (p. 124). Other changes were typically noted in increased personal flexibility, decreased judgmentalism related to people, increased judgmentalism related to institutional authority, decreased conformity, decreased passivity, and increased realism and maturity in personal interests (pp. 124-125).

In summarizing these comprehensive studies a number of relevant trends are noted. Significant change does occur during the college years and at least part of it is attributable to the college experience. Although maturation is a factor for all individuals in the typical college age group, those who go to college tend to change in ways that are different from the way those who do not go to college change. Although there are individual variations, students generally become more independent, more self-confident, more knowledgeable, more emotionally stable, more able to live with ambiguity, more able to develop interpersonal relationships, and more sure of personal values. While different majors, different residential environments, different involvement patterns, and different types of colleges all modify the degree and direction of impact, it is clear that the college years make a lasting impact on

virtually all students.

Studies Focusing on Value Related Attitudes and Behaviors. A number of studies have focused more narrowly on changes occurring in students during the college years. This subsection reviews a number of studies that focus on changes in value related attitudes and behaviors.

One of the earliest published longitudinal studies was done by Vernon Jones (1938) at Clark University. The entire freshman classes of 1930 and 1931 were tested with a five scale attitude test designed by Thurstone. The test results indicate a position for each student on a liberal-conservative continuum on attitudes toward war, race, religion, and the church. After four years, 77 of the original 104 students were retested. Attitudes toward war, religion, and the church became more liberal at a statistically significant level. Attitudes toward race also became more liberal, although the change was not significant statistically (p. 21).

One of the most frequently used instruments in studying value change is the Allport-Vernon or revised Allport-Vernon-Lindsey Study of Values. One of the first longitudinal studies using this instrument was conducted by Arsenian (1943). The freshman classes entering a New England men's college between 1938 and 1940 completed the instrument. Those who remained and graduated in four years were readministered the test. Arsenian reports



statistically significant changes from the freshman to the senior years that reflect the values stressed in the college environment rather than the values stressed in the culture at large (p. 347).

Feldman and Newcomb (1969a, 1969b) cite a number of studies using the Study of Values. Six of the studies are longitudinal. Each demonstrates some consistent change from the freshman year to later years. Studies were conducted by Thompson at Macalester College, Huntley at Union College, Heath at Haverford College, Burgemeister at Barnard College, Klingelhofer at Sacramento State College, and Telford and Plant at six California two year colleges (1969b, p. 3). Two significant changes appear to occur consistently: aesthetic values increase in importance and religious values decrease in importance from the freshman year onward. Other changes are influenced more by the major field of study. Economic values tend to decrease slightly in importance while social values tend to increase slightly in importance. Theoretical and political values change inconsistently (1969a, p. 8). In summary, Feldman and Newcomb state, "Students tend to change from the 'traditional' values of morality and achievement toward the moral relativism and 'existentialist' emphasis of the here-and-now" (1969a, p. 19).

A landmark study dealing with value and attitude change during college was conducted under the direction of

T. M. Newcomb (1943) at Bennington College. The college was established in 1932 with an experimental philosophy of education, which was characterized by a strong community atmosphere and a pressure to face relevant social issues. Its 250 member female student body consisted of bright, upper-middle and upper class students from the east coast. The families were politically and socially more conservative than the faculty (Lindberg, 1971, p. 20). Newcomb conducted a longitudinal study from 1935 to 1939 using the Political and Economic Progressivism questionnaire to determine changes in attitudes toward public relief, labor unions, and other social issues.

After extensive analysis, Newcomb (1943) concludes:

Bennington students show a significant change in social attitudes...between freshman and senior years in college. The change may be described as being from more to less conservatism.

Attitude change was only slightly related to courses of study pursued in college. The important influences making for attitude change were clearly of a community wide rather than of an academic major sort, and for a given individual could be predicted from better information concerning community relationships than from the area of major work. (p. 148)

Another significant study was conducted under the direction of Nevitt Sanford (1956, 1962) at Vassar College from 1952 to 1958. At the time of the study Vassar was a women's liberal arts college with 1400 students, 58 percent of whom had attended private secondary schools and 65 percent of whom came from the Middle Atlantic or New

England states.

Each year from 1952-1956 for the freshman class and from 1953-1956 for the senior class, a battery of tests was administered consisting of selected personality schedules, an ethnocentrism scale, an authoritarian scale, an adjective checklist, and a drawing completion test.

Lindberg (1971) summarizes the results as follows:

The "Vassar Studies" indicated that freshman to senior attitudinal differences had taken place...Seniors possessed more of the following qualities: freedom from compulsiveness, flexibility and tolerance for ambiguity, critical attitudes towards authority, mature interests, non-conformity, rejection of traditional feminine roles, and realism. (p. 24)

In addition to the instruments used, interviews were conducted with individual students to validate the results of the testing. Mervin Freedman analyzed the findings of the interviews and concludes:

The prime concern for the majority of new freshman was not academic problems but, instead, acceptance by the peer group. The sophomore and junior years were evaluated as good adjustments. However, the senior year was perceived as one of toil and upset. Many seniors saw graduation as a traumatic adjustment away from the emotional support of fellow students and into a society's environment that had different values and orientations. (Lindberg, 1971, p. 25)

A key study in the field of research into value and attitude change in college students is the Jacob Report (1957). Jacob began to investigate the impact on the values of students of the social science courses taught as part of

the general education curriculum. As the study progressed, Jacob determined that the focus of the study had to be broadened to include the impact of the instructor, the method of teaching, the climate of the institution, and the personality of the student in addition to course content. After gathering and analyzing the data, Jacob (1957) concludes, "The findings were for the most part shockingly, but inescapably negative, although, in part, significantly positive" (p. viii).

Jacob's profile of typical American college students presents a picture of a contradictory and self-centered group. They are content in their day-to-day existence and confident that they control their own destiny. They look out for themselves and expect others to do the same. A third characteristic is tolerance of diversity. Although they tend to conform to the status quo, they neither criticize nor make efforts to help those who did not. Students value traditional values of sincerity, honesty, and loyalty, although they do not criticize those who do not hold those virtues. Students express a need for religion, but do not act as if religion is important in the decision making process. In addition, Jacob finds that students are dutifully responsive toward government, contradictory in their attitudes toward international affairs, and think highly of college in general and of their own college in particular. Although these values are

not the unanimous choice of American college students, Jacob (1957) finds them characteristic of 75 to 80 percent of the students (pp. 1-3).

After developing a profile of values for the typical college student, Jacob summarizes the impact of the college experience on student values. He concludes that college does not liberalize students as much as it socializes them. Students become more homogeneous rather than more diverse as the result of four years of college. According to Jacob's (1957) research,

The main overall effect of higher education upon student values is to bring about general acceptance of a body of standards and attitudes characteristic of college-bred men and women in the American community. (p. 4)

This homogenizing effect on values appears to be true regardless of the curriculum pursued, the quality of the instruction, or the method of instruction (pp. 5, 7, 8). Jacob (1957) concludes:

The college student is not a front runner in a broad movement of values within the culture at large. If anything, the typical college graduate is a cultural rubber stamp for the social heritage as it stands rather than the instigator of new patterns of thought and new standards of conduct. (p. 38)

Although Jacob finds little variation from this pessimistic description of the impact of college on students he does find that some institutions have an impact on students that is "strikingly different" from the

national pattern. While these institutions are quite varied, they have in common a high level of what is expected of their students. Jacob (1957) notes that what is expected is not the same.

It may be outstanding intellectual initiative and drive, profound respect for the dignity and worth of work, world-mindedness or just open-mindedness, a sense of community responsibility or of social justice, a dedication to humanitarian service, or religious faithfulness. Everyone, however, is conscious of the mission to which the institution stands dedicated. Where there is such a unity and vigor of expectation, students seem drawn to live up to the college standard. (p. 12)

Jacob observes that this type of atmosphere appears most frequently at smaller, private colleges, although it occasionally happens within a division of a larger institution. The result is that a "community of values" is created which impacts students not only during college but also in the years after college.

Jacob's report stirred further investigation due to its rather pessimistic conclusions. One of the important post-Jacob studies was conducted by Trent and Medsker (1968) using a population of 10,000 high school graduates. The study was started in 1959, when data was collected from high school seniors. In 1963, the original subjects were retested with a response rate of nearly 50 percent. Trent and Medsker compared those who were employed immediately after high school with those who entered and persisted at college.

Trent and Medsker note that exposure to higher education matters in a number of important areas. Four years after finishing high school, those who persisted in college show greater intellectual curiosity, more autonomous thinking styles, greater tolerance of ambiguity, less authoritarianism, and greater receptivity and responsiveness to a wider variety of environments when compared to their peers who did not attend college (1968, p. x).

In addition to the difference between the group of those who persisted in college for four years and those who did not attend college at all, Trent and Medsker (1968) observe significant differences between those who attended college for four years and those who attended for less than four years. They note that,

If persistence in college is related to personality development, then it may be argued that the longer the exposure to college, the more change in attitudes and values is fostered, or at least facilitated, by the college. (p. 154)

Trent and Medsker (1968) conclude that:

What most distinguished the "experimental" group of college persisters from the "control" groups of withdrawals, and especially nonattenders, was the development of autonomy. Definitely, there was a strong relationship between entrance to and length of stay in college and the growth of open-minded, flexible, and autonomous dispositions. (p. 176)

In spite of the mass of data gathered by Trent and

Medsker (1968) they are unable to answer an important question.

But finally, for how long does it matter? Of all the questions brought into focus by Beyond High School, this one is perhaps most crucial. To what extent are the changes brought about by higher education durable and lifelong, and to what extent do they simply reflect accommodations to the press and demands of the academic environment? We don't know. (p. xiii)

A final significant study to be noted in this section focuses on the impact of different types of colleges on students during the undergraduate years. From 1965 to 1969, Arthur Chickering headed the Project on Student Development in Small Colleges which analyzed institutional characteristics, student characteristics, attrition, and student development at 13 small colleges. The colleges ranged from relatively conservative religious schools to those that were relatively liberal in their value orientation. Students entering the colleges in September 1965 were given a battery of tests and were retested at the end of their freshman, sophomore, and senior years. Chickering's (1971) findings indicate that the direction of change and amount of change are similar at varied institutions. Chickering also notes that a number of factors can combine in a college environment to accelerate or retard development in the individual student. Clear and consistent objectives, institutional size, curriculum and methods of instruction, residence hall arrangements,

faculty and administration interaction with students, and the student culture, combine to influence individual development (1969, p. 144).

In summarizing the studies focusing on value change during the college years, a number of trends are clear. Most studies confirm a liberalizing trend during the college years that affects attitudes toward religion, other cultures, authority figures, and sex roles. The pressure of the college environment, particularly in the area of peer contact, is significant. Certain colleges seem to have a greater impact than others. The recognition of an appreciation for diversity is a generally consistent trend which for some progresses into a hedonistic individualism. Research indicates that those who attend college change more than peers who don't attend and that the longer the student attends the greater the degree of change particularly in the development of autonomy.

Studies Focusing on Dogmatism and Related Concepts.

The general concept of dogmatism was developed by Milton Rokeach as a refinement of the more general concept of authoritarianism. Rokeach attempted to find a culture and history free interpretation of this concept which is related to open-mindedness. In The Open and Closed Mind, Rokeach (1960) details his study. The study begins with the theory and measurement of belief systems and proceeds through an analysis of how and why systems of belief are

open and closed for different individuals, the development and construction of the Dogmatism Scale and the Opinionation Scale, practical research applications, and examples of the use of these scales and the theories behind them.

One of the first important studies using Rokeach's concept of dogmatism was conducted at Santa Clara University, a small, value oriented Catholic college (Foster, Stanek, and Krossowski 1961). At the time of the study, 94 percent of the students described themselves as Roman Catholic and 70 percent of the students had attended Catholic secondary schools. There was a strong requirement in religion and philosophy and these courses were generally taught by Jesuits with typically Thomistic philosophy. The research, conducted by six professors was designed, in part, to determine the differences in impact between Catholic education and secular education on college students.

In 1959, the entire male undergraduate population was tested using the Rokeach Dogmatism Scale, the Gough revision of the California F scale, the California E scale, and a revision of the Political and Economic Conservatism Scale. In 1961, the 1959 freshman, sophomore, and junior classes were retested, allowing not only cross-sectional comparisons, but also some longitudinal comparisons. In addition, the 1960 senior and freshman classes were

retested eight months after their first test.

A cross-sectional comparison of the data shows that dogmatism declined significantly with each year in college (Foster, 1967, p. 18). The findings on ethnocentrism yield mixed results. Cross-sectional comparisons of the data show a general decline in ethnocentrism, although longitudinal studies on the entering freshman of 1960 show an insignificant increase during the year. In the area of political and economic conservatism, significant declines are shown on both longitudinal and cross-sectional comparisons (Lindberg, 1971 pp. 31-32).

A similar was conducted by Lehman and Dressel (1962, 1963) at the Michigan State University. The instruments used included the Inventory of Beliefs, Form I, to measure stereotypic beliefs; Rokeach's Dogmatism Scale, Form E, to measure general authoritarianism; and Prince's Differential Values Inventory to measure traditional values. The tests were initially given to 2,973 freshmen in the fall of 1958. Follow-up testing occurred after the freshman year and during the senior year.

Lehman and Dressel conclude that men and women are less stereotypic in their beliefs as seniors than they were as freshmen. They become less rigid, less authoritarian, less prejudiced, and more flexible through their four years in college. In the area of dogmatism, males and females are less dogmatic as seniors than they were as freshmen.

However, when Lehman and Dressel compare seniors with those who did not complete four years at Michigan State, they find no significant relationship between the amount of college education and changes in dogmatism (Lindberg, 1971, p. 33). Lehman and Dressel (1963) conclude:

It is clear that significant changes in attitudes and values do occur during college years. However, we have been unable to single out of college experiences one factor to explain changes in attitudes and values. These changes may be a function of the person's maturity or personality, a function of the times we live in, the direct result of college experience, or a combination of one or more such factors. (p. 182)

Walter Plant (1965) attempted to investigate the factors which influence changes in student ethnocentrism, authoritarianism, and dogmatism during college. In 1958, he administered a 100 question prematriculation test to 2,397 incoming freshmen at San Jose State College. The questionnaire included items from the California Ethnocentrism Scale, the Gough revision of the F Scale, and the Rokeach Dogmatism Scale, Form E. In 1960 and 1962, Plant conducted a two year and a four year follow-up study using the same instrument. He received 1,452 usable returns in 1960 and 1,058 usable returns in 1962, which he analyzed by sex, time sequence, and length of college attendance. In analyzing his data Plant discovered that some individuals who had taken the prematriculation test in 1958 had never actually matriculated at any college. Thus, he had a

control group of individuals with no college experience to compare with individuals who had attended college for up to four years.

The results of his studies are clear. The 1958 to 1960 comparison shows that ethnocentrism, authoritarianism, and dogmatism declined for those who had originally applied for the college, regardless of the amount of time spent in college. Even those who did not attend college show significant declines over the two year period. However, the degree of change was affected by the length of college attendance. The 1958 to 1962 comparisons yield similar results. All groups show declines in ethnocentrism, authoritarianism, and dogmatism, including the group of nonattenders. In comparing the degree of change from 1958 to 1960 with the degree of change from 1960 to 1962, Plant concludes that the most change took place during the first two years of college attendance. In conclusion, Plant (1965) states:

We call into question the assertion of college impact on authoritarianism and intolerance. A defensible position seems to be one that asserts that the collegiate experience facilitates authoritarian and intolerance reduction, a change that seems to be underway in young adults who aspire to college irrespective of whether or not they go to college. (p. 271)

A final study to be noted was conducted at Wheaton College and was published by Lindberg (1971). A battery of

tests, including the Rokeach Dogmatism Scale, Form E, was given to all members of the class of 1969 in the fall of 1965 as part of their orientation process to college. The Office of Institutional Research readministered the Dogmatism Scale to 269 members of the class of 1969 during their senior year. Of the group of seniors, 143 students could be identified as having taken the Dogmatism Scale as freshmen. Lindberg analyzed the group means of those 143 students and concludes that there had been a significant decrease in dogmatism among that group during their four years at the college even though the students were attending a "Christian oriented liberal arts college" and came from "conservative, evangelical Protestant backgrounds" (Lindberg, 1971, p. 91).

In summary, the research on dogmatism and related concepts indicates a general decline in dogmatism, authoritarianism and ethnocentrism throughout the college years. "Nearly without exception, the studies show seniors to be less authoritarian, less dogmatic, less ethnocentric, and less prejudiced than freshman" (Feldman and Newcomb, 1969a, p. 31). As Plant's research suggests, however, these changes are not limited to those who attend college, but are characteristic of the age group. College does appear to have a facilitating affect on this process of change since the changes for college students appear to be more reliable

and larger than for those who do not attend college. Thus, the college experience appears to accelerate the changes which normally occur during this time period.

Change After the College Years

Change after the college years has been investigated. The findings are presented in three categories: comprehensive studies, studies focusing on value related attitudes and behaviors, and studies focusing on dogmatism and related concepts. In contrast to the number of studies on change during the college years, it is noted that relatively little research has been done which focuses on the lasting impact of the changes which occur during college or the changes which occur during the postcollege years. The majority of research dealing with college alumni has focused on sociological factors such as income, age of marriage, number of children, and similar variables (Lindberg, 1971, p. 43). As suggested by Feldman and Newcomb (1969a),

Neither educators nor the public at large would justify the college experience in terms of the college years alone. College is supposed to do something to students, and that something refers primarily to consequences that make a difference in later years. There is, therefore, a very special irony in the fact that few studies of postcollege persistence of such effects, especially those justifying confident conclusions, have been reported. (p. 308)

Additional support for the need for increased studies of postcollege changes comes from Mervin Freedman (1962).

What is needed is a sufficient amount of empirical information to enable us to place the experiences of college with a larger theoretical or systematic framework. We need to know which of the changes that take place are relatively transient and which become

relatively enduring parts of the character or personality. (p. 853)

Comprehensive Studies. In Astin's (1977) summary of the changes which occur during college, he also discusses the permanence of those changes. He notes that there are forces which act to diminish the impact of college as well as those which act to preserve or strengthen the impact over longer periods of time. "Factors limiting the permanence of college impact include such phenomena as forgetting and competition from rival environmental influences" (p. 189). In contrast to the factors which tend to diminish the impact of college, Astin notes that the "channelling" effect of college, or the steering of students into unique career paths and living patterns, tends to extend the impact of college. In addition, not having to deal with the pressures of trying to succeed without college credentials also insulates the graduate from some of the experiences which might lessen college impact (p. 189).

Although Astin is able to articulate some of the forces which affect the permanence of college effects, he states that it is difficult to identify which effects are most likely to prevail due to "conceptual problems, methodological issues, and...limitations in available data" (p. 190). Nevertheless, Astin identifies at least five major research groups from which conclusions about the

lasting impact of college can be drawn. The groups include the National Bureau of Economic Research-Thorndike data (a large sample of white males tested in 1942 and 1968), the Cooperative Institutional Research Program (1961 entering freshmen who were followed up in 1971), the National Opinion Research Center sample (college graduates of 1961 who were followed up in 1968), the Pace Alumni Survey (non-longitudinal, simultaneous surveys of the class of 1970 and alumni of 1950 from diverse institutions), and the Campbell data (based on research conducted at the University of Minnesota on the classes entering in 1933 and 1936 who were followed up in 1962).

In examining the various studies, Astin (1977) notes the following trends:

1. Increases in liberalism during college are likely to be maintained after college (p. 195).
2. Declines in religious attitudes and beliefs may continue or may be reversed during the postcollege years. The data from various studies is contradictory (p. 197).
3. Women who complete college are more likely to marry than those who drop out and are likely to have fewer children than those who don't complete college (p. 198).
4. Increases in hedonistic behavior during college are likely to decline after college (p. 199).
5. Increases in competency and knowledge achieved during college are maintained after college (p. 200).

6. Changes in career interests during the undergraduate years continue to change in the same direction during the years after college (p. 203).

7. Increases in earning power generally occur for the college graduate when compared to the noncollege graduate (p. 204).

8. College graduates tend to be more satisfied with their jobs and lives in general than noncollege graduates.

Pace (1979) summarizes data from ten studies dealing with college alumni conducted from the 1930's to the 1970's. Although some of the studies focus on a specific institution, others focus on graduates from more than 1,000 institutions. All are considered by Pace to be landmark studies.

After analyzing the ten studies, Pace (1979) comes to the following conclusions:

1. College graduates "continue in overwhelming numbers to work at the top level" (p. 96).

2. "The income difference between graduates and the population in general is...very great" (p. 98).

3. "Few college graduates dislike or are not satisfied with their jobs" (p. 98).

4. "Most college graduates...work in fields that are similar to their major field of study in college" (p. 99).

5. "Very few alumni have negative attitudes toward the college they attended" (p. 101).

6. College graduates participate in political, civic, and cultural enterprises to a higher degree than nongraduates (p. 106).

7. College graduates think their education helped them to develop their ability to think critically and express themselves clearly, to increase their breadth of knowledge, to relate to other people, and to clarify their values and goals (p. 106).

8. College education has a large and enduring effect on the knowledge possessed by graduates and on their receptivity to gaining additional knowledge (p. 108).

In summarizing these comprehensive studies it is clear that certain changes which occur during college tend to persist after college while others tend to diminish. In either case, the postcollege environment is likely to effect the maintenance of the changes which occur during the college years. Among the factors which are typically maintained after college are increased liberalism, increased competency levels, and increased social and intellectual skills. College attendance also increases the chance of job satisfaction, earning power, and civic participation. No clear pattern emerges in regard to changes in religious attitudes and practices during the postcollege years. Increases in hedonistic behavior during college are likely to be reversed after college.

Studies Focusing on Value Related Attitudes and Behaviors. Bugelski and Lester (1940) conducted a seven year study on the classes of 1931, 1933, and 1934 at the University of Buffalo. Using a 25 question opinion test of social and political attitudes, they note a significant change from a conservative average score to a more liberal one during the four years of college (p. 324). In retesting alumni three to four years after graduation they note no significant change in scores (p. 326).

Nelson (1954) surveyed 3,758 students at 18 colleges, including six Lutheran colleges and four universities in 1936, using the Lentz C-R Opinionaire, Form K. He relocated 1,200 members of the same group in 1950. He surveyed them using the same instrument and received usable responses from 901. After comparing the scores of the 901 in 1936 with the scores in 1950, he concludes:

1. Student attitudes shown in college tend to persist through the postcollege years.

2. Differences between individual institutions are greater than between types of institutions in 1936 and in 1950.

3. Regional differences in conservatism are apparent in 1936 and among ex-students in 1950.

4. There is a postcollege trend toward more liberal attitudes during the 14 years following graduation.

5. Attitude changes from 1936 to 1950 seem to follow

a general pattern. Those who were more conservative during college show a greater increase in liberalism than those who were liberal in college, decreasing the gap.

6. Sex seems to be a factor in the degree of change, but not in the number of subjects shifting toward liberalism.

7. Liberalism increases with age.

8. Unmarried students shift more toward liberalism than married students, although not significantly (pp. 11-13).

Hoge and Bender (1974) studied three groups of Dartmouth College students between 1931 and 1956 using the Allport-Vernon Study of Values. When the same groups were restudied as alumni between 1952 and 1969, some large value changes were noted. The main changes are in four of the six areas measured by the Study of Values.

The theoretical scores were constant until 1956, then rose markedly to 1968; the economic scores fell consistently from 1940 to 1968; the aesthetic scores fell from 1940 to 1956, then rose to 1968; and the religious scores rose greatly from 1940 to 1956, then fell almost as greatly to 1968. (p. 574)

In terms of degree of change, value changes among students appear to take place more rapidly than value changes among alumni. In the alumni sample, value changes occur more rapidly among alumni below age 35 than among alumni above age 35. The major explanation for change appears to be the impact of historical events. College students and alumni

generally shift in the same direction during any given period of time, with the shifts among the students being more pronounced than the shifts among alumni.

One of the important studies of college graduates was conducted by T. M. Newcomb at Bennington College. In addition to studying the undergraduates of Bennington as mentioned previously, Newcomb conducted follow-up research on alumni. Newcomb's initial study indicates that students become less conservative from the freshman to senior years and that they maintain that change in the two years following graduation (1943, p. 146).

In 1960 and 1961, Newcomb and three former students restudied the original Bennington sample. Newcomb analyzed alumnae according to changes in conservatism during college and changes in conservatism after college. He concludes that:

Those women who were relatively conservative in college tended to be relatively conservative in 1960-61. Similarly, those women who were relatively nonconservative when they graduated were relatively nonconservative in 1960-61. Thus, changes which had taken place in college tended to persist for the next twenty odd years. (Newcomb, et al., 1967, p. 39)

In addition to Sanford's (1962) study of Vassar students mentioned previously, the Mellon Foundation sponsored research on Vassar alumnae going back to the class of 1904. Mervin Freedman, one of the principal researchers in this project, notes that the students from different decades tend to reflect in their attitudes the

trends in the general American culture (1961, p. 24). Once they leave college, however, the changes which occurred during college tend to persist.

The most significant finding...is that there is no indication of a consistent tendency...for those alumnae to change appreciably on the major attitude dimensions tapped by the Vassar Attitude Inventory. (Freedman and Bereiter, 1963, p. 300)

Thus, in summarizing the research on attitude and value change during the alumni years, it appears as if most changes which occur during the undergraduate years are maintained during the alumni years. Increases in liberalism are maintained and, in some cases, continue to increase. Some changes reflect regional geographical trends or historical trends and events.

Studies Focusing on Dogmatism. College alumni studies on dogmatism are virtually nonexistent. Only two longitudinal, test-retest design studies using Rokeach's Dogmatism Scale are reported.

Lindberg (1971) conducted a study on the class of 1969 at Wheaton College. The Office of Institutional Research at the college administered the Dogmatism Scale to freshmen entering during the fall of 1965 as part of a battery of tests. A follow-up test was given by the same office during the senior year to selected members of the same class. The results show a significant decrease in dogmatism during the four years of college (Lindberg, 1971, p. 91).

Lindberg readministered the Dogmatism Scale to a sample of alumni from the class of 1969 approximately 19 months after graduation. In comparing mean dogmatism scores of seniors with the alumni sample, Lindberg (1971) finds no significant difference between the mean dogmatism scores of seniors and the mean dogmatism scores of the same students 19 months after graduation (p. 92).

A second longitudinal study was conducted by Ayers and Turck (1976). They administered the Dogmatism Scale to 396 subjects as freshmen between 1962 and 1965 and again to the same subjects between 1965 and 1968. The subjects were in the teacher preparation program at the Tennessee Technical University. In the fall of 1974, 105 members of the original sample retook the Dogmatism Scale. For comparison purposes, the instrument was administered to 160 freshman and to 144 senior student teachers.

After analyzing the data, Ayers and Turck conclude that a significant decline in dogmatism occurs during the four years of college. They also note that a general decline in dogmatism seemed to occur in the total college age population since seniors and freshmen tested for comparison purposes in 1974 had lower dogmatism scores than seniors and freshmen tested in the original study in the 1960's. Finally, changes were observed in the group of graduates. Those who had taught became more open-minded than they were as seniors. In contrast, those who had

completed graduate study became slightly more closed-minded (p. 86). Thus, it appears to some degree that postgraduate changes in dogmatism depend on postgraduate experiences.

The research on alumni dogmatism is limited and somewhat conflicting. While it is clear that dogmatism generally declines during the college years, insufficient longitudinal research exists to determine the course of dogmatism after college. While Lindberg (1971) indicates little change in the immediate postgraduate environment, Ayers and Turck (1976) report conflicting results, indicating that changes in dogmatism may be related to the postgraduate environment.

The literature on value change during and after the college years has been reviewed. The literature review focused on comprehensive studies, studies dealing exclusively with value related attitudes and behaviors, and studies restricted to dogmatism. The studies show that authoritarianism, dogmatism, prejudice and conservatism typically decline during the college years, while independence, self-confidence, and aesthetic awareness typically increase during the college years. While differences exist among various majors and among various students, the broad trends are clear during the college years. The impact of different types of colleges is also noted. The small, residential, four year college is identified as having the greatest potential for impact.

The research on the postcollege experience is limited by comparison to the research focusing on the college years. While it is generally true that attitudes displayed by students when leaving college tend to persist, the environment during the postcollege years may modify those attitudes. The research on changes in dogmatism among college alumni is particularly limited. While Lindberg finds that little change occurs following graduation, Ayers and Turck find that some change did occur among graduates of a teacher education program. The change is not consistent, but varies with the postcollege activity.

After reviewing the literature, it is clear that the need for additional research of a longitudinal nature exists. In the words of Lindberg (1971), "the need for alumni research in the areas of dogmatism and related value change (is) particularly acute" (p. 59).

CHAPTER III

METHOD

Hypotheses

As indicated in Chapter I, this investigation deals with changes occurring in the graduates of a small, religiously oriented liberal arts college during the eleven years following graduation. The first area of investigation deals with changes occurring in dogmatism, or the degree of open-mindedness in a total belief system as defined by Rokeach (1960). It has been shown that the group under investigation significantly decreased in dogmatism from the freshman year to the senior year of college (Lindberg, 1971). This study investigates whether or not that decrease has been maintained in the eleven years from graduation to the point of data collection.

The second area of investigation deals with changes in attitudes and value related behaviors. As indicated in Chapter I the college attempts to reinforce certain attitudes and value related behaviors in the students during their undergraduate days. The present investigation attempts to determine whether or not the attitudes and value related behaviors present during the senior year are still present in the subjects eleven years after

graduation. The following two general hypotheses are tested:

Hypothesis I: There is no significant difference between the mean dogmatism scores of Wheaton College students tested as seniors and the mean dogmatism scores of the same students tested eleven years later.

Hypothesis II: There is no significant difference between the mean value, attitude, and behavioral responses of Wheaton College senior students and the responses of the same students eleven years later on the 1969 Wheaton College Senior Questionnaire.

The first six specific hypotheses relate to the study of dogmatism. Comparisons are made between group mean scores obtained in 1969 and 1980. Subgroup comparisons are also made by dividing the group by sex and by nontransfer status.

The last 22 specific hypotheses relate to the Senior Questionnaire. Comparisons are made between the group mean scores obtained in 1969 and 1980.

The senior year dogmatism scores and the alumni dogmatism scores are analyzed by t tests in order to determine significant differences. The t test is chosen because it measures continuous, quantitative data. The lack of predictive studies make the null hypothesis the logical choice. The probability level is arbitrarily set at the .05 level of significance. The statistical hypotheses for

dogmatism are identical to the ones used by Lindberg (1971, pp. 83-83). They are as follows:

1. There is no significant difference between the mean dogmatism score of male Wheaton College students tested as seniors and the mean dogmatism score of the same students 11 years after graduation.

2. There is no significant difference between the mean dogmatism score of female Wheaton College students tested as seniors and the mean dogmatism score of the same students 11 years after graduation.

3. There is no significant difference between the mean dogmatism score of male and female Wheaton College students tested as seniors and the mean dogmatism score of the same students 11 years after graduation.

4. There is no significant difference between the mean dogmatism score of senior male students who attended Wheaton College for four years and the mean dogmatism score of the same students 11 years after graduation.

5. There is no significant difference between the mean dogmatism score of senior female students who attended Wheaton College for four years and the mean dogmatism score of the same students 11 years after graduation.

6. There is no significant difference between the mean dogmatism score of senior male and female students who attended Wheaton College for four years and the mean dogmatism score of the same students 11 years after

graduation.

The questions from the Wheaton College Senior Questionnaire are analyzed using the Chi Square test for significant differences between senior responses and responses on the alumni retest in 1980. The Chi Square test is chosen because the multiple choice format of the questions produces discreet data that is expressed in frequencies and categories. The responses on the 1969 sampling are used as the expected frequencies and the responses on the 1980 sampling are used as the observed frequencies in calculating Chi Square on each question. As in the analysis of the dogmatism hypotheses, the .05 level of significance is arbitrarily chosen as the minimum acceptable level necessary for making a valid judgment on the data. The statistical hypotheses generated from the questionnaire parallel Lindberg's (1971, pp. 85-87) follow-up study and are as follows:

7. There is no significant difference between the expected and observed frequencies in recommending to friends attendance at Wheaton College.

8. There is no significant difference between the expected and observed frequencies in evaluating the opportunities to develop social competence while attending Wheaton College.

9. There is no significant difference between the

expected and observed frequencies in determining to what extent a Wheaton College education helps to integrate all areas of life into a meaningful, Christ centered pattern.

10. There is no significant difference between the expected and observed frequencies in relationship to interest in spiritual matters while attending Wheaton College.

11. There is no significant difference between the expected and observed frequencies in relationship to interest in missions while attending Wheaton College.

12. There is no significant difference between the expected and observed frequencies in regard to Sunday morning church attendance.

13. There is no significant difference between the expected and observed frequencies in regard to Sunday evening church attendance.

14. There is no significant difference between the expected and observed frequencies in regard to Sunday School attendance.

15. There is no significant difference between the expected and observed frequencies in relationship to the faculty's perceived sensitivity to the individual student.

16. There is no significant difference between the expected and observed frequencies in relationship to the sensitivity demonstrated by other students to the individual student.

17. There is no significant difference between the expected and observed frequencies in relationship to the student personnel deans' perceived sensitivity to the individual student.

18. There is no significant difference between the expected and observed frequencies in relationship to the administration's perceived sensitivity to the individual student.

19. There is no significant difference between the expected and observed frequencies in relationship consideration of occasional use of marijuana.

20. There is no significant difference between the expected and observed frequencies in relationship to consideration of living together with a member of the opposite sex without being married.

21. There is no significant difference between the expected and observed frequencies in consideration of adoption of more liberal attitudes on sex, drugs, and alcohol in order to keep these standards current with societal norms.

22. There is no significant difference between the expected and observed frequencies in consideration of the woman's role in determining the degree of sexual intimacy in a nonmarital, heterosexual relationship.

23. There is no significant difference between the expected and observed frequencies in considering premarital

sexual intercourse as an important experience for early marital adjustment.

24. There is no significant difference between the expected and observed frequencies in regard to actual participation in dancing.

25. There is no significant difference between the expected and observed frequencies in regard to actual participation in smoking.

26. There is no significant difference between the expected and observed frequencies in regard to actual participation in the use of alcohol.

27. There is no significant difference between the expected and observed frequencies in regard to actual participation in the use of playing cards.

28. There is no significant difference between the changes in perceived attitudes toward other races during the undergraduate experience and the changes in perceived attitudes toward other races since graduation.

Subjects

The Office of Institutional Research at Wheaton College studied the class of 1969 in an effort to better understand the nature of the student body and the impact of the college on its students. The study began with the administration of a battery of tests during the fall of 1965 and concluded with the administration of a questionnaire and tests to a stratified, random sample of

senior students during the spring of 1969. The Rokeach Dogmatism Scale, Form E, was among the instruments used in this study during the fall of 1965 and the spring of 1969. The Wheaton Senior Questionnaire was administered to a series of Senior Seminar classes randomly selected from each of the major academic divisions. The date of administration was not announced in an effort to eliminate response bias. Students were required to complete the instrument before leaving class. A descriptive summary of the 1969 sample for the Senior Questionnaire is included in Table 1. Although the responses were given anonymously, the individual names on the class lists were readily available from the registrar's office. Since there was less than a 100 percent response, it was necessary to keep each of the officially listed students on the roster of those in the follow-up study since individual names and responses were not permanently recorded. The Senior Seminars also formed the sample group for the study of dogmatism. It is known that 269 seniors took the Dogmatism Scale during their senior years. Of the 269, 105 were part of the stratified random sample which completed the Senior Questionnaire. The breakdown by major for those completing the Dogmatism Scale is given in Table 2. Of the 105, it is known that 63 had also taken the Dogmatism Scale as freshmen. Lindberg used the 63 responses to provide a relative baseline in comparing change from the freshman year to the senior year

Table 1
 Analysis of the 1969 Student Sample
 for the Senior Questionnaire

Major/ Department	Seminar Class Enrollment	Attendance on Collection Day	Returns	Percent- age*
Bible/Christ- ian Education	11	11	11	100.0
Chemistry/ Mathematics	20	20	16	80.0
Education	23	21	21	91.3
History	20	12	12	60.0
Literature	25	20	17	68.0
Music	16	13	11	68.8
Psychology	19	9	9	47.4
Sociology	16	15	14	87.5
Totals	150	121	111	74.0
Unusable Returns			3	
Total Usable Returns			108	72.0

*based on total class enrollment

Table 2
 Analysis of the 1969 Student Sample
 for the Rokeach Dogmatism Scale, Form E

Major/Department	Seminar Class Enrollment	Dogmatism Returns	Percent- age
Bible/Christian Education	11	10	90.9
Chemistry/Mathematics	20	13	65.0
Education	23	18	78.2
History	20	13	65.0
Literature	25	19	76.0
Music	16	12	75.0
Psychology	19	11	57.8
Sociology	16	9	56.2
Totals	150	105	70.0

to the alumni retest.

Lindberg (1971) used the same 150 students for his follow-up study 19 months after graduation. He modified the Senior Questionnaire to reflect alumni status and readministered both the Senior Questionnaire and the Dogmatism Scale. On the Senior Questionnaire Lindberg received 130 usable responses. Of these, he randomly selected out 22 so that he had equal numbers for comparing his results with the 1969 results. On the Dogmatism Scale, he received 96 usable responses.

In the present study the same 150 former students from the original college study and from the Lindberg study are used as the sample group of interest. These 150 former students were contacted in the summer of 1980 and were requested to complete the Senior Questionnaire as revised by Lindberg and the Dogmatism Scale, Form E. In addition, basic descriptive information about the sample was gathered to aid in differentiating responses among selected subgroups in the general sample population. Additional questions also were added to the questionnaire to gather information from the class on current value related issues. The information provided by the inclusion of these additional questions gives not only a picture of the responses of the class to value issues being faced by the general population today, but also provides a basis for further research. The decision to include items in this

additional section was made on the basis of meeting one of two criteria: interest on the part of the Long Range Planning Committee of the college (1977) or significance as a value related issue as identified in the national media. The responses by major on the Senior Questionnaire and on the Dogmatism Scale are indicated in Table 3 for the current study.

Table 3
 Analysis of 1980 Alumni Sample
 for the Senior Questionnaire and
 the Rokeach Dogmatism Scale, Form E

Major/Department	Seminar Class Enrollment	Usable Returns 1980 Sample	Percent- age
Bible/Christian Education	11	8	72.7
Chemistry/ Mathematics	20	20	100.0
Education	23	16	69.6
History	20	15	75.0
Literature	25	21	84.0
Music	16	12	75.0
Psychology	19	14	73.7
Sociology	16	14	87.5
Unusable returns		7	
Total returns	150	127	84.7
Total usable returns	150	120	80.0

Procedure

The focus of the current study was determined in the early spring of 1980. The Office of Institutional Research at Wheaton College gave approval for the study and the Alumni Association of Wheaton College provided an accurate list of names and addresses of members of the class of 1969. The Registrar's office released the names on official Senior Seminar rosters so that the members of the 1969 study could be identified. Dr. Milton Rokeach was contacted for permission to use the Dogmatism Scale, Form E. Dr. William Lindberg was contacted several times for supporting information. After defining the scope of the study the project was submitted to the Institutional Review Board for the Protection of Human Subjects, Non-Medical Campuses. The Board issued its approval and the formal proposal was then approved by the Graduate School of Education.

In late April, 1980, a cover letter and questionnaire were sent to the selected members of the class of 1969 at Wheaton College who comprised the sample for this study. The letter (see Appendix E) requested that the recipient complete an enclosed questionnaire and return it in the self-addressed, stamped envelope provided. Approximately four weeks later, a follow-up mailing was sent to those who had not responded, consisting of a cover letter (see Appendix F), a duplicate copy of the questionnaire, and a self-addressed stamped envelope. The questionnaire, which

is described in detail later in this section, consisted of two pages of questions requesting descriptive information (see Appendix B), the 1969 Senior Questionnaire (Alumni Revision) (see Appendix C), and the Rokeach Dogmatism Scale, Form E (see Appendix D). By June 15, 1980 120 usable and 7 nonusable questionnaires had been returned from the 150 person sample.

Instrumentation. Two basic instruments were used to gather the data. The Rokeach Dogmatism Scale, Form E (Rokeach, 1960), the primary research instrument, is described in the first part of this section. The Wheaton College Senior Questionnaire (Alumni Revision) (Lindberg, 1971), the secondary research instrument, is a revision of an instrument used by the Office of Institutional Research at Wheaton College to gather data about members of the class of 1969. Lindberg's (1971) revision adapted the questions modestly to accommodate the alumni status of the sample group. In the present investigation, selected questions were added to the Lindberg instrument to gather additional data about the subjects and their attitudes. This revised instrument is systematically described in the second part of this section.

The concept of dogmatism as developed by Rokeach is described in Chapter I. Understanding this concept forms the basis for understanding the Dogmatism Scale. Rokeach's goal was to describe a general concept of intolerance that

was not limited to a particular culture or time period. He appears to have been generally successful in defining a concept that dealt more with the structure of belief systems than the specific content of belief systems.

In evaluating the Dogmatism Scale as an effective measurement device it is important to consider its reliability and validity. In the course of its development the Dogmatism Scale went through a number of revisions in an effort to increase its reliability. The reliability of Form E ranges from .68 to .93 on eleven population groups including workers, college students, and residents of a Veteran's Administration domiciliary (Rokeach, 1960, p. 90). The method used to test reliability in these cases was to compare responses on odd and even items as corrected by the Spearman-Brown formula (Rokeach, 1960, p. 97).

In addition to the reliability studies conducted by Rokeach and his colleagues, several others have investigated the reliability of the Dogmatism Scale, Form E. Zagona and Zurcher (1965) studied two groups which were divided on the basis of their dogmatism scores. They isolated thirty students from each end of a population of 517 students based on high or low dogmatism scores. After 15 weeks, the students were retested in order to compare test-retest data on the Dogmatism Scale. The entire sample had a Pearson r of .697, with the r for the two extreme groups being slightly lower. This reliability coefficient

supports the earlier reliability studies reported by Rokeach.

In addition to studying the reliability of the Dogmatism Scale, Zagona and Zurcher (1965) attempted to study its validity. From the previous sample they selected subjects with high and low dogmatism scores for semester-long observation. They conclude after observing their subjects in a variety of social settings that behavior is predictable according to Rokeach's description of open-minded and closed-minded individuals (p. 1235).

Vacchiano, Schiffman, and Strauss (1967) conducted a factor analysis of the Dogmatism Scale. A review of the analysis generally supports the empirical validity of the scale, despite some disagreements between Rokeach's conceptualization of dogmatism and the differentiated factors identified by the researchers. In summarizing their findings the authors conclude:

The Dogmatism Scale has proven to be a useful instrument and has enjoyed many meaningful applications; but like many other scales in widespread use, it is internally complex and multi-factoral. This study has suggested that exploration of the dogmatic personality, using Rokeach's Dogmatism Scale, may lead to misunderstanding and theoretical difficulties if the multi-dimensional character of the scale and sex variables are not considered. (p. 851)

Gulo and Lynch (1973) also conducted research on the validity of the Dogmatism Scale. Although they raise questions about the multi-dimensional character of the

scale and the consistency of empirical identification of those dimensions, they conclude that there is still good evidence to support the usefulness of the single dogmatism score to predict selected behaviors (p. 67).

In summary, the Dogmatism Scale, Form E has been found to be a reasonably reliable and valid research instrument. In the words of its author, Milton Rokeach (1960), "High scorers on the Dogmatism Scale are repeatedly found to differ from low scorers in the ability to synthesize new beliefs into a new system, but not in the ability to analyze or break down single beliefs" (p. 286). Since dogmatism as defined by Rokeach, is a system variable, the Dogmatism Scale appears to measure what it was designed to measure.

Wheaton College Senior Questionnaire (Alumni Revision) was developed by Lindberg (1971) from the questionnaire administered to selected members of the class of 1969 at Wheaton College by the Office of Institutional Research. It has been the practice of Wheaton College to survey each graduating class shortly before graduation in order to obtain constructive information about the college, its program, possible areas for improvement, and the subjective impressions of individual students about their college experience. The rationale for doing this was given in an introduction to a report to the faculty summarizing the results of the 1969 questionnaire.

When an institution promises an experience that will liberate the mind, but promises a basis for integrating contemporary thought with protestant orthodoxy, then the necessity becomes apparent for asking the question, "In what ways do ideas that students read about for class, listen to in lectures, or derive from interaction with professors affect them outside the classroom?" Are faculty models which students seek to emulate? Are the faculty and administration sensitive to students' needs? Are stimuli from outside the college strong enough to alter the students' identification with institutional values? (Sprunger, 1969, p. 1)

The 1969 questionnaire focused on three major goals: identifying student attitudes, values, and behaviors not related directly to academic life; obtaining a representative response that would not be skewed by receiving only voluntary participation; and comparing the class of 1969 with a control group from the class of 1961. To accomplish these three goals, the questionnaire gathered demographic data and included 5 subjective open-ended questions, 21 objective questions designed specifically for the 1969 questionnaire, and 10 comparative questions which were repeated from the 1961 questionnaire. In order to focus more directly on the value related attitudes and behaviors, questions about the academic area were collected separately.

The 1969 questionnaire had 31 objective questions and 5 open-ended questions. Lindberg's (1971) alumni revision eliminated nine of the objective questions and all of the open-ended questions. In addition, changes were made in the

wording to reflect alumni status. Altogether, Lindberg's revision contained 22 questions, 10 of which were repeated from the 1961 questionnaire.

In the current study, a cover sheet containing 12 questions about demographic items is added to Lindberg's revision. In addition, 2 objective questions are added to allow a follow-up comparison to 2 of the original questions, 1 question is added to allow a follow-up to one of the questions deleted by Lindberg, 20 questions are added because they were identified as being of interest to the Long Range Planning Committee at Wheaton College (1977), and 15 are added to gather information on the opinions of the subjects on matters of current national interest. In addition to providing general information, the responses to these questions provide data for additional research.

In the questionnaire used in the present investigation, questions one and two are included to parallel Lindberg's revision. Responses are not reported as no comparisons can be made since the 1969 data are no longer available. Questions 4 through 6, 8 and 9, 11 through 13, and 23 are found in the 1961 questionnaire and are repeated in the 1969 questionnaire. Questions seven and ten are alumni follow-up questions to numbers six and nine respectively. Questions 14 through 22 were designed specifically for the 1969 questionnaire. The responses to

these questions provide the major comparative data for determining attitudinal change in this study. Questions 24 through 28, 30, 42 through 45, and 51 through 60 are suggested by the college's Long Range Planning Committee document on student product research (1977). Question 29 asks about changes in racial attitudes and is a follow-up to a question asked in the original 1969 questionnaire but not in Lindberg's revision. Finally, questions 31 through 41 and 46 through 50 are designed to elicit information from alumni on items of national interest within the general population or within the evangelical subculture. In addition, some broad comparisons can be made between responses on questions 3, 26, 51 through 54, 56 through 58, and 60 and responses from other alumni groups asked similar questions as part of other studies.

In analyzing the reasons for including certain questions on the questionnaire, the following information is noted from Lindberg and from the Office of Institutional Research. Question four, "How would you evaluate opportunities at Wheaton for the development of social competence?" is designed to gauge student perceptions of the social environment. Since this question is on both the 1961 and 1969 questionnaires the results can be compared. The class of 1969 views the campus as less adequate in promoting social competence than did the class of 1961 (Lindberg, 1971, p. 77).

One of the self-professed distinguishing characteristics of Wheaton College is the attempt to integrate Christian faith with academic pursuits. Answers on questions five, six and nine give information on student perceptions of the adequacy of this process.

Question eight, "At approximately what age did you accept Christ as Savior?" is included as a factual question to verify the reliability of student responses on the 1969 questionnaire and the alumni retest. For most evangelicals this "born again" experience is a once in a lifetime event which may be located at a specific point in time. If the response groups are similar, the responses to this question should be virtually identical.

Questions 11, 12, and 13 are asked to measure patterns of corporate worship. If a relationship is assumed between attendance at corporate worship and religious concern, then the data from these questions gives some indication of the change or lack of change in religious values since graduation.

Questions fourteen through seventeen are intended to measure student perceptions of the sensitivity of different segments of the community to student needs. The results from the alumni survey can demonstrate if changes are occurring in those perceptions.

Questions 18 through 22, like several of the additional questions, ask about contemporary moral issues.

The eleven year gap between administrations of the instrument allows an analysis of the self-perceived changes in values during the postcollege experience.

Question 23 is designed to assess behavior related specifically to the college's standards of conduct. In the original survey, students were asked to describe participation in dancing, smoking, drinking and card playing before coming to Wheaton, during their time at Wheaton, and their expected participation after graduation from Wheaton. The alumni revision changes the third part to reflect alumni status and asks for a description of current behavior. This allows a comparison between predicted and actual behavior as well as a comparison of behavior before, during, and after college.

Thus, the questionnaire focuses on student perceptions of values and experiences during the college years and the years following college. While some dangers exist in equating self-reported perceptions with actual behavior certain trends may be analyzed through this type of an instrument which allows a college like Wheaton to determine, in part, if it is achieving its stated objectives. Wheaton perceives itself and is perceived by others as a unique institution with a student body unlike most other small, liberal arts colleges (Lindberg, 1971, p. 80; Keeton and Hilberry, 1969, p. 14). The college operates on the assumption that its unique environment has a

specific and lasting influence on its graduates. Since the postgraduate environment is perceived to be significantly different from the college environment, one of the major questions in this study is to evaluate the long term impact of the college environment on specific value related attitudes and behaviors when the student encounters an environment which is no longer supportive of those attitudes and behaviors.

Design and statistical analysis. The current investigation is clearly an example of ex post facto research. The specific design is a one group stratified sample, longitudinal pretest/posttest design. There is no control over the independent variables as they have occurred already and are not manipulable. The same group is investigated in both the original 1969 study and in the current study. The sample is stratified by field of study in an effort to be a representative cross section of the institution. The same basic instruments are used in collecting the 1969 data and the 1980 data. The addition of demographic information to the 1980 data increases the probability of finding significant results that can be more likely attributed to the college experience.

The first six hypotheses relating to dogmatism are analyzed using t tests. This statistic is used because of the continuous, quantitative nature of the Dogmatism Scale data. The minimally acceptable level of significance was

arbitrarily set at .05. The last 22 hypotheses relating to the Senior Questionnaire are analyzed using the Chi Square statistic. This statistic is chosen because of the multiple choice format of the questions and the discrete frequencies produced in those categories.

Summary

The third chapter details the basic method of this study. The hypotheses are identified, the subjects are described, and the procedure is outlined. Distinctions are made between the original 1969 respondents, Lindberg's 1971 respondents, and the respondents in the 1980 follow-up study. It is assumed that due to the length of time from graduation and the variety of environments in the postcollege experience of the subjects that the degree of change as measured by the primary and secondary instruments will give some indication of the long term impact of the environmental press of the college.

CHAPTER IV

RESULTS

In this chapter data are analyzed and presented in three major sections. The first section focuses on data related to changes in dogmatism, the second on data related to the attitudes and values expressed in the Senior Questionnaire, and the third on ancillary data, including descriptive data and data based on questions or relationships not included in the 1969 study or Lindberg's 1971 study. Where considered appropriate, comparisons are made with the findings of Lindberg (1971) in addition to the 1969 data computed by the Office of Institutional Research at Wheaton College.

Prior to beginning systematic and detailed analysis of the variables under investigation, descriptive comparisons are made between the 1969 sample and the 1980 sample. Since group data and not individual data were the focus of the 1969 study, individual responses from the 1969 sample were not preserved. Thus, it is not possible to make comparisons of the individual responses from 1969 and 1980. Since the dogmatism means differ significantly among majors (see Table 4 for details), it is considered important to establish, in so far as possible, that the composition of

Table 4

Summary Table of Analysis of Dogmatism Scores Across Majors

Major	Literature	Educa- tion	Psychol- ogy	Chemistry/ Mathematics	History	Music	Bible Christian Ed	Sociology
Mean	146.43	158.75	126.64	151.70	147.93	149.08	174.63	132.14
<u>n</u>	21	16	14	20	15	12	8	14

Note. Minimum score possible = 40. Maximum score possible = 280. Higher score indicates greater dogmatism. Grand mean = 147.308.

Source of Variability	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	7	11708.60	2529.80	4.68	.001
Within Groups	112	60543.00	540.56		
Total	119	78251.60	657.58		

the 1969 respondents do not differ significantly from the composition of the 1980 respondents. The results reported in Table 5 indicate that no statistically significant differences appear to exist between the 1969 sample and the 1980 sample when compared by major. Furthermore, the results reported in Table 6 indicate that no statistically significant differences appear to exist between the two groups when compared by sex. A third comparison between the 1969 and 1980 groups is made on the basis of question 8 of the Senior Questionnaire. The question asks for specific factual information about the timing of a personal acceptance of Christ as Savior, a key life event in the theology of the religious groups supporting the college. A high degree of similarity between the 1969 and 1980 responses would strengthen the assumption that the two groups are closely matched. The results reported in Table 7 indicate that the two groups are closely matched on that variable.

Table 5

Summary Table Comparing Responses by Major in the 1969 Senior Sample
and the 1980 Alumni Sample on the Rokeach Dogmatism Scale, Form E

Source	Liter- ature	Educa- tion	Psychol- ogy	Chemistry/ Mathematics	History	Music	Bible/ Christian Ed	Sociol- ogy
Senior Re- spondents	19	18	11	13	13	12	10	9
Alumni Re- spondents	21	16	14	20	15	12	8	14

$\chi^2 = 2.53$ with 7 df

$p (\chi^2 > 14.1) = .05.$

Table 6

Summary Table Comparing Responses by Sex in the 1969 Senior Sample and the 1980 Alumni Sample on the Rokeach Dogmatism Scale, Form E

Source	Male	Female
Senior Respondents	46	50
Alumni Respondents	67	53

$$X^2 = 1.04 \text{ with } 1 \text{ df} \quad p (X^2 > 3.84) = .05.$$

Table 7

A Comparative Analysis of Responses of the 1969 Senior Sample and the 1980 Alumni Sample to the Question:
"At What Age Did You Accept Christ as Savior?"

Source	5 years or younger	6-12 years	13-17 years	18+ years	Never
Senior Respondents	16	57	25	4	6
Alumni Respondents	18	69	26	5	2

$$X^2 = 2.77 \text{ with } 4 \text{ df} \quad p (X^2 > 9.49) = .05.$$

Results Related to Dogmatism (Null Hypotheses 1-6)

Data related to dogmatism are presented in this section following the order of the six null hypotheses stated in Chapter III. In testing null hypotheses 1-6, t tests are performed. The .05 level of significance is arbitrarily chosen as the minimum acceptable standard necessary for making a valid judgment on the data. Data related to these six null hypotheses are summarized in Table 8. Null hypothesis one is tested by comparing the mean dogmatism score of male Wheaton College students tested as seniors and the mean dogmatism score of the same students tested 11 years after graduation. The obtained t score of 0.995 is below the level of statistical significance. Thus, null hypothesis one is not rejected indicating that no statistically significant difference exists between senior and alumni scores of Wheaton College males. Null hypothesis two is tested by comparing the mean dogmatism score of female Wheaton College students tested as seniors and the mean dogmatism score of the same students tested 11 years after graduation. The obtained t score of -0.8759 is below the level of statistical significance. Thus, null hypothesis two is not rejected, indicating that no significant difference exists between senior and alumni scores of Wheaton College females. Null hypothesis three is tested by comparing the mean dogmatism score of male and female Wheaton College students and the mean dogmatism score of the same students 11 years after

graduation. The obtained t score of 1.52 is below the level of statistical significance. Thus, null hypothesis three is not rejected, indicating that no statistically significant difference exists between senior and alumni scores of Wheaton College males and females. Null hypothesis four is tested by comparing the mean dogmatism score of senior male students who attended Wheaton College for four years and the mean dogmatism score of the same students 11 years after graduation. The obtained t score of -0.12 is below the necessary level for statistical significance. Thus, null hypothesis four is not rejected, indicating that no statistically significant difference exists between senior and alumni scores of male nontransfer students. Null hypothesis five is tested by comparing the mean dogmatism score of senior female students who attended Wheaton College for four years and the mean dogmatism score of the same students 11 years after graduation. The obtained t score of -0.70 is below the level of statistical significance. Thus, null hypothesis five is not rejected, indicating that no statistically significant difference exists between senior and alumni scores of female nontransfer students. Null hypothesis six is tested by comparing the mean dogmatism score of senior male and female students who attended Wheaton College for four years and the mean dogmatism score of the same students 11 years after graduation. The obtained t score of 0.39 is below the level of statistical significance. Thus, null hypothesis

six is not rejected, indicating that no statistically significant difference exists between senior and alumni scores of male and female nontransfers.

Table 8
A Comparative Summary of Mean Scores for the
1969 Senior Sample and the 1980 Alumni Sample
on the Rokeach Dogmatism Scale, Form E

Group	<u>df</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
Transfers and Nontransfers Combined					
Males	111				.995*
1969		46	147.85	24.03	
1980		67	143.39	22.97	
Females	101				-.876*
1969		50	156.82	24.46	
1980		53	152.26	28.12	
Males and Females	214				1.52*
1969		96	152.52	24.25	
1980		120	147.31	25.64	

(Table 8 continued)

Group	<u>df</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
Nontransfers Only					
Males	84				-.12*
1969		32	145.34	23.48	
1980		54	145.96	22.70	
Females	56				-.70*
1969		23	150.96	24.16	
1980		35	146.29	25.56	
Males and Females	142				.39*
1969		55	147.69	23.76	
1980		89	146.09	23.72	

Note. Minimum score possible = 40. Maximum score possible = 280. Higher score indicates greater dogmatism.

*Not significant at .05 level of confidence.

Results Related to the Senior Questionnaire (Null Hypotheses 7-28)

The data related to the Senior Questionnaire are presented in this section according to the order of the hypotheses stated in Chapter III. The Chi Square test is employed because of the multiple choice format of the Questionnaire which produces categorical data. The .05 level of significance is arbitrarily chosen as the minimum acceptable standard necessary for making a valid judgment on the data.

To test null hypothesis seven, comparisons are made between the Senior and Alumni responses on the question of recommending attendance at Wheaton College to a friend. As indicated in Table 9, the obtained Chi Square of 7.02 is not significant at the .05 level of confidence. Consequently, null hypothesis seven is not rejected, indicating that no statistically significant difference exists between the senior and alumni responses. To test null hypothesis eight, comparisons are made between the Senior and Alumni responses in evaluating the opportunities to develop social competence while attending Wheaton College. As indicated in Table 10, the obtained Chi Square of 14.52 is significant at the .05 level of confidence. Therefore, the hypothesis is rejected, indicating that senior and alumni responses are significantly different in evaluating opportunities to develop competence during the undergraduate experience. To test null hypothesis

Table 9

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on the Question of Recommending
Attendance at Wheaton College

Source	Defi- nitely	Prob- ably	Neu- tral	Probably Not	Definitely Not
Senior Responses	20	62	19	6	1
Alumni Responses	32	50	23	14	1

$$X^2 = 7.02 \text{ with } 4 \text{ df} \quad p (X^2 > 9.49) = .05$$

Table 10

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses Evaluating the Opportunity to Develop
Social Competence at Wheaton College

Source	Excellent	Good	Fair	Poor
Senior Responses	4	42	39	23
Alumni Responses	16	60	33	11

$$X^2 = 14.52 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

nine, comparisons are made between the 1969 Senior and 1980 Alumni responses in determining to what extent a Wheaton College education helped to integrate all areas of life into a meaningful, Christ centered pattern. As indicated in Table 11, the obtained Chi Square of 3.87 is not significant at the .05 level of confidence. Therefore, the hypothesis is not rejected, indicating that no significant difference exists between the 1969 and 1980 samples in the evaluation of the Wheaton College experience in integrating life into a Christ centered pattern.

Null hypothesis ten is tested by comparing 1969 Senior and 1980 Alumni responses in evaluating changes in interest in spiritual matters while attending Wheaton College. As indicated in Table 12, the obtained Chi Square of 2.45 is not significant at the .05 level of confidence. Therefore, the hypothesis is not rejected, indicating that no significant difference exists between Senior and Alumni perceptions of the development of interest in spiritual matters while attending Wheaton College. By comparing responses to questions six and seven on the 1980 survey it is possible to evaluate self-reported trends in the growth of spiritual interest since leaving the college. As indicated in Table 13, the obtained Chi Square of 8.41 is significant at the .05 level of confidence. Therefore it appears that the college years are perceived as more spiritually stimulating than the postcollege years. Null hypothesis eleven is tested by comparing 1969 Senior and

Table 11

Summary Table Comparing 1969 Senior Responses With 1980
 Alumni Responses Evaluating the Undergraduate
 Experience in Helping to Integrate Life Into a
 Christ Centered Pattern

Source	Helped Much	Helped	Neither	Hindered
Senior Responses	25	58	15	10
Alumni Responses	26	59	28	7

$$X^2 = 3.87 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 12

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses Evaluating Changes in Interest
in Spiritual Matters During College

Source	Greatly Increase	Increase	Same	Decline
Senior Responses	14	52	28	14
Alumni Responses	16	46	38	20

$$X^2 = 2.45 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 13

Summary Table Comparing 1980 Alumni Perceptions of Growth
in Spiritual Interest During College With Growth
After College

Source	Greatly Increase	Increase	Same	Decline
Question 6	20	38	46	16
Question 7	12	34	41	33

$$X^2 = 8.41 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

1980 Alumni responses and in evaluating changes in interest in missions while attending Wheaton College. As indicated in Table 14, the obtained Chi Square of 10.35 is significant at the .05 level of confidence. Therefore the hypothesis is rejected, indicating a significant difference in Senior and Alumni perceptions of the development of interest in missions during the undergraduate experience. By comparing responses to questions nine and ten on the 1980 survey it is possible to evaluate self-reported trends in the growth of interest in missions since leaving the college. As indicated in Table 15, the obtained Chi Square of 5.45 is not significant at the .05 level of confidence. It appears that the development of interest in missions has remained at approximately the same level during the postcollege years as during the college years. Null hypothesis twelve is tested by comparing 1969 Senior and Alumni responses on frequency of Sunday morning church attendance. As indicated in Table 16, the obtained Chi Square of 21.26 is significant at the .05 level of confidence. Thus, null hypothesis twelve is rejected, indicating a significant change in Sunday morning church attendance. In this hypothesis and the next two hypotheses a clear trend emerges in regard to participation in church activities. Since graduation, participation in church activities has increased significantly. Although Lindberg (1971) notes some movement in this direction nineteen months after graduation, it is not statistically

Table 14

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses Evaluating Changes in Interest
in Missions During College

Source	Greatly Increase	Increase	Same	Decline	No Interest
Senior Responses	20	30	39	17	6
Alumni Responses	9	27	55	14	15

$$X^2 = 10.35 \text{ with } 4 \text{ df} \quad p (X^2 > 9.49) = .05$$

Table 15

Summary Table Comparing 1980 Alumni Perceptions of Growth
in Interest in Missions During College With Growth
After College

Source	Greatly Increase	Increase	Same	Decline	No Interest
Question 9	9	27	55	14	15
Question 10	11	42	44	12	11

$$X^2 = 5.45 \text{ with } 4 \text{ df} \quad p (X^2 > 9.49) = .05$$

Table 16

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Frequency of Sunday Morning
Church Attendance

Source	Regularly	Frequently	Occasionally	Rarely
Senior Responses	53	16	12	27
Alumni Responses	93	8	4	14

$$\chi^2 = 21.26 \text{ with } 3 \text{ df} \quad p(\chi^2 > 7.81) = .05$$

significant. Null hypothesis thirteen is tested by comparing 1969 Senior and 1980 Alumni responses on frequency of Sunday evening attendance. As indicated in Table 17, the obtained Chi Square of 15.04 is significant at the .05 level of confidence. Thus, null hypothesis thirteen is rejected, indicating a significant difference in Sunday evening church attendance. Although the shift is not as dramatic as in Table 16, it is clearly a shift toward greater church involvement. Null hypothesis fourteen is tested by comparing 1969 Senior and Alumni responses on the frequency of Sunday School attendance. As indicated in Table 18, the obtained Chi Square of 47.19 is significant at the .05 level of confidence. Thus, null hypothesis fourteen is rejected, indicating a significant change in Sunday School attendance. Based on null hypotheses 12-14 it is clear that a significant change in affiliation with the local church has occurred.

Null hypotheses 15-18 deal with perceptions of campus relationships. Null hypothesis fifteen is tested by comparing 1969 Senior responses with 1980 Alumni responses on the perception of faculty sensitivity to students. As indicated in Table 19, the obtained Chi Square of 0.98 is not significant at the .05 level of confidence. Therefore, null hypothesis fifteen is not rejected, indicating that student perceptions of faculty sensitivity have remained unchanged since graduation. Null hypothesis sixteen is tested by comparing 1969 Senior responses with the 1980

Table 17

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Frequency of Sunday Evening
Church Attendance

Source	Regularly	Frequently	Occasionally	Rarely
Senior Responses	15	20	15	58
Alumni Responses	37	7	16	60

$$x^2 = 15.04 \text{ with } 3 \text{ df} \quad p (x^2 > 7.81) = .05$$

Table 18

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Frequency of Sunday School Attendance

Source	Regularly	Frequently	Occasionally	Rarely
Senior Responses	15	11	7	75
Alumni Responses	68	7	8	37

$$x^2 = 47.19 \text{ with } 3 \text{ df} \quad p (x^2 > 7.81) = .05$$

Alumni responses in relationship to the sensitivity demonstrated by one student to another. As indicated in Table 20, the obtained Chi Square of 6.90 is not significant at the .05 level of confidence. Therefore, null hypothesis sixteen is not rejected, indicating that student perception of fellow students' sensitivity has remained unchanged since graduation. Null hypothesis seventeen is tested by comparing 1969 Senior responses with 1980 Alumni responses in relationship to the student personnel deans' perceived sensitivity to the individual student. As indicated in Table 21, the obtained Chi Square of 11.95 is significant at the .05 level of confidence, indicating that a significant difference in perceptions exists. Null hypothesis seventeen is rejected. The shift in response pattern appears to be a movement from the extremes to the middle positions with the result that a more negative perception of the student personnel deans' sensitivity appears. This may result from less contact with student personnel deans during college or from the general stereotype of student personnel deans as disciplinarians. Null hypothesis eighteen is tested by comparing 1969 Senior and 1980 Alumni responses in relationship to the administrations' perceived sensitivity to the individual student. As indicated in Table 22, the obtained Chi Square of 1.38 is not significant at the .05 level of confidence. Therefore, null hypothesis eighteen is not rejected, indicating that the generally negative view of

Table 19

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Perceptions of Faculty
Sensitivity to Students

Source	Very Sensitive	Somewhat Sensitive	Rarely Sensitive	Insensitive
Senior Responses	21	67	16	4
Alumni Responses	25	68	23	4

$$X^2 = .98 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 20

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Perceptions of Student Sensitivity
to Other Students

Source	Very Sensitive	Somewhat Sensitive	Rarely Sensitive	Insensitive
Senior Responses	19	68	17	4
Alumni Responses	35	72	12	1

$$X^2 = 6.90 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 21

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Perceptions of Student Personnel
Deans' Sensitivity to Students

Source	Very Sensitive	Somewhat Sensitive	Rarely Sensitive	Insensitive
Senior Responses	23	42	24	19
Alumni Responses	9	55	38	13

$$X^2 = 11.95 \text{ 3 } \underline{\text{df}} \quad p (X^2 > 7.81) = .05$$

Table 22

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Perceptions of the Administration's
Sensitivity to Students

Source	Very Sensitive	Somewhat Sensitive	Rarely Sensitive	Insensitive
Senior Responses	5	39	41	23
Alumni Responses	6	41	52	19

$$X^2 = 1.38 \text{ with 3 } \underline{\text{df}} \quad p (X^2 > 7.81) = .05$$

administrative sensitivity remains eleven years after graduation.

The next five null hypotheses deal with specific value issues. Null hypothesis nineteen is tested by comparing 1969 Senior and 1980 Alumni responses on the question of the consideration of occasional use of marijuana. As indicated in Table 23, the obtained Chi Square of 6.09 is not significant at the .05 level of confidence. Therefore, null hypothesis nineteen is not rejected, indicating that little difference exists between senior and alumni responses. However, the Chi Square of 6.09 almost reaches the 0.1 level of confidence, which may indicate a softening of the attitudes toward marijuana. Null hypothesis twenty is tested by comparing 1969 Senior responses with 1980 Alumni responses on the question of consideration of living together with a member of the opposite sex without being married. As indicated in Table 24, the obtained Chi Square of 7.03 is not significant at the .05 level of confidence. Therefore, null hypothesis twenty is not rejected, indicating that no significant shift has taken place in attitudes toward cohabitation. However, the Chi Square is significant at the 0.1 level of confidence and represents an increase from the Chi Square of .62 found by Lindberg (1971) nineteen months after graduation. Thus, a possible trend is noted. Null hypothesis twenty-one is tested by comparing 1969 Senior responses with 1980 Alumni responses on the question of

Table 23

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on the Question of Occasional Use
of Marijuana

Source	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
Senior Responses	3	9	18	78
Alumni Responses	5	11	35	69

$$\chi^2 = 6.09 \text{ with } 3 \text{ df} \quad p (\chi^2 > 7.81) = .05$$

Table 24

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on the Question of Unmarried
Cohabitation With a Member of the Opposite Sex

Source	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
Senior Responses	1	6	13	88
Alumni Responses	5	14	20	81

$$\chi^2 = 7.03 \text{ with } 3 \text{ df} \quad p (\chi^2 > 7.81) = .05$$

consideration of adoption of more liberal attitudes on sex, drugs, and alcohol in order to keep up with current societal norms. As indicated in Table 25, the obtained Chi Square of 4.93 is not significant at the .05 level of confidence. Therefore, null hypothesis twenty-one is not rejected, indicating that no significant difference exists between senior and alumni responses on perceived willingness to adopt more liberal views to conform to the views of the broader society. Null hypothesis twenty-two is tested by comparing 1969 Senior responses with 1980 Alumni responses on the question of the woman's role in determining the degree of sexual intimacy in a nonmarital, heterosexual relationship. As indicated in Table 26, the obtained Chi Square of 15.42 is significant at the .05 level of confidence. Therefore, null hypothesis twenty-two is rejected, indicating that a significant change of opinion has occurred on the role of the woman in determining the degree of nonmarital sexual intimacy. It is important to note that 89% of the sample disagrees to some extent with the belief that it is the woman's role to set the limit compared to 71% disagreement during the senior year. Null hypothesis twenty-three is tested by comparing 1969 Senior and 1980 Alumni responses on the perceived value of premarital sexual intercourse as an important experience for early marital adjustment. As indicated in Table 27, the obtained Chi Square of 12.26 is significant at the .05 level of confidence. Thus null hypothesis

Table 25

Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of Adoption of Liberal Attitudes Toward Sex, Drugs and Alcohol

Source	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
Senior Responses	1	5	27	75
Alumni Responses	0	2	42	76

$$X^2 = 4.93 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 26

Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Question of the Woman's Role in Determining Nonmarital Sexual Intimacy

Source	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
Senior Responses	6	25	32	45
Alumni Responses	2	11	60	47

$$X^2 = 15.42 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 27

Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Perceived Benefit of Premarital Sexual Intercourse for Marital Adjustment

Source	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
Senior Responses	2	3	21	82
Alumni Responses	4	10	41	65

$$X^2 = 12.26 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

twenty-three is rejected, indicating that a significant change has occurred in the perceived benefit of premarital intercourse in early marital adjustment. It is important to note, however, that 88% of the sample still disagrees to some degree with the premise that premarital intercourse can aid marital adjustment compared to 95% of the sample during the senior year.

The next four null hypotheses are generated from question 23 which asks about participation in dancing, the use of smoking tobacco, drinking alcoholic beverages, and the use of playing cards. Two comparisons are made. The first, like Lindberg's (1971) study, compares before college and after college behavior. The second compares behavior during college with behavior after college. Null hypothesis twenty-four is tested by comparing 1969 Senior responses with 1980 Alumni responses on the question of participation in social dancing. As indicated in Table 28, the obtained Chi Square of 4.97 is not significant at the .05 level of confidence. Therefore null hypothesis twenty-four is not rejected, indicating that no significant change has occurred in participation in dancing before and after college. However, an interesting difference is noted when comparing behavior during college with behavior after college. As indicated in Table 29, a significant difference exists in frequency of participation in dancing. Since students signed a statement promising not to participate in social dancing during college, this, perhaps, is not

Table 28

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Frequency of Participation
in Dancing Before College With After College

Source	Never	Rarely	Occasionally	Regularly
Before College	58	28	15	7
After College	64	29	25	2

$$\chi^2 = 4.97 \text{ with } 3 \text{ df} \quad p (\chi^2 > 7.81) = .05$$

Table 29

Summary Table Comparing 1980 Alumni Responses
on Frequency of Participation in Dancing
During College With After College

Source	Never	Rarely	Occasionally	Regularly
During College	105	9	5	1
After College	64	29	25	2

$$\chi^2 = 34.14 \text{ with } 3 \text{ df} \quad p (\chi^2 > 7.81) = .05$$

surprising. When comparing Tables 28 and 29 the conclusion can be reached that the college environment prompts a temporary change in participation in dancing and that graduates soon return to their precollege standards. Null hypothesis twenty-five is tested by comparing 1969 Senior responses with 1980 Alumni responses in regard to participation in smoking. As indicated in Table 30, the obtained Chi Square of 9.47 is significant at the .05 level of confidence. Thus null hypothesis twenty-five is rejected although the high percentage (86%) of those who never smoke is noteworthy. Table 31 summarizes 1980 Alumni responses comparing self-reported smoking during college with self-reported smoking after college. When comparing participation in smoking during college with smoking after college, a significant difference is noted, in spite of the prohibition against smoking during the college years. However, while the hypothesis is rejected that no significant change occurred it must be noted that the vast majority (85.8%) choose to abstain from smoking, which is virtually identical to the precollege percentage of abstinence (85.0%). Null hypothesis twenty-six is tested by comparing 1969 Senior responses with 1980 Alumni responses on the frequency of the use of alcohol. As indicated in Table 32, the obtained Chi Square of 83.82 is clearly significant. Thus null hypothesis twenty-six is rejected. In terms of the four behaviors examined in question 23 the

Table 30

Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on Frequency of Participation in Smoking Before College With After College

Source	Never	Rarely	Occasionally	Regularly
Before College	96	6	5	1
After College	103	3	3	11

$$\chi^2 = 9.47 \text{ with } 3 \text{ df} \quad p (\chi^2 > 7.81) = .05$$

Table 31

Summary Table Comparing 1980 Alumni Responses on Frequency of Participation in Smoking During College With After College

Source	Never	Rarely	Occasionally	Regularly
During College	102	11	6	1
After College	103	3	3	11

$$\chi^2 = 13.91 \text{ with } 3 \text{ df} \quad p (\chi^2 > 7.81) = .05$$

Table 32

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on the Frequency of Use of Alcohol
Before College With After College

Source	Never	Rarely	Occasionally	Regularly
Before College	90	12	5	1
After College	29	30	45	16

$$\chi^2 = 83.82 \text{ with } 3 \text{ df} \quad p(\chi^2 > 7.81) = .05$$

Table 33

Summary Table Comparing 1980 Alumni Responses on the
Frequency of Use of Alcohol Before College
With During College

Source	Never	Rarely	Occasionally	Regularly
Before College	105	8	7	0
During College	91	22	5	2

$$\chi^2 = 9.87 \text{ with } 3 \text{ df} \quad p(\chi^2 > 7.81) = .05$$

use of alcohol is the area of greatest change. Some of the change can be explained by the fact that students prior to college had not reached legal drinking age. However, certain other comparisons suggest that the nature of change goes beyond that explanation. First, Table 33 compares participation in the use of alcohol before college with participation in the use of alcohol during college. The table shows that in spite of rules prohibiting alcohol use, a change was beginning to occur to a degree not present in other areas. As indicated in Table 33, the obtained Chi Square of 9.87 is significant, indicating an increase in the number of those who report using alcohol. Second, consider Lindberg's finding that the use of alcohol had increased significantly 19 months after graduation (1971, p. 109). When Lindberg's after graduation responses are compared with the current after graduation responses a significant change is noted as indicated in Table 34. The obtained Chi Square of 12.09 is significant at the .05 level of confidence. Thus, the trend toward increased alcohol use is clear. The final comparison between use of alcohol during college with use of alcohol after college, as reported in the 1980 investigation, is contained in Table 35. Although the obtained Chi Square of 76.15 is significant at the .05 level of confidence, indicating a significant difference between behavior during college and behavior after college, this clearly represents a temporary

Table 34

Summary Table Comparing 1971 Alumni Responses With 1980
Alumni Responses on the Frequency of Use of Alcohol

Source	Never	Rarely	Occasionally	Regularly
1971 responses	49	23	25	11
1980 responses	29	30	45	16

$$X^2 = 12.09 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 35

Summary Table Comparing 1980 Alumni Responses on the
Frequency of Use of Alcohol During College
With After College

Source	Never	Rarely	Occasionally	Regularly
During College	91	22	5	2
After College	29	30	45	16

$$X^2 = 76.15 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

inhibition on the use of alcohol. It is notable that 51% of the respondents occasionally or regularly use alcohol. Of the four areas considered in question 23, this is the only area where a majority are at the occasionally-regularly end of the spectrum. Null hypothesis twenty-seven is tested by comparing 1969 Senior responses with 1980 Alumni responses on the frequency of use of playing cards. As indicated in Table 36, the obtained Chi Square of 0.62 is not significant. Therefore null hypothesis twenty-seven is not rejected, indicating that no significant difference exists in the use of playing cards. Table 37 shows the comparisons between the use of playing cards during and after college as reported in the 1980 study. The obtained Chi Square of 35.51 is significant at the .05 level of confidence. This again shows the temporary inhibition on the use of playing cards due to college rules.

A final hypothesis based on the 1969 Senior Questionnaire is tested. Null hypothesis twenty-eight is tested by comparing 1969 Senior responses with 1980 Alumni responses on changes in attitudes toward other racial groups. As indicated in Table 38, the obtained Chi Square of 21.77 is significant at the .05 level of confidence, leading to the rejection of null hypothesis twenty-eight. However, the large number of uncertain responses makes interpretation difficult. If the last column is omitted, the degrees of freedom are reduced to two and Chi Square is

Table 36

Summary Table Comparing 1969 Senior Responses With 1980 Alumni Responses on the Frequency of Use of Playing Cards Before College With After College

Source	Never	Rarely	Occasionally	Regularly
Before College	33	26	42	7
After College	32	33	48	7

$$X^2 = .62 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 37

Summary Table Comparing 1980 Alumni Responses on the Frequency of Use of Playing Cards During College With After College

Source	Never	Rarely	Occasionally	Regularly
During College	72	31	15	2
After College	32	33	48	7

$$X^2 = 35.51 \text{ with } 3 \text{ df} \quad p (X^2 > 7.81) = .05$$

Table 38

Summary Table Comparing 1969 Senior Responses With 1980
Alumni Responses on Perceived Changes in Attitudes
Toward Other Races

Source	More Positive	Unchanged	Less Positive	Uncertain
Senior Responses	27	28	7	27
Alumni Responses	47	46	9	6

$$\chi^2 = 21.77 \text{ with } 3 \text{ df} \quad p(\chi^2 > 7.81) = .05$$

0.30 which is not significant. However, if uncertainty is considered as a socially acceptable way of being less positive and is included in that category, then the obtained Chi Square is 15.46 which is significant at the .05 level of confidence. One could conclude that attitudes toward other races became less uncertain and perhaps more positive.

Descriptive Examination of Ancillary Data

In examining the 1980 questionnaire responses, a number of interesting facts are evident. First, the typical respondent spent 7.3 semesters at the college, 5.9 semesters in a college residence, participated in co-curricular activities for 4.9 semesters, reads alumni mailings (96.7%), has not attended an off campus alumni meeting (71.7%), has visited campus (57.5%), has significant contact with friends from college (55.8%), and has not donated to the college (59.2%). In addition, the typical respondent is married (82.5%). Of those who were currently married in 1980, the average couple had been married 8.6 years and had 2.0 children. The typical respondent has an advanced degree (60.8%), lives in the suburbs (64.2%), works in a place where less than 25% of the co-workers share the college's standards, has an average family income of \$26,500, tithes regularly (66.7%), does not participate in a personal fitness program (59.2%), has a regular program for individual spiritual growth (56.7%), and does not voluntarily live at a lower standard than income would permit (67.5%). In the area of priorities, the typical respondent ranks personal relationship to God and personal relationship to spouse as the top two priorities followed by personal relationship to offspring, service to others, and job. In evaluating the impact of the college experience, the typical respondent

ranks student friendships as by far the most important influence (see Table 39). Classroom content is second in importance followed by living in a college residence and participation in co-curricular activities.

It is possible to compare the responses to certain questions on this survey with responses to selected well known surveys of college alumni. For example Calvert (1969) directed a national study of college graduates for the Survey Research Center of the University of California at Berkeley. Calvert's research shows that 50% of college alumni have attended a college function or visited campus and 48% have donated to the college (Pace, 1979, p. 80). This compares to a visitation rate of 57.5% and a donation rate of 40.8% in this survey. Pace (1979, p. 101) summarizes a number of studies that deal with satisfaction with and attitude toward the college. In this study 68.3% of the respondents would definitely or probably recommend attendance at the college. Pace's summaries show a range of 88% to 57% for similar questions. In the area of political activities 50.8% of the respondents in this survey signed a political petition, 20.8% wrote a letter to a public official, and 1.7% campaigned for a political candidate in the last 12 months. By comparison Pace's summaries show between 30-79% of college alumni have signed a political petition, 20-23% have written to a public official and 20% have campaigned for a political candidate (pp. 101-102).

Table 39

1980 Alumni Ranking of Factors Having the Most Impact
During the Undergraduate Experience

Factor	<u>M</u>	<u>SD</u>
Student friendships	1.91	1.43
Course content	3.21	1.85
Residence life	4.34	2.40
Co-curricular activities	4.49	2.31
Involvement with faculty	5.55	2.55
Daily chapel	6.05	2.38
Special chapels	6.07	2.42
Student personnel programs and people	8.49	2.08
President of the college	8.79	2.18
Other administrators	9.39	1.72
Statement of conduct	9.70	1.78

Note. Factors were ranked on a scale from 1 (high) to 12 (low).

In the area of cultural activities, comparisons can also be made. In this sample 75.8% of the respondents report attending a concert (compared to 17-55% in Pace's summary), 49.2% visiting an art gallery or museum (compared to 17-79%), 56.7% attending a theatrical production (compared to 36-79%), 48.3% reading five or more fiction books (compared to 43%), and 67.5% reading 5 or more nonfiction books (compared to 36%) in the last year (Pace, 1979, pp. 102-103).

Perhaps the area of most interest, however, has to do with interpersonal skills, goals and values. If the college claims distinctiveness in these areas it is instructive to compare how graduates of Wheaton respond to certain evaluative statements in comparison to graduates of other institutions. The key studies summarized by Pace (1979) are the Syracuse Study conducted in 1948 involving 2,000 alumni from 5 selected classes, the Calvert Survey of Men Graduates in Liberal Arts conducted in 1963 involving 11,000 alumni from 100 colleges from 3 selected classes, the National Opinion Research Center (NORC) Alumni Survey conducted in 1968 involving 5,000 alumni of the class of 1961 from 135 colleges, the UCLA Survey, conducted in 1969, of 8,000 alumni of the class of 1950 from 74 colleges, the Higher Education Research Institute (HERI) National Study of College Graduates and Employment conducted in 1974-1975 involving 5,500 graduates in the class of 1965 from 248

colleges, and the 1976 Associated Colleges of the Midwest (ACM) Survey of Liberal Arts Graduates involving 3,300 graduates from 11 liberal arts colleges from four selected classes. To more clearly present the comparisons, a question by question synopsis of questions 51-57 of the Senior Questionnaire is presented below.

Question 51. "My undergraduate experience at Wheaton greatly helped me to understand the meaning and value of life." In the current survey 60.9% of the respondents agree or strongly agree with this statement. By comparison in the Syracuse Survey 79% indicate their college experience helped or greatly helped them in understanding the meaning and value in life (Pace, 1971, p. 105).

Question 52. "My undergraduate experience at Wheaton helped me to develop a sensitivity to the feelings and perceptions of others." In the current survey 69.1% of the respondents agree or strongly agree with the statement. By comparison 85% of those responding on the ACM Survey, 56% of those responding on the UCLA Survey, and 91% of those responding on the Syracuse Survey express similar perceptions (Pace, 1971, pp. 104-105).

Question 53. "My undergraduate experience at Wheaton helped me to develop an understanding of different philosophies, cultures, and ways of life." In the current survey 71.7% of the respondents agree or strongly agree with the statement. By comparison 64% of those responding

on the UCLA study feel similarly (Pace, 1971, p. 105).

Question 54. "My undergraduate experience at Wheaton helped me to develop competence in coping with ethical and moral issues." In the current survey 65% of those responding agree or strongly agree with the statement. Again, by contrast 80% of those responding in the ACM Survey feel that the college experience was effective in developing competence in this area (Pace, 1971, p. 105).

Question 56. "My experience at Wheaton helped me to develop a personal philosophy of life." In this survey 65.8% of those responding agree or strongly agree with the statement. Pace cites several studies for comparison on this question. For those agreeing with the statement, the Syracuse Survey shows a 73% response, the Calvert Survey shows a 68% response, and the NORC Survey shows a 64% response (Pace, 1971, p. 105).

Question 57. "My undergraduate experience at Wheaton helped me to develop competence in getting along with different types of people." In the current survey 58.4% of those responding agree or strongly agree with the statement. In the Calvert Survey 72% make a similar claim, while 68% of those in the NORC Survey and 61% of those in the UCLA Survey make similar claims (Pace, 1971, pp. 104-105).

Although certain methodological concerns, such as varied wording on the questions, varied sample selection

procedures, and varied methods of data analysis make exact comparisons difficult in the areas mentioned above, it is clear that these reports of the Wheaton experience in areas related to interpersonal skills, goals, and values certainly do not place Wheaton ahead of other institutions. The age of some of the surveys, the varying distances between the time of the surveys and graduation, and the variety of colleges surveyed are additional factors which must be considered in making comparisons.

Another topic to be considered in this section relates to the use of money. Tithing, or donating 10% of personal income to charitable causes, is a common teaching in religious circles. In the present investigation a t test was performed comparing the mean income level of those who tithe with the mean income level of those who do not tithe. As indicated in Table 40, those who tithe have a significantly lower income level than those who do not tithe. Thus, the results appear to indicate that tithing and income level are related. A t test was performed comparing mean dogmatism scores of those who tithe with those who do not tithe. As indicated in Table 41, those who tithe have a statistically significant difference in dogmatism level from those who do not tithe. Thus, it appears as if tithing is also significantly related to dogmatism. Generally respondents whose dogmatism score is above the mean are more likely to tithe than respondents

Table 40

Summary Table Comparing Mean Income Levels of Those Who
Tithe With Those Who Do Not Tithe

Group	<u>n</u>	<u>M</u>	<u>SD</u>
Tithers	80	18,800	11,040
Nontithers	40	31,000	16,880

$\underline{t} = 4.35$ with 118 df $\underline{p} (\underline{t} > 3.16) = .002$ (2 tailed).

Table 41

Summary Table Comparing Mean Dogmatism Scores
of Those Who Tithe With Those Who Do Not Tithe

Group	<u>n</u>	<u>M</u>	<u>SD</u>
Tithers	80	155.11	23.00
Nontithers	40	130.80	22.49

$\underline{t} = 5.539$ with 118 df $\underline{p} (\underline{t} > 3.16) = .002$ (2 tailed).

whose dogmatism score is below the mean.

In addition to null hypotheses one through six additional data are generated on dogmatism by the current investigation. Table 42 compares mean dogmatism scores of respondents holding baccalaureate, masters, or doctoral degrees. As indicated in the table, differences exist by level of degree at the .0757 level of confidence. Those with more advanced degrees have lower dogmatism levels than those with less advanced degrees. Table 43 presents a number of comparisons involving dogmatism and association with people of similar beliefs. Examining responses to the question, "Approximately what percentage of the following groups would generally agree with the statement of faith and standards of conduct at Wheaton College?" leads to significant categorical distinctions in mean dogmatism scores. This is most obvious in activities such as church attendance and leisure time associations where there is greater personal freedom of choice. When the work environment is examined more closely and the two extremes are compared (0-25% vs. 76-100%), obvious differences emerge (Mean = 142.53, \underline{n} = 60; Mean = 158.70, \underline{n} = 27). Table 44 presents comparative data relating dogmatism and postcollege participation in four behaviors proscribed during college (use of alcohol, use of tobacco, social dancing, and use of playing cards). The variable "POST" is derived from question 23 on the Senior Questionnaire. It

Table 42

Summary Table of Analysis of Dogmatism Scores
Across Academic Degree

Degree	B.A./B.S.	M.A./M.S./ M.Ed/M.Div.	Ph.D./Ed.D/M.D./ J.D.
<u>M</u>	151.15	147.95	135.33
<u>n</u>	47	55	18

Note. Minimum score possible = 40. Maximum score possible = 280. Higher score indicates greater dogmatism.

Source of Variability	<u>df</u>	<u>SS</u>	<u>M</u>	<u>F</u>	<u>p</u>
Between Groups	2	3296.93	168.47	2.64	.0757
Within Groups	117	73078.1	624.599		
Total	119				

Table 43

Summary Table Comparing Mean Dogmatism Scores on Responses to the Question,
 "Approximately What Percentage of the Following Groups Would Generally Agree
 With the Statement of Faith and Standards of Conduct at Wheaton College?"

People Who Attend Your Church					
Percentage	Don't Attend	0-25%	26-50%	51-75%	76-100%
<u>M</u>	121.60	129.50	144.92	151.35	155.52
<u>n</u>	15	10	13	19	63
People With Whom You Spend Leisure Time					
Percentage	Don't Associate/ No Leisure Time	0-25%	26-50%	51-75%	76-100%
<u>M</u>	144.00	128.14	139.45	150.05	164.57
<u>n</u>	3	29	20	31	37

(Table 43 continued)

People With Whom You Work

Percentage	Don't Work Out- side Home/Un- employed	0-25%	26-50%	51-75%	76-100%
<u>M</u>	148.64	142.53	143.14	142.07	158.70
<u>n</u>	22	60	7	4	27

Note. Minimum score possible = 40. Maximum score possible = 280. Higher score indicates greater dogmatism. Grand mean = 147.308.

(Table 43 continued)

Analysis of Variance

Source of Variability	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Church					
Between Groups	4	17724.43	4431.11	8.42	.001
Within Groups	115	60527.16	526.32		
Total	119	78251.59	657.58		
Leisure					
Between Groups	4	23177.15	5794.29	12.10	.001
Within Groups	115	55074.45	478.91		
Total	119	78251.60	657.58		

(Table 43 continued)

Source of Variability	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Work					
Between Groups	4	5147.08	1286.77	2.02	.096
Within Groups	115	73104.51	635.69		
Total	119	78251.59	657.58		

Table 44

Summary Table Comparing Mean Dogmatism Scores
With Frequency of Participation in Alcohol, Tobacco,
Social Dancing, and Playing Cards

Participation Level	Low	Medium	High
<u>M</u>	155.13	132.16	122.71
<u>n</u>	82	31	7

Note. Minimum score possible = 40. Maximum score possible = 280. Higher score indicates greater dogmatism. Grand mean = 147.308.

Source of Variability	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	2	16368.22	8184.22	15.47	.001
Within Groups	117	61883.15	528.92		
Total	119	78251.60	657.58		

summarizes frequency of participation in the four behaviors since graduation on a scale of 1-12. Based on response frequencies the sample was divided into high, medium or low participation groups. As indicated in Table 44, significant differences exist among the three groups. A similar analysis of behavior before college ($\underline{F} = .517$, $\underline{p} = .474$) and during college ($\underline{F} = 2.493$, $\underline{p} = .093$) shows no significant differences among groups. Table 45 analyzes mean dogmatism scores by living environment. When comparing mean dogmatism scores of respondents living in rural, suburban, or urban areas, no significant differences are found. Additional comparisons are made by partitioning the sample group in the current investigation into two groups: those above the mean dogmatism score ($\underline{n} = 57$) and those below the mean dogmatism score ($\underline{n} = 63$). Comparisons are made between the two groups on selected variables. Concerns exist about the statistical independence of the two groups based on the number of \underline{t} tests employed in making comparisons. The results are given in tabular form in Appendix G. The results are discussed in Chapter V. Table 46 presents one final group of data related to dogmatism. As the data were analyzed, an attempt was made to determine what factors in the current investigation could be used to predict dogmatism. The results of the multiple regression are presented in Table 46.

In addition to data related to dogmatism, selected

Table 45
 Summary Table Comparing Mean Dogmatism Scores
 Across Living Environment

Environment	Urban	Suburban	Rural
<u>M</u>	144.23	146.97	151.71
<u>n</u>	22	77	21

Note. Minimum score possible = 40. Maximum score possible = 280. Higher score indicates greater dogmatism. Grand mean = 147.308.

Source of Variability	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	2	633.57	316.99	.478	.621
Within Groups	117	77617.62	663.40		
Total	119	78251.19	657.58		

Table 46

Summary Table of Factors Used to Predict Dogmatism

Variable	Coefficient	Cumulative Multiple <u>R</u> Squared
Attitude Toward Homo- sexual Rights	5.168	.33920
Postcollege Use of Alcohol	3.520	.43390
Priority of Relation- ship With God	-5.567	.47639
Attitude Toward Divorce	3.685	.49834
Income Level	-2.388	.51524
Priority of Personal Relationship With Spouse	-4.508	.52700
Sunday Evening Church Attendance	2.199	.53361
Priority of Job	-2.609	.53808
Participation in Per- sonal Fitness Program	5.047	.54243
% of People at Work Who Agree With College's Beliefs	-1.434	.54629
Integration of Faith/ Life During College	1.545	.54955
% of Extended Family That Agree With College's Beliefs	-3.117	.55223
% of Leisure Time Spent With People Who Agree With College's Beliefs	2.484	.55470
Marital Status	-1.555	.55757

View of Exercise as Part of Christian Stewardship	2.153	.55979
Postcollege Partic- ipation in Four Pro- scribed Behaviors	2.813	.56187
Participation in Per- sonal Spiritual Growth Program	-2.319	.56392
% of People at Church Who Agree With College's Beliefs	1.444	.56560
Children or No Children	2.875	.56711
Attitude Toward Abortion	0.958	.56806
Possession of Advanced Degree	-0.630	.56883
Regular Tithing	-2.102	.56928
Attitude Toward Inter- racial Marriage	0.745	.56981
Interest in Spiritual Matters Since Graduation	-0.737	.57017
Position on Liberal- Moderate-Conservative Spectrum	0.550	.57038
Constant	123.690	

ancillary data from the Senior Questionnaire are presented in the last part of this section. Tables 47 and 48 show self-reported comparisons of college and postcollege placement on a liberal-moderate-conservative spectrum. The obtained Chi Square of 31.66 is statistically significant, indicating an apparent change in a more liberal direction since the college years. Table 48 compares college and postcollege political labels. The obtained Chi Square of 64.16 is also statistically significant, indicating an apparent change from the college years.

The final part of this section presents data from the last section of the questionnaire. In this portion questions are asked about personal religiosity and social/moral issues such as abortion, racial attitudes, consumption of resources, divorce and remarriage, the role of women in child rearing and in out of the home work settings, and homosexuality. In evaluating responses in these areas comparisons are made with the data gathered by the Princeton Religion Research Center (Gallup, 1982).

In evaluating personal religiosity a number of trends may be noted about this sample group. First, 81% of the respondents ranked their relationship with God as "most important" when compared to their relationship with their spouse, offspring, service to others, or job. By contrast Gallup (1982, p. 113) found that 69% of those responding completely agreed or mostly agreed with the statement,

Table 47

Summary Table Comparing 1980 Alumni Responses
of Self-Descriptive Social/Political Label During
College With Current Social/Political Label

Source	Conservative	Moderate	Liberal	Other
College Label	59	36	21	4
Current Label	39	62	12	7

$$X^2 = 31.66 \text{ with } 3 \text{ df} \quad p (X^2 > .05) = 7.81$$

Table 48

Summary Table Comparing 1980 Alumni Responses
of Self Descriptive Political Party Preference
During College With Current Political Party Preference

Source	Republican	Independent	Democrat	Other
College Label	75	25	19	1
Current Label	42	54	19	5

$$X^2 = 64.16 \text{ with } 3 \text{ df} \quad p (X^2 > .05) = 7.81$$

of participation in prayer. If prayer and Bible reading are considered to be at least part of a system of spiritual growth a rough comparison can be made that the Wheaton group appears to be religiously active. In addition, Gallup (1982, p. 31) reports a "born again" rate of 35%, down from 38% in 1980. Gallup (1982, p. 76) also reports a rate of 32% involvement in charitable activities.

When it comes to assessing how beliefs are put into practice some parallel areas are clearly stated while others require more indirect comparison. Gallup (1982, p. 118) reports that 80% completely or mostly agree with the statement, "I try hard to put my religious beliefs into practice in my relations with all people, including people of different races, religions, nationalities and backgrounds." In the Wheaton alumni sample 71% of the respondents indicate that their undergraduate experience helped or greatly helped "integrate all areas of life into a meaningful, Christ-centered pattern." In addition 72% indicate that their Wheaton experience helped them develop "an understanding of different philosophies, cultures, and ways of life." Also, 58% report that they were helped "in getting along with different types of people." More specifically in the area of race 43% of the graduates feel that they have become more positive toward other racial groups since graduating, 63% do not object to interracial marriage and 79% do not object to living in a racially

mixed neighborhood.

In other areas where religious beliefs influence behavioral standards, the Gallup (1982, pp. 68, 69) survey reports that 69% oppose any ban on abortion, 64% favor excluding homosexuals from teaching in public schools, 67% do not welcome more acceptance of sexual freedom, and 82% do not welcome more acceptance of marijuana usage. In the Wheaton survey 33% oppose a ban on abortion and 20% favor public funding of abortions. In dealing with homosexuality, 18% of the Wheaton alumni feel that homosexuals should have full legal rights and benefits and 51% feel that there should be discrimination against homosexuals in matters of employment. In the area of heterosexual freedom, 84% oppose premarital cohabitation. Finally, in the Wheaton survey 87% oppose the occasional use of marijuana. It is clear in these areas that the Wheaton group is more conservative than the national norms. In spite of this, the Wheaton alumni show very little difference from national norms for self-rating on a conservative-moderate-liberal political continuum. Gallup (1982, p. 89) shows a breakdown of 31% conservative, 50% moderate, and 17% liberal compared to 32% conservative, 52% moderate, and 10% liberal for the Wheaton group.

Summary

The data from the Rokeach Dogmatism Scale, Form E and the Wheaton College Senior Questionnaire (Alumni Revision) have been presented. A preliminary analysis of the data indicates that relatively little significant change has occurred in dogmatism from 1969 to 1980. Therefore, the decrease in dogmatism which occurred during the college years appears to have been maintained.

The Senior Questionnaire responses also demonstrated some degree of stability with 11 of the 21 comparisons showing no significant difference from 1969 to 1980. Where change did occur it was in a less conservative direction on some items, such as the use of alcohol or tobacco, the role of women, feelings about premarital sexual experience, and decreased interest in missions, and in a more conservative direction on other items, such as increased church attendance. In retrospect the alumni in the sample had a less positive view of the student personnel deans and a more positive view of the opportunities to develop social competence.

The significant findings and conclusions are examined and discussed in more detail in Chapter V.

CHAPTER V

DISCUSSION

This chapter begins with an overview of the current investigation. The purpose of the investigation, the highlights of the literature review, the general hypotheses, and the research methods are summarized to provide a backdrop for the discussion of the findings based on data reported in Chapter IV. The second part of this chapter presents a discussion of the data reported in Chapter IV. The first subsection focuses on findings related to dogmatism and findings related to the Senior Questionnaire as revised for the present investigation. The twenty-eight null hypotheses are analyzed. In the area of dogmatism, no significant changes are noted in comparing 1969 and 1980 responses. In the analysis of the Senior Questionnaire, changes are noted in eleven of the twenty-two null hypotheses. In the second subsection conclusions are drawn by comparing the findings of the present investigation to the findings of other studies. The third part of this chapter focuses on the implications of this investigation for the college as well as suggested directions for the conduct of future research.

Summary

Purpose. As indicated in Chapter I, one of the primary purposes of the small, religiously oriented, liberal arts college is the inculcation of a specific and lasting value orientation and lifestyle in its students. While research has been conducted to investigate changes occurring during the college years at both religiously oriented and nonreligiously oriented institutions, very little research has been conducted to investigate the persistence of the changes which occur during the college years. This lack of longitudinal research is particularly true at small, religiously oriented colleges. Thus, while such colleges may have goals related to value change, there is little research to indicate whether or not those goals are attained. In an age of rising consumerism, neither the college nor the prospective student can document the benefits of this type of education which is generally more costly than other types of education. In addition to this concern about long term stability of values, a concern exists about factors contributing to changes in belief systems. A concept which is useful in studying belief systems is reported by Rokeach (1960). The concept of dogmatism, as measured by the Rokeach Dogmatism Scale, is an indication of the relative degree of openness to change in a belief system. It has been demonstrated that dogmatism generally declines during the college years. However,

little is known about how dogmatism changes after the college years. Thus, two key areas have been identified for research in the present investigation: persistence of values and behaviors promoted during the college years and persistence of the open-mindedness developed during the college years.

Conclusions from related research. In reviewing the literature on changes in value related attitudes, behaviors, and dogmatism during the college years, a number of general conclusions may be drawn. It is clear that certain changes typically occur during college. Although some changes may be the result of maturation, it appears that the college experience enhances and may even be responsible for initiating certain changes. Students typically become more independent, more self-confident, more knowledgeable, more emotionally stable, more free in interpersonal relationships, and more certain of personal values. In addition, students typically become more liberal, less religious, more open to other ways of life, and less dogmatic during the college years. Studies of change after college provide less information. However, it generally appears that students maintain their increased liberalism, intellectual skills, and social skills. Hedonistic behavior, which typically increases during college, is likely to decrease after college. Trends in religious behavior are less clear, with some studies

indicating increased religiosity after college while the majority indicate general maintenance of the decreases which occurred during college. Postcollege studies of dogmatism are extremely limited and offer no clear trend in the alumni years.

Subjects. The college chosen for investigation is Wheaton College, a small, religiously oriented, liberal arts college near Chicago. The Office of Institutional Research at the college conducted a preliminary investigation of the changes which occurred in selected members of the class of 1969. As Lindberg (1971) reports, dogmatism declined significantly among class members during the four years of college. This decline occurred despite the fact that the students come from generally conservative evangelical churches and the college has comparatively strict rules for student behavior. These rules reflect a specific set of values and beliefs that the college attempts to reinforce in its students. In the current investigation two instruments were chosen to study specific changes between the senior year in 1969 and a point 11 years after graduation. In the spring of 1980 the Rokeach Dogmatism Scale, Form E and the Wheaton College Senior Questionnaire (Alumni Revision) were readministered to a sample of 150 members of the class of 1969. This same sample had completed the same instruments during the spring of 1969. The data generated from comparisons between the

two test administrations are the basis for the findings presented in this chapter.

Hypotheses. The longitudinal nature of this study and the two instruments mentioned above provide the framework for the two major research hypotheses. In the first area of investigation it is hypothesized that no significant difference exists between the mean dogmatism scores of selected Wheaton College students tested as seniors and the mean dogmatism scores of the same students tested 11 years after graduation. In the second area of investigation comparisons are made between 1969 and 1980 responses on the Wheaton College Senior Questionnaire. It is hypothesized that no significant differences exist in the mean responses of subjects responding in 1969 and the mean responses of subjects responding in 1980 in 22 selected attitudinal and behavioral areas.

Method. In the current study a stratified sample of 150 subjects was identified for investigation. This sample is identical to the sample studied in 1969 by the Office of Institutional Research at Wheaton College and by Lindberg in 1971. The 1969 respondents were compared with the 1980 respondents on three variables (number of respondents per major, number of respondents by sex, and age of profession of personal faith in Christ) in an effort to assure that the two groups were closely matched. Although no significant differences exist on these three variables the

possibility exists that the groups differ on key variables which have not been identified. The subjects were contacted by mail in the spring of 1980 and were asked to complete the Rokeach Dogmatism Scale, Form E, and the alumni revision of the 1969 Wheaton College Senior Questionnaire. Additional questions were added to the questionnaire to gather descriptive data about the respondents and to gather data about value related attitudes and behaviors not studied in 1969.

The Dogmatism Scale as developed by Rokeach (1960) provides a measure of closed-mindedness or dogmatism. The concept of dogmatism is related to authoritarianism and is meant to describe the degree to which a person's belief system is open to change. Dogmatism differs from authoritarianism in that it describes a general intolerance that is not related to a particular ideology or period of history. The Dogmatism Scale has been used in more than 120 studies and appears to be generally reliable and valid. The Senior Questionnaire was designed by the college and was modified by Lindberg (1971) for a follow-up of alumni. The purpose of the questionnaire is to gather data about the college experience in order to identify areas for improvement and to assess the impact of the college in selected value related areas. The original questionnaire had 31 objective questions and five open-ended questions. For the current investigation eight of the objective

questions and all of the open-ended questions were eliminated. A cover sheet containing 12 questions to solicit demographic information and an addendum containing 37 questions generally related to attitudes toward current moral issues or the undergraduate experience were added.

One hundred twenty usable questionnaires were returned. Six null hypotheses were tested using t tests and 22 null hypotheses were tested using the Chi Square statistic. Additional comparisons were made using analysis of variance, t tests, and multiple regressions. The number of t tests, Chi Squares, and null hypotheses suggest the possibility of obtaining spurious results by chance. However, since the current investigation is a systematic replication of a previous study, the decision was made to use the same procedures, keeping in mind this limitation. The research design is basically a one group stratified sample, longitudinal pretest/posttest design. While there are some inherent weaknesses in the design due to the items that were fixed at the start of the longitudinal study (such as poor wording on certain questions, unclear definition of selected variables, and lack of individual data from the 1969 study) and due to the ex post facto nature of the study, the design appears to be justified in terms of the unusual opportunity to observe the same group over an 11 year period, in terms of the lack of research on changes in alumni dogmatism, and in terms of the state of

the field of college student personnel work. While there is limited maximization of experimental variance in ex post facto research, the 11 year period between the test and retest has been sufficient to allow a significant impact to occur from a wide variety of postcollege environments. By gathering additional demographic data, additional comparisons are possible among various subgroups in the current investigation providing a degree of experimental variance. The nature of this research also limits the opportunities to control extraneous variables. However, given the self-selection and screening which occur prior to enrollment at colleges like Wheaton, a degree of homogeneity does exist in the research sample. A certain degree of randomization also occurred in selecting the sample. Senior seminars were chosen at random and were distributed across the range of academic majors. An effort has been made in the current investigation to minimize error variance. While the Senior Questionnaire has not been evaluated as a research instrument, the Rokeach Dogmatism Scale, as previously mentioned, appears to have a reasonable degree of reliability and validity.

Discussion of the Findings

Dogmatism. One of the primary questions faced in the current investigation is, "What happens to dogmatism in a selected group over a period of time during young adulthood?" As reported previously (Lindberg, 1971) and in line with the review of the research on dogmatism reported in Chapter II, the class of 1969 at Wheaton College showed a significant decline in dogmatism from the freshman year to the senior year of college. Lindberg (1971) also reports a maintenance of that decline during the immediate postcollege adjustment period. Little research exists on this specific variable to tell us precisely what happens as time progresses. The current study establishes that for this group of subjects (graduates of a relatively conservative, religiously oriented liberal arts college) the decline in dogmatism which occurred during college appears to be maintained in the 11 years following graduation. This is true regardless of the sex of the respondents. It is also true when all transfers are eliminated from the group under investigation. Thus, the first general null hypothesis that no significant difference exists between the mean dogmatism scores of senior Wheaton College students and the mean dogmatism scores of the same individuals tested 11 years after graduation is not rejected. The data suggest that Wheaton College provides a climate in which students from generally

narrow religious settings become more tolerant and accepting of other belief systems in spite of the atypical lifestyle expectations of the college and the relatively homogeneous range of beliefs professed by the faculty and the majority of the student population. In addition, the tolerance which develops during the college years appears to be maintained in the more heterogeneous postcollege environment. The belief structure, lifestyle expectations, and structured atmosphere of the institution apparently do not alter the student's ability to recognize and accept the diversity of beliefs in others or to continue recognizing and accepting that diversity after college.

That this change should occur during college and persist after college is suggested by a number of developmental theorists. If individuals have a basic cognitive structure which acts as a mediating filter in determining personal interaction with external reality, and if that structure changes in a generally hierarchical and progressive fashion as individuals interact with their environment, then one would expect change to occur during the college years. This is particularly true in the cognitive area as individuals are challenged repeatedly to evaluate and restructure their approach to life. Further, if this developmental process is primarily unidirectional, then a higher level achieved during the college years is likely to be maintained after the college years. This

should be true particularly at colleges like Wheaton which fit many of the criteria given by Jacob (1957) and Chickering (1969) for maximizing personal change and development.

Looking at specific theorists lends support to the belief that dogmatism should decrease during the college years. Perry's (1970) research indicates a movement from higher dogmatism to lower dogmatism during the college years. As individuals generally progress through dualism, multiplicity, and relativism to commitment in relativism, a greater degree of openness to change of the belief system is evident. The either-or, we-they, simplistic, categorical thinking that is typical of the dualistic thinker is also characteristic of the dogmatic individual. At the other end of Perry's spectrum the person who has made a commitment in the midst of relativism reportedly realizes that knowledge has meaning in context, that receiving constructive feedback on personal judgments is valuable, and that reality is pluralistic. In spite of that relativism, a personal commitment is made which remains open to additional clarification. This is characteristic of the less dogmatic individual.

Douglas Heath's (1968) model of maturing also gives support to the view that dogmatism should decrease during the college years. Although in Heath's model much of the stabilization occurs after the college years, during the

college years individuals become more allocentric, or other-centered. According to Heath, "a mature person is not as egocentric as an immature person nor is he as dominated by his own immediate needs. He is more socialized and other-centered" (1968, p. 8). Widick, Parker, and Knefelkamp (1978) summarize Heath's view:

Allocentric maturing is manifest in the following attitudes and skills: (1) an ability to look at problems from multiple perspectives; (2) increasing skill in socialized thought--thought that is precise and logical, thereby communicating effectively to others; (3) increased tolerance and adoption of humanistic values; (4) an increased ability to see oneself through others' eyes...; and (5) an increased ability to empathize with others. (p. 82)

Clearly Heath's description of allocentric maturing parallels the decline in dogmatism.

A third model of development is suggested by Chickering (1969). Two of the areas of development that he identifies are related closely to dogmatism. The task of "freeing interpersonal relationships" implies developing the ability to tolerate a wider range of persons and ideas (p. 15). This implies an ability to understand and appreciate the diversity and plurality that exists in the sphere of belief systems. A maturing individual is increasingly able to appreciate and relate to a wide spectrum of others. This implies the ability to see things with a perspective which comes with a lower degree of dogmatism. The task of "developing integrity" implies the

ability to reformulate the rigid rules of childhood to more varied situations, to chose for oneself what values are appropriate after careful examination of the alternatives, and to live with congruence between professed beliefs and daily behavior (pp. 17-18). This process implies, again, the open-mindedness characteristic of individuals with low dogmatism. Chickering's research on college age populations implies that these changes occur during the college years and that the change rate diminishes after college, which is in harmony with the findings of the current investigation.

In examining the data related to dogmatism, a number of interesting trends may be noted by comparing those above the mean dogmatism score with those below the mean dogmatism score (see Appendix G for statistical comparisons). In this sample, dogmatism does not appear to be significantly related to having children, having an advanced degree, living environment (urban, suburban, or rural), or the percentage of people in the current work environment or extended family who share the basic faith and behavioral standards that were present in the college environment. In terms of the college experience, it does not appear to be significantly related to the number of semesters of participation in co-curricular activities or the number of semesters in college housing. In terms of self-evaluation of the college experience, dogmatism does not appear to be significantly related to the view that the

undergraduate experience helped the student understand the meaning and value of life; develop sensitivity to the feelings and perceptions of others; develop an understanding of different philosophies, cultures, and ways of life; develop competence in coping with moral and ethical issues; develop a more accurate picture of oneself; or develop a personal philosophy of life. In terms of attitudes toward value related issues, dogmatism does not appear to be significantly related to participation in a physical fitness program; voluntarily living at a lower standard; participation in social dancing, use of tobacco, use of alcohol, or use of playing cards before or during college; attitudes toward other racial groups or interracial housing; attitudes toward voluntary limitation of consumption of resources; or the priority given to one's spouse, offspring, job, or service to others compared to the priority given to developing a personal relationship with God.

In contrast to these areas where dogmatism does not appear to be a significant factor, a number of areas can be identified where dogmatism appears to be significantly related. By comparing those whose dogmatism score is below the mean with those whose dogmatism score is above the mean the following significant relationships can be identified. Dogmatism appears to be significantly related to family income level, the percentage of people in the church or

leisure time environment who share the basic faith and behavioral standards that were present in the college environment, political party preference, and self-reported position on a liberal-conservative spectrum. In terms of self-evaluation of the college experience, dogmatism appears to be significantly related to the belief that the undergraduate experience helped the individual integrate life into a "meaningful, Christ-centered pattern" and to the belief that the college experience assisted the individual to develop the ability to get along with different types of people. In terms of attitudes towards value related issues, dogmatism appears to be significantly related to tithing; participation in a systematic program of spiritual growth; increased interest in spiritual growth; increased interest in spiritual matters since graduation; church attendance; the belief that physical exercise is an important part of Christian stewardship; the priority of a personal relationship with God; the belief that personal standards do not need to be changed to keep up with broader changes in society; participation in social dancing, use of tobacco, use of alcohol, and the use of playing cards since graduation; the belief that abortion is morally wrong; the belief that divorce or remarriage after divorce are morally wrong; lack of support for homosexual rights; lack of support for more equal treatment of women; and a lack of support for equal roles in child rearing.

In concluding this section one additional finding is noted. As the data were analyzed an attempt was made to determine what factors in this investigation could be used to predict dogmatism, the primary area of focus for this study. A stepwise regression was conducted. The results are reported in Table 46. As indicated in the table, the most important factor in predicting dogmatism is the respondent's attitude toward homosexual rights. The more strongly one opposes full protection under the law for homosexuals the higher one's dogmatism score. The second contributing factor is postcollege use of alcohol. Generally, the less one uses beverage alcohol the greater one's dogmatism score. The third significant variable is the relative priority of the respondent's personal relationship with God. If one's relationship with God has a higher priority than one's relationship to one's spouse, offspring, service to others, or job, then one's dogmatism score is likely to be higher. The other variables are noted in Table 46. Generally, dogmatism and rejection of divorce, Sunday evening church attendance, participation in a personal fitness program, working with people who agree with the college's statement of faith, spending leisure time with people who agree with the college's statement of faith, postcollege participation in smoking, dancing, or playing cards, attending church with people who agree with the college's statement of faith, having children, and

self-description as socially/politically conservative are among the things that are direct predictors of higher dogmatism. In contrast, an inverse relationship appears to exist between dogmatism and income level, assessment that the college experience helped integrate life into a Christ-centered pattern, participation in a personal spiritual growth program, possession of an advanced degree, and regular tithing.

Senior Questionnaire. A second major question faced in the current investigation is, "What happens to selected values, attitudes, and behaviors of a selected group of young adults during the postcollege experience?" Lindberg's (1971) findings from the Wheaton College Senior Questionnaire indicate no significant change in the 19 months following graduation except in the area of participation in the use of alcohol. By contrast, in the present study with the same sample, a number of significant changes since graduation are noted. The changes will be noted in two subsections: changes in attitudes toward the college or college experience and changes in value related attitudes or behaviors.

The area of least change on the Senior Questionnaire involves attitudes toward the college or college experience. On the questions related to recommending attendance at the college to a friend, integrating life into a Christ-centered pattern as a result of the college

experience, perceiving faculty, fellow students, or the administration as displaying sensitivity, no significant changes are noted. Although a slightly lower percentage (68% vs. 76%) definitely or probably would recommend Wheaton College to a friend now than at the point of graduation, this change is not found to be statistically significant (see Table 9). A similar comparison exists for the feeling that the education received helped or helped very much in integrating all of life into a Christ-centered pattern (see Table 11). In the current investigation 71% answered affirmatively compared to 77% in the original study. On questions asking for perceptions of the degree of sensitivity of different groups to the individual student, the comparisons between the 1980 respondents and the 1969 respondents show the following groups are rated as somewhat sensitive or very sensitive in the two studies (1980 vs. 1969): faculty (78% vs. 81%), fellow students (89% vs. 81%), and administrators (39% vs. 41%). None of these changes are statistically significant (see Tables 19, 20, and 22). Two questions did show a significant change, however. The rating of the student personnel deans' sensitivity dropped significantly. The very sensitive rating dropped from 21% to 8% and the rarely sensitive rating increased from 22% to 32%. The Chi Square analysis (see Table 21) of 1969 and 1980 responses indicates a change that is significant at the .05 level of confidence.

It is interesting to note that this shift toward a more negative view still does not bring the student personnel deans' rating as low as the rating for the general administration. The shift may reflect a lack of significant contact with the student personnel area during college or the general stereotype of student personnel deans as disciplinarians. This stereotype may have been reinforced in the postcollege environment in a way that was not true during the college years when specific situations and personalities may have counteracted the stereotype. A second significant change relates to the perception of the college environment as a good place to develop social competence. The formal social atmosphere mentioned by Keeton and Hilberry (1969, pp. 34, 35) was often criticized by students as hindering social development. Apparently after gaining some distance from campus and having a chance to put into practice the social skills gained, Wheaton graduates reflect more positively on their undergraduate experience. The more positive perception that the opportunity to develop social competence was either excellent or good is shown by a margin of 63% (1980) to 43% (1969) when the two studies are compared. This is significant at the .05 level of confidence (see Table 10).

The area of greatest change on the Senior Questionnaire relates to changes in value related attitudes or behaviors. While the direction of change is not

consistent, it is usually in a more liberal direction, away from the values encouraged during the undergraduate experience. It is important to note, however, that in most cases where significant change occurs away from the values expressed during the undergraduate days, the majority of alumni still are found at the conservative end of the response spectrum.

On six questions, no significant change is noted in the response pattern from 1969 to 1980. On Question 6, comparing changes in interest in spiritual matters during college, no significant change is noted (see Table 12). By contrast, Question 7 shows a significant increase in interest in spiritual matters since the college days (see Table 13). Question 9 shows a significantly more negative perception of interest in missions during the college years than during the 1969 study (see Table 14), but Question 10 shows no decline in interest in missions since college (see Table 15). Questions 11 through 13 show a marked increase in local church involvement and participation in church activities. These findings generally show an increase in religious interest since college (see Tables 16, 17, and 18). A review of Question 30 adds support to the view that religious and spiritual matters are important to this subject population. In ranking a number of key personal priorities, 81% rank their relationship with God as their most significant priority.

Other areas where no significant change is noted are more behavior oriented. No significant change is found when comparing 1969 and 1980 responses in attitudes toward the use of marijuana (see Table 23), unmarried cohabitation (see Table 24), participation in dancing (see Table 28), participation in the use of playing cards (see Table 36), and in the need to adopt more liberal attitudes due to peer pressure (see Table 25). Although there is a slight shift away from strongly disagreeing with the occasional use of marijuana, 87% of those responding still disagree or strongly disagree with its use. However, the shift to a more liberal view is almost significant at the .1 level of confidence. On the issue of cohabitation the shift away from the strongly disagree pole is significant at the .1 level of confidence. However, 84% of those responding still disagree or strongly disagree with the practice. On the issues of participation in social dancing and the use of playing cards, the study finds virtually no change when comparing behavior prior to college with behavior after college. In comparing behavior during college with behavior after college, a rather significant change is noted for both activities. Most students appear to have abstained during college in accordance with their promise to the college on entry, even though it may have conflicted somewhat with their precollege experience. In terms of current behavior, the majority still rarely or never

participate in either activity. Finally, on question 20, no significant change is noted from the senior year to 1980 in the need to change one's attitudes in a more liberal direction due to peer pressure. By 94% (1969) and 98% (1980) margins, the respondents strongly or moderately disagree with the need to change due to peer pressure.

In addition to the areas of significant change noted above, five additional questions show significant change since 1969. On Question 21, "In a nonmarital, heterosexual relationship, it is the role of the woman to decide how sexually intimate the relationship should be," a significant shift toward the disagree end of the spectrum is noted (see Table 26). In the 1980 sample 89% moderately or strongly disagreed with the statement compared with 71% of the 1969 sample. This indicates, perhaps, a more equalitarian view of male-female relationships. On Question 22, "Sexual intercourse before marriage is an important experience for early marital adjustment," another significant change is noted (see Table 27). Although 88% of the respondents still moderately or strongly disagree with the statement (compared to 95% in 1969), the number who strongly disagree has dropped from 76% to 54%. It is interesting to note from Question 19 that 84% of the respondents disagree with premarital cohabitation but 88% disagree with premarital intercourse as an aid to marital adjustment.

On questions relating to the use of tobacco and beverage alcohol, significant changes are noted from precollege to postcollege behavior. The number who regularly smoke increased from 1% to 9% of the sample. While the number who never smoke dropped from 89% to 86%, the percentage of those who never smoke is still quite high. Comparing those who report smoking during college with those who report smoking after college, a similar shift is noted. Of the sample, 94% report never or rarely smoked during college. Participation in the use of alcohol is one of the areas where greatest change is reported on this investigation. It is the only area among the four behavioral issues where a majority of the respondents are at the occasionally-regularly end of the spectrum. It is interesting to note that while 76% of the respondents report never using alcohol during college (which must be a remarkably high percentage by comparison to most institutions), only 24% report never using alcohol currently.

The final area of significant change on the Senior Questionnaire involves Question 29, which samples attitudes toward other races (see Table 38). The framing of the question in the 1969 survey makes comparisons difficult. However, it does appear that attitudes toward other races have become less uncertain and perhaps more positive since graduation.

In summarizing the results of the Senior Questionnaire it is noted that 11 of the 22 null hypotheses are rejected at the .05 level. In addition, two other null hypotheses are nearly rejected. Changes in certain areas seem to be apparent. A significant increase in church attendance and a significant increase in the use of alcohol are the two areas where the most change appears to have taken place. Other significant changes are noted in attitudes toward premarital sexual intimacy and in the woman's role in determining the degree of premarital sexual intimacy. Overall, the basis of these findings and a systematic review of the Senior Questionnaire, it would seem that the second general null hypothesis, that no significant change has occurred from 1969 to 1980 in the mean responses on the Senior Questionnaire, would have to be rejected.

Comparisons

The most obvious place to begin comparisons is with Lindberg's (1971) investigation, since the current investigation parallels a major part of that investigation. In the area of changes in dogmatism, the findings are virtually identical. Where Lindberg finds a slight but insignificant increase in dogmatism scores in the 19 months following graduation, results of the present investigation indicate an insignificant decrease in dogmatism scores in the 11 years following graduation.

Such is not the case in comparing results on the Senior Questionnaire. Lindberg (1971) finds only one significant area of change, increased use of alcohol. As previously noted, the current study finds 11 areas of significant change varying from increased interest in spiritual matters and church attendance, to more liberal attitudes toward alcohol, tobacco, and premarital sexual intercourse.

Other comparisons related to postcollege changes in dogmatism are limited. Certainly Lindberg's (1971, p. 134) finding that dogmatism declined during the college years is consistent with the results of most major studies (Foster, Stanek, and Krossowski, 1961; Lehman and Dressel, 1962, 1963; and Plant, 1965). Thus, Wheaton appears to stand in the mainstream of American higher education when changes in dogmatism during the college years are considered. However,

the only other study dealing with postcollege changes in dogmatism is limited in scope and comparisons are difficult. In a follow-up study of education majors Ayers and Turck (1976) report a decline in dogmatism among those who taught after college and an increase in dogmatism among those who completed graduate study. Since individual scores and subgroup scores by major are not available from the 1969 study, there is no way of comparing the 1969 and 1980 dogmatism scores of those involved in teaching, although it is noted that education majors are above the mean dogmatism score in the present investigation (158.75 vs. 147.31, SD = 25.64). It is possible to compare those with advanced degrees to those without advanced degrees. Contrary to Ayers and Turck's (1976) findings, dogmatism appears to decline as the education level increases as indicated in Table 42.

In comparing the present investigation to Rokeach's (1960) findings, one would expect to find a relationship between dogmatism and association with people of similar beliefs. Rokeach states, "The basic criterion of categorization is a belief criterion: how much we like and dislike those whose belief-disbelief systems are similar to or different from our own" (1960, p. 34). This statement is supported by data in the current study. Examining responses to the question, "Approximately what percentage of the following groups would generally agree with the statement

of faith and standards of conduct at Wheaton College?", leads to significant categorical distinctions in mean dogmatism scores for the groups "people who attend your church" and "people with whom you spend leisure time." Table 43 gives an analysis of these responses. In these two areas there is a general freedom of choice in choosing with whom one associates. In the area of work, however, there is not the same degree of freedom of choice. Although some opt to work for a religious organization, opportunities are more limited in that area. Thus, in comparing mean dogmatism scores by categories of percentage of people who agree with the statement of faith or behavioral expectations of the college with the place of work, a different picture emerges. Conducting an analysis of variance across the four categories for work, a significant difference is found only at the .1 level of confidence. However, when the two extremes are compared, 0-25% agree (\underline{M} = 142.53, \underline{n} = 60) and 76-100% agree (\underline{M} = 158.70, \underline{n} = 27) an obvious contrast is evident. Clearly the data supports Rokeach's assertion that those with higher dogmatism scores are more likely to spend time with people of similar beliefs while those with lower dogmatism scores are more likely to spend time with people with whose beliefs they may not agree. Also in line with the general definition of dogmatism as a measure of resistance to change in a whole belief system, subjects scoring higher in dogmatism not

only associate more closely with others of like mind but also maintain a higher degree of conformity to the specific behavioral standards called for by the college during the undergraduate period. The variable "POST" is a measure of degree of participation in four of the behaviors proscribed during college (use of alcohol, use of tobacco, social dancing, and use of playing cards). After dividing the sample into three groups (low, medium, or high participation) based on postcollege participation, significant differences emerge in mean dogmatism scores among the three groups, indicating a greater degree of conformity to past values among those with higher dogmatism scores (see Table 44).

Focusing again on the Senior Questionnaire, a number of comparisons can be made with findings from other studies. Previous studies indicate the shift toward liberalism which typically occurs during college, tends to persist after college. Although there may be some shifting of values and attitudes in either a more liberal or a more conservative direction, most studies indicate that increases in liberalism are likely to be maintained (Astin, 1977) with relatively little other change occurring. Bugelski and Lester (1940) indicate a mixed response in alumni retests with no statistically significant changes. Nelson (1954) in a follow-up of college graduates finds a slight, but statistically significant trend toward more

liberal attitudes 14 years after graduation. Bender (1958) finds a higher religious score on the Allport-Vernon Study of Values in the 1956 retest of his original 1939 sample of Dartmouth College seniors. Freedman (1961) finds that various changes which occurred in Vassar alumnae during college are generally sustained after college. He concludes that any changes which occur after college are generally the result of changes in the broader society (1961, p. 24). In contrast, Astin (1977) concludes that the postcollege changes are more likely to result from specific environmental changes that are more individualistically felt (p. 189). Newcomb (1967) finds relatively little change in liberalism in his study of Bennington alumnae. In the current investigation there are many points of agreement with previously cited research. In selected areas it has been shown that little change occurred between 1969 and 1980. However, other areas of change are clear. For example, in self-reports of political party preference and in positioning on a conservative-moderate-liberal continuum, significant change is noted away from the conservative pole and to a lesser degree from the liberal pole to the moderate position. A shift is also noted away from the Republican position to the Independent position. Tables 47 and 48 summarize these changes. These tables suggest a relative increase in liberalism, a finding that contrasts with most of the previously cited studies. Other

signs of increased liberalism have also been noted. Attitudes toward the use of alcohol, premarital sexual intercourse, and the role of women in determining premarital sexual intimacy are among the areas where a statistically significant change occurred in a more liberal direction. As noted previously, not all change has been in a liberal direction. Participation in religious activities significantly increased in harmony with Bender's (1958) findings. Perhaps some of the more liberal attitudes are the result of general societal changes as suggested by Freedman (1961). Certainly in the area of alcohol, a major shift in attitudes has taken place among the constituent groups of the college (Thompson, 1983). Regardless of the reason for the shifts or the statistical significance of the shifts, it is clear that the sample group resides firmly in the conservative sector on most issues when compared to the general adult population.

Other comparisons suggested in Chapter IV relate less directly to the area of values and more to general satisfaction with and impact of the college experience. Pace's (1979) comprehensive summary indicates that very few alumni have a negative attitude toward their alma mater (p. 101). Most think that their college experience helped them develop the ability to think critically and to express themselves clearly. As a result of college they feel that their breadth of knowledge increased significantly as did

their ability to relate to other people. The college experience helped them to clarify their life goals and personal values (p. 106). College also had a positive impact on their postcollege participation in political, civic, and cultural affairs (p. 106). In comparing these summary statements with the results of the current investigation it is clear that a number of similarities exist. In this study only 12.5% of the respondents express dissatisfaction with the college experience to the point of not recommending it to a friend. That abilities in critical thinking and experience in coping with issues were helped is also suggested by the responses. Only 16% of the respondents disagreed with the statement that their undergraduate experience helped them develop competence in coping with difficult issues. Increased breadth of knowledge is indicated by a 72% agreement with the assertion that they developed a better understanding of different philosophies, cultures, and ways of life. In addition course content is ranked as the second most important impact of the college experience. If course content is important, student friendships are apparently more important. They are ranked significantly above all other facets of college life in terms of long term impact. This and responses to two other questions give credence to the assertion that the college experience aided in the ability to relate to other people. On the statement, "My

undergraduate experience at Wheaton helped me to develop a sensitivity to the feelings and perceptions of others," 69% expressed agreement. Similarly, 58% expressed agreement with the belief that they were helped to "develop competence in getting along with different types of people." On the matter of clarifying life goals and personal values there is good evidence to suggest that the Wheaton experience is helpful. Approximately 66% of the respondents indicate that their undergraduate experience helped them develop a personal philosophy of life and 60% thought that it helped them understand the meaning and value of life. In clarifying life goals and vocational direction, 31% report leaving college without clear vocational objectives while 75% report that the undergraduate experience helped prepare them for their current vocation. Finally, as reported in Chapter IV Wheaton graduates compare favorably with other graduates on measures of political, civic, and cultural participation. Thus, it is clear that on matters of satisfaction with the college experience and the long term impact of the college experience, the respondents in the current investigation feel that they gained significantly from the college experience.

In summary, certain areas of change and certain areas of stability are noted over an 11 year period in the responses of selected members of the class of 1969. In the

words of Newcomb and Feldman (cited in Chickering, 1969):

Attitudes held by students on leaving college tend to persist thereafter, particularly as a consequence of living in post-college environments that support those attitudes. Within-college changes, especially if accompanied by a general stance of openness to change, may be still further extended in response to new social and technological conditions.

General findings that attitudes change little after cannot be attributed simply to "inherent inertia," or to some sort of hardening of the psychological arteries. The basic fact is that one's attitudes and values do not change whimsically, but in response to new information or to new ways of viewing one's world. The older one becomes, the less the relative impact of any particular set of new experiences. The unique thing about late-adolescence-merging-into-early maturity is that this stage of development is one, in our society, maximally motivated to achieve autonomy and at the same time minimally constrained to conform to the restrictions of adult roles. The typical consequence is that if one does not change during this period one is not likely to change thereafter. Or, alternatively, if one has changed during these years one may have acquired a propensity for changing oneself in response to changes in the world outside oneself (p. 305).

Changes are noted which exemplify the impact of both supportive and nonsupportive postcollege environments. It is clear (Lindberg, 1971) that the Wheaton experience produced a "general stance of openness to change" and some changes have occurred, perhaps "in response to new information or to new ways of viewing one's world." It can be argued that some of the limitations accepted by Wheaton students may result in a delayed response to change; however, a general picture emerges of an alumni group that is largely in harmony with the beliefs and behavioral values of the institution.

Implications

In considering the implications of the present study for the college, at least two factors should be kept in mind. First, the mid- to late-1960's were a turbulent time on most college campuses. Even Wheaton had its share of difficult moments as the campus debated many issues, not the least of which was mandatory ROTC for all male students amidst rising national concern over Viet Nam. Given the tenor of the times, an argument could be advanced that alumni have given surprisingly positive responses in evaluating their college experiences. Although the current study does not advance that argument, it is helpful to consider that the sample group was attending college during a very difficult period. Second, in considering the implications of this study, it is important to remember that the college has changed. While the statement of faith signed by the faculty has remained intact, as have many of the behavioral expectations, the style of leadership appears to be somewhat more participatory and the approach to regulations appears to be more developmental. The intellectually stimulating atmosphere and the focus on worldwide service still appear to remain as part of the campus milieu. If a similar study were to be conducted on the class of 1984, the findings could possibly show some significant differences with the current investigation.

College goals. With these two considerations in mind,

attention is focused on the implications of this study for the college. As a place to begin, certain goal statements of the college are reviewed in the light of the findings of this investigation. The college states its general purpose, in part, as follows:

Wheaton College seeks to relate Christian liberal arts education to the needs of contemporary society. The curricular approach is designed to combine faith and learning in order to produce a biblical perspective needed to relate Christian experience to the demands of those needs (Inform: Bulletin of Wheaton College, 1983, p. 4).

This emphasis on the integration of faith and learning is listed as one of the prime areas of growth in the historical development of the college from 1965-1982 under the leadership of President Hudson Armerding (Inform: Bulletin of Wheaton College, 1983, p. 5). Thus, it should show prominently in the findings of the current investigation. In response to Question 5, "To what extent did your Wheaton education help you integrate all areas of life into a meaningful, Christ-centered pattern?", 22% reply that it helped very much, 49% reply that it helped, 23% reply that it neither helped nor hindered, and 6% reply that it hindered. While a generally favorable response rating of 71% is commendable, questions are raised that 23% found their experience essentially neutral and 6% found it negative in helping to meet this broadly stated purpose of the institution. The fact that Wheaton is academically

selective in admissions, required an admissions interview, and has some religious or moral screening based on conduct regulations and a statement of basic Christian faith, suggests that the homogeneity of the student body is higher than at most institutions. This degree of uniformity is, perhaps, a problem as well as a benefit. Perhaps if the integration of faith and learning is to occur at a higher rate, the college needs either to increase the diversity of the student mix or to provide more structured opportunities for exposure to diversity through meaningful interaction with more diverse populations. Required in-depth exposure to other cultures or increased internship opportunities might be ways of accomplishing this.

Responses to two other questions have implications for the college in evaluating this area. Question 54 asks to what extent the respondent agrees with the statement, "My undergraduate experience at Wheaton helped me to develop competence in coping with moral and ethical issues." Related to that, Question 56 asks for a similar evaluation of the statement, "My undergraduate experience at Wheaton helped me to develop a personal philosophy of life." Question 54 is associated with the desired ability to relate Christian experience to the needs of contemporary society, while Question 56 is associated with the development of a Biblical perspective that is the desired result of the integration of faith and learning. On

Question 54, 13% strongly agree, 52% agree, 19% are neutral, 13% disagree, and 3% strongly disagree. On Question 56, 23% strongly agree, 53% agree, 19% are neutral, 13% disagree, and 2% strongly disagree. Again, questions are raised about the third of the respondents who feel that their undergraduate experience was at best neutral in helping them to cope with moral and ethical issues or in developing a personal philosophy of life. While a two-thirds positive rating might be commendable for many institutions, it seems to fall short of the mark for an institution with a strong emphasis on moral behavior, ethical development, and application of faith to life. Perhaps a greater emphasis on ethics in required Bible or Philosophy courses, a broader campus dialogue on college rules, greater exposure to representatives of conflicting world views, greater student participation in campus judicial proceedings, or a seminar course in the major field of study or in the general education program relating to the development of a personal world view might lead to greater development in this area. At the very least the findings would seem to imply a need for the college to evaluate this area in light of changes that have been made since 1969.

A second broad goal of the college is that the undergraduate program is intended to enable students to "appreciate beauty and order in God's creation and human

creativity in the arts and sciences" (Inform: Bulletin of Wheaton College, 1983 p. 4). This is one of the areas where the college appears to have made a lasting impact. On most measures of cultural activities the Wheaton alumni in this investigation compare favorably with other studies. In the past 12 months they report a high rate of attending concerts and theatrical productions, visiting art and science museums, and reading fiction and nonfiction books.

A third broad educational goal is "to assist students to respect, understand, and evaluate the thoughts of others" (Inform: Bulletin of Wheaton College, 1983, p. 4). Two questions reflect on the accomplishment of this goal in selected members of the class of 1969. Respondents were asked to express their degree of agreement with the statements, "My undergraduate experience at Wheaton helped me to develop an understanding of different philosophies, cultures, and ways of life" and "My undergraduate experience at Wheaton helped me to develop competence in getting along with different types of people." On the first question, 27% strongly agree, 45% agree, 7% were neutral, 19% disagree, and 3% strongly disagree. On the second question, responses are somewhat less positive with 9% strongly agreeing, 49% agreeing, 25% feeling neutral, 16% disagreeing, and 1% strongly disagreeing. The differing responses on these suggests that Wheaton may do a better job academically than practically in exposing students to a

variety of people and ideas. While this is probably true at virtually all academic institutions it provides an item for consideration and evaluation.

A fourth broad goal is to "cultivate the life-long habit of learning" and "to lay foundations for career, graduate, and professional training" (Inform: Bulletin of Wheaton College, 1983, p. 4). At the time of data collection in the present study, 60% of the respondents had earned an advanced degree. The tradition of Wheaton being a prime undergraduate source for advanced degrees (Mitchell, 1976) appears to be continuing. In addition, 75% of those responding indicate that their undergraduate experience greatly or somewhat helped prepare them for their current vocation. It would appear that this is one of the areas in which the college is generally meeting its goals.

A fifth broad goal is

to help students understand the meaning of life and their service to society, family, and the church, and to prepare them for the responsible use of their freedom and ability by virtue of their commitment to Jesus Christ as Savior and Lord. (Inform: Bulletin of Wheaton College, 1983, p. 4)

A number of response areas appear to reflect on this goal. On Question 51, "My undergraduate experience at Wheaton helped me to understand the meaning and value of life," 17% strongly agree, 44% agree, 23% are neutral, 11% disagree, and 5% strongly disagree. Concerns similar to those mentioned in the discussion of the first goal area are

evident in this response rate. While a 61% agreement may be commendable at some institutions, it probably falls short of the mark for the types of institutions Wheaton represents. Certain responses relate to specific subparts of this goal statement. In terms of service to society, the family, and the church, there are some interesting findings. One of the marks of service is a willingness to give time or money to institutions which attempt to better society. Of those responding, 65% feel it is important to give 10% of personal income to religious organizations or causes (67% say they actually do tithe) and 91% feel it is as important to give time as it is to give money to religious or charitable organizations. Another mark of service is a willingness to do with less for the benefit of others. Thirty-six percent of the respondents indicate a willingness to limit their family size and 76% indicate a willingness to limit consumption for the benefit of others. Interestingly, only 33% say they actually live at a lower standard of living for the benefit of others. In addition, this group appears to be rather family oriented, with 83% reporting that they are currently married. Only 5% report that they are either divorced or separated. Of those who are married, the average length of marriage is 8.6 years and the average number of children is 2.0. A rough measure of service to church is church attendance. As indicated previously, this is one of the areas of significant.

increase since graduation, with at least 84% indicating regular or very frequent church attendance. A measure of degree of service to society is political involvement. Ninety percent of the respondents indicate voting in the past four year period and nearly half (47%) indicate voting in nonpresidential year Congressional, state and local elections. In addition, 51% have signed a political petition in the last year and 21% have written a letter to a state or national politician. On the matter of personal "commitment to Jesus Christ as Savior and Lord," 98% can pinpoint a time when such a commitment was made.

A sixth broad goal is, "to encourage students to develop priorities which will contribute to their well-being and effectiveness physically, psychologically, socially, and spiritually" (Inform: Bulletin of Wheaton College, 1983, p. 4). This study reveals that in the area of fitness, 63% of the respondents agree or strongly agree that "It is an important part of Christian stewardship to participate in a regular, effective exercise program." However, only 41% state that they have a regular fitness program. With the addition of a Life Fitness Center and a formal program focusing on nutrition, exercise, stress control, and weight control, it may be that this area is being addressed more successfully than in the past. In the area of psychological well-being, 67% of the respondents agree or strongly agree that their undergraduate experience

at Wheaton helped them to develop a more accurate self-perception. Chickering (1969) identifies developing a realistic and stable self-image as the key developmental task of the college student. It appears that for two-thirds of the class of 1969, the undergraduate experience helped them in this process. In the area of social well-being, 63% of the respondents rate the opportunities for developing social competence as an undergraduate as good or excellent. As previously noted, this represents an improvement in perceptions measured during the senior year. In addition, 69% agree or strongly agree that their undergraduate experience "helped me to develop a sensitivity to the feelings and perceptions of others." Finally, in the area of spiritual well-being, 89% agree or strongly agree that it is important to spend regular time each week in personal spiritual development on an individual basis." However, only 58% participate in a regular program of individual growth. Increases church attendance have already been noted. It has also been noted that approximately 62% of the respondents report an increased interest in spiritual matters and 44% an increased interest in missions since leaving the college. In reviewing data related to this goal statement, several areas of challenge for the college are suggested. One of the prime implications is that attention needs to be given to bringing about congruence between belief and behavior. Particularly in the areas of fitness

and personal spiritual development there is a gap between what respondents say their behavior is and what they say it should be. Perhaps Wheaton is doing better than most colleges in these areas; however, there is room for improvement. The area of psychological well-being is another area of challenge. If Chickering's (1969) model of development has validity and the development of a realistic and stable self-image is the key task of the college student, then more should probably be done in the programming of the college to maximize that development. Perhaps the development of a mentoring program (Brown and DeCoster, 1982) that supplements the formal program of academic advising would be beneficial.

College rules. In addition to considering implications for the college in relation to goal attainment, implications are considered in relation to the impact of college rules. In beginning this section it is important to note that the college reexamined its rules in the early 1970's. The result is a more carefully reasoned approach to rules that differentiates more clearly between Biblical absolutes and cultural norms. Nevertheless, most of the major prohibitions exist on campus that existed when the current sample group was enrolled.

One of Astin's (1977) findings is that hedonistic behaviors (drinking, smoking, gambling) tend to increase during college (p. 199). He also finds some evidence to

suggest that they decrease after college. In the current study one of the noteworthy changes is that hedonistic behavior, particularly in the area of alcohol use, decreases during college and dramatically increases after college. This appears to be contrary to the wishes of the institution. The key question in this area is, "What is the role of rules in moral development?" An argument could be advanced, based on the findings of this study and Lindberg's (1971) study, that in the area of alcohol use the rules or some other part of the campus atmosphere are counterproductive. A clear implication for the college is that ongoing research is necessary to determine how to address the question of moral development and the role of rules. Given increased evidence of alcohol use and abuse within the subculture that Wheaton attempts to serve (Thompson, 1983), the college must find a way to effectively address this issue.

Self-reported impacts. Based on his findings as Director of the Project on Student Development in Small Colleges, Chickering (1971) reports that in loco parentis has been replaced by in loco uteri. "Like wombs, most colleges offer a warm and cozy setting where the organism can exist protected from outside influences until parturition sends him or her screaming into the world" (p. 48). He goes on to argue that at colleges where there is a high degree of selectivity and a narrow range of acceptable

behavior, it is not the institution but the peer group that has the greatest effect. He asserts that,

Under current patterns of recruitment and admission...the most productive educational outcomes for individuals and for the country take place in those non-selective colleges where proportions of misfits are high and where they are recognized and helped. Selective colleges, which by their selectivity function in loco uteri for most of their students..., contribute the least. (p. 54)

That Chickering's assessment has some validity is seen in rankings by the sample group of factors in the undergraduate experience which had a long term impact. Table 39 summarizes the findings. Clearly the area of greatest impact is student friendships. It is ranked in the top three by 87% of the respondents and has the least variance. A significant gap exists between it and the second ranked impact, course content. Another relatively large gap separates course content from residence life and co-curricular activities, which are fairly close together. Both of these factors focus again on the importance of peer contacts. In light of the previous discussion on college rules, it is interesting to note that the "Statement of Conduct" is firmly entrenched in last place after "Other administrators." These findings seem to imply a number of things for the college. First, the quality of the student body is vitally important. In selective colleges like Wheaton the quality of the finished product is determined in large measure by the quality of the entering product

(Chickering, 1971). Significant benefit to the institution and to individual students could be derived from increasing the diversity of student backgrounds within a certain framework and by exposing students to a greater diversity through the effective use of off campus resources. Thus, the admissions program is vital in attracting a diverse and well qualified student body and the academic program must work together with the student development program to maximize positive peer interaction and positive interaction with a variety of off campus stimuli. Second, the quality of the academic program needs to be maintained while increasing the emphasis on constructive interaction among students and professors. The mentoring concept mentioned previously (Brown and De Coster, 1982) could be a key factor in accomplishing this. The development and persistence of open-mindedness as shown in this study is a vital part of the academic process and must be maintained. Third, the value of residence life and co-curricular participation must not be overlooked. Discovering ways to document the positive impact that seems to be occurring here may be beneficial for the institution and the individual. If Astin's (1977) findings are correct, living in a campus residence positively affects artistic interests, self-esteem, persistence in college, achievement in co-curricular activities, grade point average, and general satisfaction with the college experience (pp.

220-221). It would seem, based on Astin's summary and the current study, that the college should continue its residential philosophy and commitment to sound residential facilities, programs, and personnel. Fourth, the relative placement of the chapel program may be significant. For an event which brings the entire college together four days a week, a ranking of sixth may be lower than desired.

In summarizing this area, Chickering's (1969, pp. 144-157) research is helpful. The college can maximize its impact and deal with many of the concerns voiced in this study by clearly and consistently stating its objectives and by finding ways to get them beyond the catalog pages to the minds and activities of the students. As in the gap between belief and behavior in selected areas probed by this study, what is stated as a goal must be pursued consistently and with imagination. A second area of challenge is finding ways to give a wider variety of students opportunities for involvement and leadership. Through residence life and co-curricular programming individual growth can be maximized as students find significant opportunities for involvement. The findings suggest Wheaton is doing a good job in this area. A third area of challenge suggested by Chickering is maximizing growth in the academic realm by focusing on discussion, program flexibility, and direct experiences. This suggestion also attends to the concern about a lack of

diversity and exposure to differing perspectives. A fourth way of maximizing development relates to residence arrangements. If the residence unit becomes a meaningful subculture for its members and if there is sufficient diversity of background, opportunity for interchange, and sharing of intellectual interests, significant growth will occur. Finally, Chickering suggests that maximizing interaction between students and faculty or administrators leads to significant personal and intellectual growth. The challenge of evaluating current programs and implementing programs based on the findings of those evaluations is a significant undertaking.

Product research. The institution has identified a number of areas for research and evaluation (Long Range Planning Committee, 1977). The current study provides only one part of the evaluative picture. If the institution is to be sure about its claims and the attainment of its goals, additional data must be systematically gathered and carefully analyzed. The findings of the present investigation are generally supportive of the long term impact of the college even though a number of significant questions have been raised.

A number of areas for additional research are suggested by this study. The most obvious need for research, perhaps, is a longitudinal analysis comparing similarly matched groups of high school seniors who go in

different directions after high school. A comparison among groups going directly into the world of work, going to Christian liberal arts colleges, going to private nonreligious colleges, and going to state universities would give valuable information about the true impact of the type of education offered by colleges like Wheaton. A second area of research is suggested by Chickering's (1971) assertion that, "The best colleges have the least effect." Although a great deal of similarity exists among religiously oriented liberal arts colleges, great diversity exists as well. Ongoing research into the differing impacts of these institutions would be valuable. It could shed light, perhaps, on the question of moral development and the type of climate that maximizes moral development during the college years. Of particular interest would be research on the role of rules in moral development. Some data suggests that increased rules may delay experimentation with hedonistic behavior. Research to determine if this is true and what long term impact such rules have would be valuable. Third, additional research is needed on the factors motivating behavior to become congruent with beliefs. A number of areas are identified in the present study where the level of behavior did not match up to professed beliefs. If factors could be identified in the college environment or postcollege environment which would help narrow that gap, the implications would be far

reaching. Fourth, a number of changes in behavior have been identified in the current study. Increases in church attendance, use of alcohol, and liberal attitudes toward premarital sexual intercourse are three of the more interesting findings. Research to study the reasons for these change could take us beyond the conjecture that they are the result of general changes in society. A fifth research suggestion is replication of parts of the current investigation with students attending the college now. Comparisons of dogmatism scores of the class of 1969 with the classes of 1984 and 1987 would give some perspective on the changes which have taken place since the first data was gathered on the class of 1969 in the fall of 1965. A final research suggestion is a follow-up study of this subject group in 1990, looking particularly for changes in dogmatism and value related attitudes and behaviors that are more society oriented than college oriented. The additional questions included in the Senior Questionnaire generated data for comparisons in the future.

In evaluating the present study, significant data and findings have been generated. It appears as if the small, religiously oriented, liberal arts college in the present study has made a significant impact on its students. However, to suggest that the study is without limitations is rather shortsighted. Concerns have been raised about the nature of the instrument used to collect the data, the lack

of individual data from 1969, certain aspects of the statistical analysis, and the equivalency of the 1969 and 1980 sample groups. If other standardized instruments had been used in addition to the Dogmatism Scale, Form E, potentially significant comparisons could have been made that go beyond the scope of this investigation. One of the limitations of Lindberg's (1971) study was eliminated in the present study. Significant time was allowed between graduation and the current investigation to allow greater societal impact on the key variables under consideration. In spite of these and other limitations, significant findings have been noted. That no significant changes occurred in dogmatism is truly an important finding and adds a new dimension to knowledge about dogmatism and about change in alumni populations. In addition the data from the Senior Questionnaire present a number of challenges to the small, religiously oriented, liberal arts college.

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APPENDIX A

APPENDIX A

STATEMENT OF RESPONSIBILITIES 1968-1969

Membership in an academic community is a unique, demanding, and privileged experience. It is important for individual members of the institution as a whole to recognize the reciprocal responsibilities inherent in the life of such a community. If maximum attainment of both personal and institutional objectives is to be realized, there must be clear understanding of them and unity of purpose and effort in striving toward their fulfillment.

As a Christian college, Wheaton is committed to an integration of Biblical Christianity with the liberal arts and sciences, an integration relevant to one's personal life, to classroom disciplines, to co-curricular activities and to societal experience in general. Therefore, the purposes of Wheaton College, as stated below, are designed to encompass the total life of those persons who have committed themselves to Christ, to this unique institution, and to scholarly study which explores the liberal arts in an historic Christian perspective.

The purposes of Wheaton College are:

1. To provide a liberal education that introduces the organized fields of learning and presents the Christian theistic view of the world, of man, and of man's culture in the light of Biblical and natural revelation.
2. To enable the student to understand truth in his study of Scripture, of nature, and of man; to pursue righteousness in the individual life and in society; and to appreciate beauty both in God's creation and in human literature and the arts.
3. To assist the student to understand, respect, and evaluate the thoughts of others and to express his own thoughts clearly and effectively.
4. To provide opportunity for concentration and research in one field of learning and to lay the foundation for graduate and professional training.
5. To help the student understand the meaning of life and his role in society and the church, and to prepare him for the responsible use of his freedom and ability by virtue of his commitment to Jesus Christ as Savior and Lord.

6. To aid the student in developing habits which will contribute to his well-being -- physical, psychological, and spiritual -- and will enable him to participate constructively in community and church life.

The first goal is to provide a liberal education that introduces one to all organized fields of learning, while stressing a Christian theistic view of the world, of man, and of man's culture, in the belief that the Holy Scriptures are a revelation from God which enables one to understand and evaluate that which is learned of various subjects.

As stated in the second objective, Wheaton believes that God has revealed Himself in nature and in man as well as in the Bible, and that the pursuit of truth and righteousness and beauty are imperative for one who has committed his life to Christ.

The next two objectives relate to the critical interaction which takes place in the classroom and to the adventure of learning in a specialized field of study.

The last two objectives are particularly significant because they relate not only to life here at Wheaton but also to one's responsibilities after leaving college. The College is persuaded that commitment to Jesus Christ as Savior and Lord results in responsible use of freedom in the employment of talents and capabilities which God has given.

It is recognized that not all members of the academic community may agree as to specific means of implementing institutional aims and objectives. For instance, to achieve the first objective the College requires of all students a basic core of subjects, including Bible and philosophy, literature, foreign language, natural science, art and music, social studies, and physical education. Some may disagree with specific aspects of this general education requirement but nonetheless accept the total core.

Likewise, the College sees fit to ask members of this academic community to observe certain behavioral norms which, although placing limitations on individuals while they are associated with the institution, help to create an atmosphere conducive to the achievement of institutional purposes. While stressing the fact that the essence of Christian faith and conduct is total commitment to Jesus Christ, the College believes that general principles of Christian behavior, such as observance of the moral law of God, are explicitly taught in the Scriptures and provide a

standard of behavior for all Christians. The College recognizes that the Scriptures do not provide in every case specific teaching regarding behavioral norms adopted by Wheaton College; when personally applied, therefore, the particulars of the Christian ethic in these cases must be determined individually between man and God.

With the guidance and enablement of the Holy Spirit, the College is responsible to:

1. Implement its purposes in such a way as to demonstrate their relevance to prevailing needs and changes in higher education, the Christian church, and society.
2. Exhibit in administrative affairs, classroom instruction, and co-curricular activities, the highest standards of competence, leadership, and encouragement for Christian maturation.
3. Formulate and observe standards of personal and professional conduct consonant with the realization of institutional purposes in a dynamic society.
4. Provide maximum educational opportunities within the framework of the aims and objectives of the college.
5. Constantly improve the total program of the institution so as to achieve its full potential.
6. Continuously maintain and reaffirm its commitment to "Christ and His Kingdom."

With the guidance and enablement of the Holy Spirit, the student is responsible to:

1. Cooperate constructively in the achievement of the aims and objectives of Wheaton College and the responsibilities of citizenship in the community and the nation.
2. Exhibit Christian conduct, based on principles taught in the Scriptures, which will result in the glorification of God, the edification of the Church and his own growth in grace.
3. Observe, while under the jurisdiction of the college, Wheaton College's "Standards of Conduct."
4. Take maximum advantage of the educational opportunities available to him by ordering his life so that he can live in harmony with both the academic and non-academic goals.
5. Make full use of his God-given abilities so as to

achieve maximum personal development.

6. Continually evaluate his commitment to Christ and to the purposes of Wheaton College.

Recognizing that God demands of His people the highest standards of conduct and that there are aspects of our contemporary culture which are offensive to the Christian conscience, the college believes that the Scriptures give a certain basic framework within which the individual may fashion between himself and God the particulars of a Christian ethic. Specific Biblical principles which the College seeks to establish for itself and to encourage in its students include:

1. The recognition that the Lordship of Christ extends to all of life and involves the observance of the moral law of God, not only as embodied in the Old Testament but also as brought to fruition in the life of Christ and the Spirit-filled life.
2. The responsibility to love God with all our heart, soul, and mind, and our neighbors as ourselves. This will involve an unselfish, motivating love as the basis for all of life's actions, decisions and relationships.
3. The care and concern for our bodies as temples of the Holy Spirit and instruments through which we seek to serve God.
4. The right of personal freedom in certain areas of decision-making and the responsibility of each to respect the standards and decisions of others in these areas.

To implement these principles into the fiber of college life the College seeks to create an atmosphere which guides the student to a personal acceptance of these principles and to an embracing of the total purpose of the College. The daily worship service, a Christian faculty dedicated to these principles, and a Standard of Conduct are all parts of the College's efforts to establish an atmosphere within which the purposes of the College may be promulgated. Hence, the College expects adherence to the following Standards of Conduct considered appropriate to its purposes: refraining from the possession or use of alcoholic beverages and tobacco, from gambling and the use of traditional playing cards, from social dancing, and from participation in oath-bound secret societies. The College further expects the students to exercise Christian discretion and restraint in the choice of entertainment including television, radio, movies, theater, and the various forms of literature.

Students, by virtue of their enrollment, agree to accept the responsibilities of membership in the academic community of Wheaton College which includes adherence to the specific Standards of Conduct stated in the preceding paragraph. While some may not have personal convictions wholly in accord with these responsibilities and standards, the purpose underlying this statement necessitates the student's honorable adherence to them while under the jurisdiction of the College or withdrawal if he can no longer in integrity conform to them.

STATEMENT OF RESPONSIBILITIES 1983-1984

All members of the college community are required to sign an agreement in which they promise to live in accordance with the following Statement of Responsibilities.

Membership in an academic community, particularly a Christian one, carries with it a unique, demanding and privileged responsibility. As a Christian college, Wheaton seeks to relate biblical Christianity to the liberal arts, sciences and fine arts, to co-curricular activities, to one's personal life and to society in general. The purposes of Wheaton College as stated in the catalog therefore assume that a member is both committed to Christ and desirous of a meaningful involvement in liberal arts education in an evangelical Christian context. The student, by virtue of his enrollment, therefore agrees to accept the responsibilities of membership in the college community.

The College believes that the Scriptures establish the basic principles which should guide the development of Christian character and govern all Christian behavior. These include:

1. The Lordship of Christ over all life and thought: this involves wholehearted obedience to the moral law of God as taught in the Old and New Testaments and exemplified in the life of Christ, the careful stewardship of mind, time, abilities, funds and opportunities for intellectual and spiritual growth, and the care of our bodies as temples of the Holy Spirit.
2. The responsibility to love God with all our being and to love our neighbor as ourselves. This means that unselfish love should be the motive in all life's decisions, actions, and relationships.
3. The responsibility to seek after righteousness, to practice justice in our dealing with one another and in our social institutions, and to help those in need.
4. The need to exercise our freedom responsibly within the framework of God's moral law, in relationship to the various communities of which we are a part, and with loving regard for the sensitivities and weaknesses of others.
5. Access through Jesus Christ to the forgiveness of God and to the help of the Holy Spirit in doing heartily what God requires of us.

Biblical Principles. Practices which are known to be morally wrong by biblical teachings are not acceptable for members of the Wheaton College community. Included are specific acts such as drunkenness, stealing, the use of slanderous or profane language, all forms of dishonesty including cheating, occult practices, and sexual sins such as pre-marital sex, adultery and homosexual behavior. In addition, Scripture condemns such attitudes as greed, jealousy, pride, lust, bitterness, needless anger, an unforgiving spirit and harmful discrimination and prejudice such as that based on race, sex or socio-economic status. While these attitudes are difficult to detect, they are as subject to the judgment of God as are outward forms of disobedience to Him. The college community is obliged to repudiate these attitudes and seek God's forgiveness and help so that each individual may grow in grace and righteousness.

Rules. The College also recognizes that, while the Scriptures do not provide specific teaching regarding all social practices, they do advocate self-restraint in that which is harmful or is offensive to others. The College has chosen, therefore, to adopt certain prudential rules which will contribute to the environment appropriate to its aims and goals. Thus, the College requires members of the community to abstain from gambling and from the possession or use of alcoholic beverages, tobacco, non-medicinal narcotic or hallucinogenic drugs including marijuana, and from social dancing. These rules apply to the student while he is under the jurisdiction of the College, that is, while he is enrolled in a college program or residing in college-approved housing; and he is expected to exercise restraint in these matters even when he is not under college jurisdiction.

Discretion. In addition, members of the community, whether or not they are under the jurisdiction of the College, are expected to practice discretion and restraint in the following:

1. The choice of television programs, music, movies, theater, printed matter and card games.
2. The use of approved folk and interpretive dance and other art forms in dramatic productions and other public programs.
3. The choice of organizations with which they associate.
4. The use of the Lord's Day to give primary attention to worship, rest, and Christian fellowship and service.

It is assumed that the individual who voluntarily joins the Christian academic community at Wheaton College will, with God's help:

1. Deepen his spiritual commitment and understanding by means of the Christian activities and educational opportunities available both on campus and in local churches.
2. Develop his moral character by practicing biblical principles and moral teachings.
3. Develop his intellectual and creative powers by thorough academic work, studying the broad range of human opinion and ideas without engaging in the whole range of human behavior.
4. Participate constructively in the life of the College and civic communities, observing their rules and doing whatever he can to help them achieve their goals.

APPENDIX B

APPENDIX B

CLASS OF 1969 BACKGROUND DATA

Please answer the following questions. Your responses will be kept in confidence as indicated in the cover letter.
THANKS!

Major at Wheaton: _____

Place a check to indicate which semesters you attended Wheaton.

	Freshman	Sophomore	Junior	Senior
Fall	_____	_____	_____	_____
Spring	_____	_____	_____	_____

What is your present marital status?

Unmarried and not dating anyone regularly
 Unmarried and dating the same person regularly
 Engaged
 Married Now (indicate number of years _____)
 Separated
 Divorced
 Widowed
 Other _____

Do you have any children?

No
 Yes (Please give ages of each _____)

Do you have an earned degree beyond the bachelor degree?

No
 Yes (indicate which degree or degrees _____)

How would you describe your living environment?

_____ Urban

_____ Suburban

_____ Rural

While a student at Wheaton, how many semesters did you live in a residence hall or college house? _____

While a student at Wheaton, how many semesters did you participate in college sponsored extra curricular activities (sports, drama, music organizations, CSC, Student Government, etc.)? _____

Approximately what percentage of the following groups would generally agree with the statement of faith and standards of conduct at Wheaton College?

	0-25%	26-50%	51-75%	76-100%	does not apply
people at your place of work	_____	_____	_____	_____	_____
people who attend your church	_____	_____	_____	_____	_____
people with whom you spend leisure time	_____	_____	_____	_____	_____
your extended family (par- ents, in-laws, siblings, etc.)	_____	_____	_____	_____	_____

What is your family yearly income to the nearest \$1000?

_____ 0 - 8

_____ 9 - 17

_____ 18 - 26

_____ 27 - 35

_____ 36 - 44

___45 - 53

___54 - 62

___63 - 71

___72 or up

What continuing contact have you had with Wheaton College?
(more than one may be checked)

___read alumni mailings

___attended at least one alumni meeting off campus

___visited campus

___significant contact with some friends from college

___donation of time or money to the college

___other _____

Check any of the following that apply to you.

___I give 10% or more of my gross income to religious causes

___I participate in a regular physical fitness program

___I participate in a regular program of individual spiritual growth

___I have chosen to live at a lower standard of living than my income would permit

APPENDIX C

APPENDIX C

SENIOR QUESTIONNAIRE--1969

This instrument is a retest of the Wheaton College Senior Questionnaire which was given to a sample of seniors in the Spring of 1969. The purpose is to analyze the changes which have taken place in behavior and values since college graduation. Some questions have been eliminated and the grammatical structure has been altered on others to reflect your alumni status. In addition, a limited number of new questions have been added to provide a basis for future research.

The anonymity of your responses will be protected as indicated in the cover letter.

Please check the answer that best describes your response to the item.

1. To what extent was the Student Personnel Office helpful in assisting you in your choice of postgraduate plans?

- helped greatly
- helped considerably
- somewhat helpful
- very little or no help
- not applicable

2. During your stay at Wheaton were your vocational objectives

- strengthened
- unchanged
- radically changed
- never clarified

3. If a friend of yours were planning to attend college, what advice would you give him or her about attending Wheaton?

- definitely recommend
- probably recommend
- neutral
- would not recommend
- definitely would not recommend

4. How would you evaluate opportunities at Wheaton for the development of social competence?

- excellent
- good
- fair
- poor

5. To what extent did your Wheaton education help you integrate all areas of life into a meaningful, Christ-centered pattern?

- helped very much
- helped
- neither helped nor hindered
- hindered

6. While at Wheaton did your interest in spiritual matters

- greatly increase
- increase
- remain about the same
- decline

7. Since Wheaton has your interest in spiritual matters

- greatly increased
- increased
- remained about the same
- declined
- greatly declined

8. At approximately what age did you accept Christ as Savior?

- 5 years or younger
- 6 to 12 years
- 13 to 17 years
- 18 years or older
- does not apply

9. While at Wheaton did your interest in missions--the need to share Christ's message to all cultures, ethnic groups, and nations--

- greatly increase
- somewhat increase
- remain about the same
- decline
- I had no interest in missions

10. Since leaving Wheaton has your interest in missions

- greatly increased
- increased
- remained about the same
- declined
- I have no interest in missions

11. To what extent do you attend Sunday morning church services now?

- regularly
- quite frequently
- occasionally
- rarely

12. To what extent do you attend Sunday evening church services now?

- regularly
- quite frequently
- occasionally
- rarely

13. To what extent do you attend Sunday School now?

- regularly
- quite frequently
- occasionally
- rarely

14. Which of the following represented (described) the faculty's sensitivity to you as an individual while at Wheaton?

- very sensitive
- somewhat sensitive
- rarely sensitive
- insensitive

15. Which of the following represented other students' sensitivity to you as an individual while at Wheaton?

- very sensitive
- somewhat sensitive
- rarely sensitive
- insensitive

16. Which of the following represented the administration's sensitivity to you as a student while at Wheaton?

- very sensitive
- somewhat sensitive
- rarely sensitive
- insensitive

17. Which of the following represented the student personnel deans' sensitivity to you as an individual while at Wheaton?

- very sensitive
- somewhat sensitive
- rarely sensitive
- insensitive

18. Assuming marijuana was non-habit forming and had less harmful side effects than LSD, I would consider using it occasionally.

- strongly agree
- agree
- disagree
- strongly disagree

19. I feel that couples should be able to live together without being married and easily dissolve the union if one or the other wishes to do so.

- strongly agree
- agree
- disagree
- strongly disagree

20. Because some of my acquaintances have adopted liberal attitudes toward sex, drugs, and alcohol, I feel some of my standards are out of date and I need to change them to keep up with others.

- strongly agree
- agree
- disagree
- strongly disagree

21. In a nonmarital, heterosexual relationship, it is the role of the woman to decide how sexually intimate the relationship should be.

- strongly agree
 agree
 disagree
 strongly disagree

22. Sexual intercourse before marriage is an important experience for early marital adjustment.

- strongly agree
 agree
 disagree
 strongly disagree

23. Please indicate the extent of your participation in each of the following activities listed

<u>BEFORE COMING TO WHEATON</u>	Never	Rarely	Occasionally	Regularly
Dancing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of play- ing cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>WHILE AT WHEATON</u>				
Dancing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of play- ing cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACTUAL PARTICIPATION NOW	Never	Rarely	Occasionally	Regularly
Dancing	___	___	___	___
Smoking	___	___	___	___
Drinking	___	___	___	___
Use of playing cards	___	___	___	___

24. In college my political party was

- Republican
 Democrat
 Independent
 Other _____

25. My current political party preference is

- Republican
 Democrat
 Independent
 Other _____

26. In the last 4 years I have voted in the following elections (mark as many as apply)

- Presidential
 nonpresidential year congressional election
 nonpresidential year state election
 nonpresidential year local election
 I have not voted in the last four years

27. In college, on social and political issues, the label that best described my ideology was

- Conservative
 Moderate
 Liberal
 Other _____

28. On social and political issues, the label that best describes me now is

- Conservative
 Moderate
 Liberal
 Other _____

29. Since my graduation from Wheaton, my attitudes toward racial groups other than my own have

- become more positive
- remained unchanged
- become less positive
- changed, but I'm not sure how

30. Rank the following in terms of importance to you (1 = most important, 2 = second most important, ..., 5 = fifth most important).

- personal relationship with God
- relationship with spouse
- relationship with offspring
- service to others
- job

31. To have an abortion should be the choice of an individual woman.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

32. Public funds should be made available for those who desire an abortion but who cannot afford to pay for it.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

33. If my son or daughter wanted to marry a person of a race different from my own, I would encourage him or her to do so if their religious beliefs were similar.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

34. In looking for a home, it would be desirable to settle in a racially mixed neighborhood.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

35. Family size should be voluntarily limited to 2 children to help curb the population explosion.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

36. Each person in developed countries like the United States should limit his or her consumption of food and energy resources for the benefit of future generations and people in less developed areas.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

37. Divorce should be permitted whenever two people decide they can no longer benefit from living together.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

38. Divorce should be permitted only in the case of infidelity.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

39. Divorce should never be permitted.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

40. Remarriage should be permitted in most cases of divorce.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

41. Remarriage should be permitted only for the "innocent" party in the case of infidelity that leads to divorce.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

42. It is important to spend regular time each week in personal spiritual development on an individual basis.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

43. A minimum of 10% of gross income should be given to religious causes.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

44. Giving of personal time for religious or charitable work is as important as giving money to religious or charitable organizations.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

45. It is an important part of Christian stewardship to participate in a regular, effective exercise program.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

46. Women should be given equal pay for equal work and should have equal opportunity for advancement within a work setting.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

47. Mothers should have a greater responsibility for daily care and upbringing of children than fathers.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

48. Within the ordained leadership of the local church, women should have access to any leadership position that is open to men.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

49. Homosexual relationships should have the same protection and benefits granted to heterosexual relationships under the law.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

50. There should be no discrimination against homosexuals in employment.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

51. My undergraduate experience at Wheaton greatly helped me to understand the meaning and value of life.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

52. My undergraduate experience at Wheaton helped me to develop a sensitivity to the feelings and perceptions of others.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

53. My undergraduate experience at Wheaton helped me to develop an understanding of different philosophies, cultures, and ways of life.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

54. My undergraduate experience at Wheaton helped me to develop competence in coping with moral and ethical issues.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

55. My undergraduate experience at Wheaton helped me to develop a more accurate picture of who I am as a person.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

56. My undergraduate experience at Wheaton helped me to develop a personal philosophy of life.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

57. My undergraduate experience at Wheaton helped me to develop competence in getting along with different types of people.

- strongly agree
- agree
- neutral
- disagree
- strongly disagree

58. In the past 12 months, how many of the following have you done? (Place a check in the space in front of each item that applies to you)

- attended one or more concerts other than at church
- visited an art gallery or art museum
- visited a science museum or exhibition
- attended one or more theatrical productions
- read five or more fiction books
- read five or more nonfiction books
- signed a political petition
- written a letter to a state or national politician
- campaigned for a political candidate

59. Rank the following factors from your undergraduate days at Wheaton in terms of lasting impact on you (1 = most impact, 2 = second most impact, ..., 12 = least impact).

- course content
- personal involvement with faculty
- participation in extracurricular activities
- living in a residence hall
- student friendships
- President of the college
- student personnel program and personnel
- administrators other than the president or student personnel deans
- daily chapel
- special chapel services
- statement of conduct (the pledge)
- other _____

60. Did your undergraduate experience at Wheaton help in preparing you for your current vocation?

- greatly helped
- helped somewhat
- neither helped nor hindered
- hindered somewhat
- greatly hindered

APPENDIX D

APPENDIX D

Cooperative Study of Attitudes and Values*

The following is a study of what the general public thinks about a number of important social and personal questions. The best answer to the statements below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others. Whether you agree or disagree with any statement, you can be sure that many other people feel the same way you do.

In the blank column to the left of each statement, mark each statement according to how much you agree or disagree with it according to the following key:

Key: 1. I agree a little 4. I disagree a little
 2. I agree on the whole 5. I disagree on the whole
 3. I agree very much 6. I disagree very much

Please mark every one.

Example: College students should not be allowed to drive cars on campus. If you AGREE A LITTLE, you would write in a "1" in the blank at the left:

1 College students should not be allowed to drive cars on campus.

- 1. The United States and Russia have just about nothing in common.
- 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
- 4. It is only natural that a person would have much better acquaintance with ideas he believes in than with ideas he opposes.
- 5. Man on his own is a helpless and miserable creature.
- 6. Fundamentally, the world we live in is a pretty lonesome place.
- 7. Most people just don't give a "damn" for others.
- 8. I'd like it if I could find someone who would tell me how to solve my personal problems.
- 9. It is only natural for a person to be rather fearful of the future.
- 10. There is so much to be done and so little time to do it in.

- ___ 11. Once I get wound up in a heated discussion, I just can't stop.
- ___ 12. In a discussion I often find it necessary to repeat myself several times to make sure that I am being understood.
- ___ 13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.
- ___ 14. It is better to be a dead hero than a live coward.
- ___ 15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
- ___ 16. The main thing in life is for a person to want to do something important.
- ___ 17. If given a chance, I would do something of great benefit to the world.
- ___ 18. In the history of mankind there have probably been just a handful of really great thinkers.
- ___ 19. There are a number of people I have come to hate because of the things they stand for.
- ___ 20. A man who does not believe in some great cause has not really lived.
- ___ 21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
- ___ 22. Of all the different philosophies which exist in this world there is probably only one which is correct.
- ___ 23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- ___ 24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- ___ 25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
- ___ 26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
- ___ 27. The worst crime a person could commit is to attack publically the people who believe in the same thing he does.
- ___ 28. In times likes these, it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.
- ___ 30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.
- ___ 31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- ___ 32. A person who thinks primarily of his own happiness is beneath contempt.

- ___33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- ___34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- ___35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
- ___36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
- ___37. The present is all too often full of unhappiness. It is only the future that counts.
- ___38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."
- ___39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
- ___40. Most people just don't know what's good for them.

*Rokeach Dogmatism Scale, Form E

APPENDIX E

APPENDIX E

April 25, 1980

Dear Classmate:

Whatever happened to the class of '69? Those of us who were able to attend the class reunion last fall were given a chance to make some observations about some things which had changed and about some things which had remained the same. With your help, I'll be able to document some of those observations in a way that will help our alma mater.

In the fall of 1965, the spring of 1969, and the winter of 1970, selected members of our class completed the Rokeach Dogmatism Scale, Form E. In addition, during the spring of 1969 and the winter of 1970, selected members of our class were asked to answer a series of questions dealing with value related attitudes and behaviors. You have been selected to provide a representative sample for a retest of these instruments.

Please fill out the questionnaire enclosed with this letter and return them to me in the self-addressed stamped envelope provided. I am interested in the analysis of group data only -- not in individual responses to each instrument. Consequently, each return envelope is coded with a number to protect the anonymity of the respondent. The numerical code will be used to determine which individuals in the sample have not returned their questionnaires so that a follow-up mailing can be sent. Names will never be attached to questionnaires in this study.

This research is being used to complete my doctoral dissertation in College Student Personnel Work at Loyola University of Chicago. The purpose of the dissertation is to study the long term impact of a small, religiously oriented, liberal arts college on the dogmatism and value related attitudes and behaviors of its graduates. This research was begun by Dr. Bill Lindberg, former CSC Director and Associate Dean of Students, and by the Office of Institutional Research at Wheaton during the mid 1960's. I have received the assistance of the Alumni Office in obtaining your current address. The college considers this project a part of the Accountability Research Program and it has the encouragement of the Office of the President. The Director of Institutional Research has reviewed the

project proposal and is expecting to share the results with the policy makers of the college in a way that will aid them in doing a more effective job. A copy of the project proposal has also been filed with the Graduate School of Education and the Institutional Review Board for Protection of Human Subjects at Loyola. When my dissertation has been completed, you will receive a summary of the results as well.

Thank you for your help in completing this task. It will take you approximately 16 minutes to fill out the questionnaires -- that investment of 16 minutes is very important to me and my family -- and it is potentially important to Wheaton College. Please do it soon! I need your response before May 15. If you have any questions, please call me collect at 312-682-6037.

Sincerely,

Jay Barnes '69
Residence Director
Wheaton College

APPENDIX F

APPENDIX F

May 27, 1980

Dear Classmate:

This letter is a plea for your help. About 4 weeks ago I sent you some instruments to fill out to provide me with some information that will aid me in the completion of my doctoral dissertation and will aid Wheaton College in their Accountability Research Project. Although I have had a good response, I need your help to meet the minimum number of responses that my committee and I consider necessary. According to my records, I have not received a response from you.

If you have recently mailed your response to me, THANKS! If you have not had a chance to do it or if my first mailing never reached you, please fill out the enclosed instruments and return them to me in the stamped, self-addressed envelope.

If you have any questions, please do not hesitate to call me collect at 312-682-6037.

Thanks again for your help and cooperation!

Sincerely,

Jay Barnes '69
Residence Director
Wheaton College

P.S. I really need your response by June 12! THANKS!

APPENDIX G

APPENDIX G

Table G-1

Summary Table Comparing Responses of Those Above
With Those Below the Mean Dogmatism Score
on Selected Variables

Variable		High ^a Dogmatism	Low ^b Dogmatism	<u>t</u>
Children vs. No Children	<u>M</u> <u>SD</u>	1.68 .47	1.69 .46	.89
Semesters at Wheaton	<u>M</u> <u>SD</u>	7.14 1.56	7.38 1.28	.36
Semesters in Co-Curricular Activities	<u>M</u> <u>SD</u>	4.63 2.98	5.13 2.83	.93
Semesters in Campus Residence	<u>M</u> <u>SD</u>	5.86 2.37	6.02 2.19	.38
Strength of Contact with College Since Graduation	<u>M</u> <u>SD</u>	3.00 1.24	2.73 1.31	-1.16
Participation in a Regular Fitness Program	<u>M</u> <u>SD</u>	1.39 .49	1.43 .50	.47
Participation in a Program of Person- al Spiritual Growth	<u>M</u> <u>SD</u>	1.70 .46	1.44 .50	-2.92*
Willingness to Live at Lower Standard of Living	<u>M</u> <u>SD</u>	1.33 .48	1.32 .47	-.18
Belief that Wheaton Helped Integrate Faith and Life	<u>M</u> <u>SD</u>	1.93 .70	2.32 .88	2.65*

Interest in Spirit- ual Matters Since Graduation	<u>M</u> 3.98 <u>SD</u> .86	3.52 1.20	-2.38*
Sunday Morning Church Attendance	<u>M</u> 3.91 <u>SD</u> .39	3.17 1.26	-4.23*
Sunday Evening Church Attendance	<u>M</u> 2.61 <u>SD</u> 1.33	1.78 1.21	-3.60*
Sunday School Attendance	<u>M</u> 3.37 <u>SD</u> 1.14	2.44 1.41	-3.91*
Perceived Need to Change Standards	<u>M</u> 3.74 <u>SD</u> .44	3.51 .56	-2.45*
Participation in Alcohol, Smoking, Dancing, Cards Prior to College	<u>M</u> 1.09 <u>SD</u> .29	1.11 .32	.42
Participation in Alcohol, Smoking, Dancing, Cards During College	<u>M</u> 2.95 <u>SD</u> .23	2.87 .46	-1.11
Attitudes Toward Other Races	<u>M</u> 1.86 <u>SD</u> .88	1.67 .74	-1.31
Relative Priority of Relationship to God	<u>M</u> 1.14 <u>SD</u> .52	1.86 1.58	3.28*
Relative Priority of Relationship to Spouse	<u>M</u> 1.63 <u>SD</u> .72	1.71 .66	.66
Relative Priority of Relationship to Offspring	<u>M</u> 2.30 <u>SD</u> 1.31	2.35 1.29	.22
Relative Priority of Service to Others	<u>M</u> 4.25 <u>SD</u> .85	3.97 .92	-1.71
Relative Priority of Job	<u>M</u> 4.33 <u>SD</u> .74	4.03 1.19	-1.65
View of Abortion	<u>M</u> 3.91 <u>SD</u> 1.20	2.97 1.50	-3.78*
View of Interracial Marriage	<u>M</u> 3.28 <u>SD</u> .96	2.83 1.06	-2.46*

View of Integrated Housing	<u>M</u> 2.96 <u>SD</u> .94	2.78 .89	-1.12
Willingness to Limit Family Size	<u>M</u> 3.14 <u>SD</u> 1.06	3.02 1.13	-.62
View of Divorce	<u>M</u> 4.21 <u>SD</u> .90	3.14 1.35	-5.03*
View of Remarriage After Divorce	<u>M</u> 3.11 <u>SD</u> 1.25	2.41 1.21	-3.08*
View of Equal Rights for Women	<u>M</u> 1.61 <u>SD</u> .75	1.35 .60	-2.14*
Equalitarian View of Child Care	<u>M</u> 3.01 <u>SD</u> 1.14	2.17 1.02	-4.26*
Role of Women in Church Leadership	<u>M</u> 3.60 <u>SD</u> 1.27	2.51 1.27	-4.70*
View of Homosexual Rights	<u>M</u> 4.40 <u>SD</u> .78	3.21 1.35	-5.89*
Value of Wheaton in Helping Understand Meaning of Life	<u>M</u> 3.68 <u>SD</u> .89	3.46 1.18	-1.17
Value of Wheaton in Developing Sensitivity to Others	<u>M</u> 3.82 <u>SD</u> .87	3.68 .86	-.90
Value of Wheaton in Understanding Other Ways of Life	<u>M</u> 3.79 <u>SD</u> 1.05	3.70 1.20	-.44
Value of Wheaton in Developing Moral Competence	<u>M</u> 3.74 <u>SD</u> .84	3.48 1.06	-1.49
Value of Wheaton in Developing Accurate Self-Image	<u>M</u> 3.61 <u>SD</u> 1.01	3.46 1.19	-.76
Value of Wheaton in Formulating Philosophy of Life	<u>M</u> 3.63 <u>SD</u> .79	3.60 1.04	-.17

Value of Wheaton in	<u>M</u>	3.67	3.35	-1.96*
Developing Social	<u>SD</u>	.85	.91	
Competence				

Note. The mean dogmatism score for the 120 subjects is

147.31.

a_n = 57

b_n = 63

* p < .05

APPROVAL SHEET

The dissertation submitted by James Hume Barnes III has been read and approved by the following committee:

Dr. John A. Wellington, Director
Professor, Counseling Psychology and
Higher Education,
Loyola University of Chicago

Dr. Ronald Morgan
Associate Professor, Foundations of Education,
Loyola University of Chicago

Dr. Terry E. Williams
Assistant Professor, Counseling Psychology and
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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

December 6, 1983
Date

John A. Wellington, Ph.D.
Director's Signature