

1973

Attitudes of donors at selected institutions of higher education

Charles Roderick MacIsaac
Iowa State University

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Attitudes of donors at selected
institutions of higher education

by

Charles Roderick MacIsaac

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Major: Education (Higher Education)

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In Charge of Major Work

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INTRODUCTION

Financing of higher education became one of the major problems confronting higher education in the 1970's. Public and private institutions of higher learning had been affected by the gap between annual income and the level of expenditure required to maintain a high quality of education. The financial problems were made more severe by the fact that the cost of higher education was rising more rapidly than the resources allocated to cover the increasing costs (5, 7, 49, 50, 86).

One of the reasons for the increased cost of higher education was the increase in numbers of people attending colleges and universities. During the 1960's, enrollment in institutions of higher education more than doubled, and the Carnegie Commission projected that during the 1970's enrollment would increase by 59 percent. However, the pattern of growth at public and private colleges and universities differed. In 1950 the student population was approximately equally distributed among public and private institutions of higher education, while in 1970, 75 percent of the students were in public colleges and universities (14). Increase in enrollment was expected to continue. It was anticipated that part of the expected growth would result from elimination of economic barriers for those to whom higher education was previously inaccessible (12, 13, 15, 16).

One of the major questions facing higher education was: Who would support the growing numbers in higher education? Historically, for many years private funds were the major source of revenue for colleges and universities. The total of voluntary support showed a growth trend of approximately nine percent per year until 1968-1969. While "...this growth rate

was significantly lower than the rates at which college and university expenditures were rising, it was generally higher than the rate of growth of the national economy" (88, p. 8).

In the late 1960's, the major sources of support, averaged over public and private institutions of higher education, were: tuition and fees from students (approximately 20 percent); the Federal Government (approximately 24 percent); the state (approximately 23.5 percent); and voluntary support -- alumni, non-alumni individuals, foundations, business corporations, and other (approximately 10 percent) (18, 40, 81).

However, a break in the trend of total voluntary support for each of its major sources was indicated for the period 1969-1971. It was believed to be due to (88):

- (1) The economic recession of 1969-1971;
 - (2) The Tax Reform Act of 1969;
- and, (3) Campus unrest during 1968-1970.

Of the total amount of funds from voluntary sources in 1970-1971, over one-half (51.2 percent) came from individuals with alumni contributing approximately one-half (24.6 percent) of this amount. Alumni gifts to American colleges and universities had increased in 1970-1971 by 18.6 percent. While the number of alumni donors increased by 9.2 percent, the increase in the amount of money contributed was 8.2 percent. The average alumni gift decreased .9 percent (88).

The remaining sources of private funds were: foundations, 22.5 percent; business corporations, 13.9 percent; religious denominations, 5.6 percent; and miscellaneous donors, 6.8 percent. Decreases in amount of contributions from these sources were reported as follows: foundations

(down 5.1 percent), business corporations (down 5.2 percent), and miscellaneous donors (down 18.5 percent) (88).

Authorities on the subject of financing of higher education claimed that colleges and universities need "...substantial private support not just to continue its important contributions, but, in some cases to survive" (8, p. 2). Stressing the importance of increased private support for colleges and universities, the report Margin for Excellence (56, p. 16) stated that growing private support is essential to:

...provide the broadest possible educational opportunities so that all talented and able youths will have the chance to contribute to society regardless of their social or economic background;

fill the tax support gaps in areas for which tax funds may not be used or available because of their needs; and

insure diversity, richness, and quality in higher education -- public and private -- in this country.

The need of alumni support was recognized by many authors (3, 9, 19, 20, 25, 26, 29, 30, 37, 61, 68, 69, 75, 78, 87). Commenting on the overall importance of alumni support, McAnally (61, p. 21) contended that:

Strong alumni support can help bridge the gap between essential needs and available funds, but it can also achieve much more than the financial goals. With a strong, viable alumni program, the following must inevitably result:

1. A greater awareness of the college's position in the educational world and a more intense desire to help the institution meet its needs and strengthen its purpose.
2. The creation of a partnership between the alumnus and the college, in which the alumnus becomes better informed about the college. He will recognize the physical, financial and educational needs, and be more aware of the problems of admissions, of securing and holding an outstanding faculty with mounting financial pressure, etc.
3. A more sympathetic understanding of the merits of an organized program of alumni giving.

As colleges and universities experienced the tightening of purse strings, the support of the alumni became more significant. According to Cooley (25, p. 10), "For most schools the importance of a successful alumni fund is often the difference between standing still and moving ahead." Brakeley (8, p. 11) stated that, "Annual alumni giving is the closest thing, next to soundly invested endowment, if available, to assured philanthropic income that a school, college, or university can hope to have."

Not only was the need for private support recognized, but the practice of publicizing support received from alumni and other private sources was considered important. Commenting on this, Bennett (3, p. 15) stated:

All of us know that the foundation or corporate prospect wants to know how the alumni are doing. If the present trend continues, it will be up to all of us to sell the new concept that our friends -- including alumni and non-alumni -- are supporting our institutions at a higher level than ever before. And in identifying and cultivating these friends, the research and fact-finding capabilities must be increased proportionally.

The present study was conducted for the purpose of providing information about the attitudes of alumni donors at selected institutions of higher education. It was expected that a better understanding of alumni would result. The alumni donor was chosen "...because the alumni of a particular institution are, or should be, the most important source of support for that institution" (25, p. 8). Frantzreb (69) stressed that for greater success in fund raising, institutions should approach alumni with knowledge of their ideals and goals. He went on to advise (69, p. 7), "Get to know the kind of person he is and the kinds of things he is interested in." According to Andrews (1, p. 7), if colleges and universities "...are to flourish, or even to survive, we need to know much more about givers' attitudes in today's changing world."

While the necessity of knowing the attitudes of alumni was expressed, there was a paucity of research directed to discovering their attitudes. There was also an apparent need to distinguish among the attitudes of (1) donors who gave large amounts, (2) those who gave small amounts on a regular basis, (3) those who gave small amounts but not regularly, and (4) those who were non-donors. Although major donors were an important source of income for colleges and universities, the attitudes of those who gave small amounts were also considered to be important as Eldridge (30, p. 30) claimed that individuals "...who have once contributed on either a large or small scale are very likely to continue their support through the years." The range of attitudes of the different types of donors as well as variations due to type of college or university which the alumnus attended and his year or projected year of graduation, were also considered important.

Definitions

In order to clarify the meaning of several terms used in the present study, the following definitions were established:

Alumnus: An individual who is a resident of North America and has graduated from one of the selected institutions of higher education before January 1, 1969, and is maintained on the lists of alumni in the Alumni Offices at the selected institutions.

Donor: An alumnus who has made a monetary contribution to his alma mater during the time period 1969 to 1971 inclusive.

Major donor: A donor who has contributed a total of at least \$1,000 during the specified time period.

Consecutive donor: A donor who has contributed a total of less than \$1,000 and has contributed each year during the specified time period.

Non-consecutive donor: A donor who has contributed a total of less than \$1,000 but has not contributed each year during the specified time period.

Non-donor: An alumnus who has not contributed monetarily to his alma mater during the specified time period.

Respondent: An alumnus who has returned a completed instrument.

Purpose of the Study

The purpose of this research was an investigation of the attitudes of donors at Cornell College, Drake University, and Iowa State University related to certain topical areas which were considered important in higher education. These areas pertain to the philosophy and objectives of colleges and universities, the role of the alumni office in the overall functioning of the college or university, and issues related to financing and fund raising.

It was believed that the findings would contribute to a better understanding of donors by the personnel of the alumni and development offices and by the administration of the selected institutions. This information would aid in the development of more effective programs for the promotion of closer cooperation among all the constituents of the college or university community. Furthermore, it was believed that the findings would be of interest to other American institutions of higher education.

Objectives of the Study

The specific objectives of the study were to:

1. Describe the attitudes of donors related to certain topical areas which are considered to be important in higher education
2. Analyze the attitudes of donors in terms of relationships to the variables:
 - a. Type of college or university
 - b. Donor classification
 - c. Era of graduation.

Hypotheses

The hypotheses tested in the present study are:

There are no significant differences in the attitudes of donors by:

- a) Type of college or university
- b) Donor classification
- c) Era of graduation.

Assumptions

The following assumptions were considered basic to the study:

1. The sampled alumni were representative of the sampled populations from which they were selected
2. The respondents expressed their real attitudes in response to the instrument.

Limitations

1. The research was limited to a study of donors at Cornell College, Drake University, and Iowa State University
2. The self-report measures of the sampled donors' attitudes were limited to what the alumnus knew about his attitudes and was willing to relate (66).
3. Sample stratification was limited to the defined donor classifications and eras of graduation.

LITERATURE REVIEW

To provide background for the study of the attitudes of donors in higher education, the report of literature included: (1) the history of fund raising in higher education; (2) reports of research related to the present study; and (3) concerns of higher education relevant to the study.

History of Fund Raising in Higher Education

The history of fund raising for higher education began with the history of higher education (33). In his treatment of fund raising in general, Curti in Cutlip (28, pp. xii-xiii) characterized it in this way:

...the history of fund raising in the United States is distinctively American. It is American in its functional relationships to our changing social structure, notably in the shift of philanthropy from a social elite to a mass base....

But what stands out perhaps most of all is the way in which fund raising in our time reflects our business culture. The American flair for organization, the fetish of efficiency, the onslaught in the name of these against chaos, waste, conflict, and deception in organized giving, the uses of publicity techniques, and the introduction of scientific methods into fund raising - all these take on full and significant meaning. So does the increasing role of corporate giving in relation to tax exemption and to the effort to create a favorable image.

Although "systematic fund raising is a twentieth century development" (28, p. 3), it had deep roots in early colonial times. According to Cutlip (28, p. 3), "The first systematic effort to raise money on this continent was for a college." This was the 1641 Weld-Peter begging mission on behalf of Harvard College which Morison (64, p. 303) described as "...the first concerted 'drive' to obtain income and endowment for the College."

Even in the early efforts of fund raising for higher education, emphasis was placed on planning. Marts (60, p. 97) quoted Franklin's advice to a fund raiser seeking assistance:

In the first place I advise you to apply to all those whom you know will give something; next, to those whom you are uncertain whether they will give anything or not, and show them the list of those who have given; and lastly, do not neglect those whom you are sure will give nothing, for in some of them you may be mistaken.

Typical of educational fund raising in the nineteenth century were the efforts of Mary Lyon to raise \$30,000 to found Mt. Holyoke. According to Marts (59, p. 23), colleges during this period

...were using the "financial agent," frequently the president himself, who was sent to the eastern cities to preach in the churches and gather funds for the colleges of the west and south....

This personal search for gifts was the major technique used all through the Nineteenth Century for founding and maintaining our colleges. Indeed, it was the accepted technique for college fund-raising in America right up to the close of World War I.

Prior to 1890, much of the efforts at fund raising were conducted by the Presidents. Their annual reports were used mainly for this purpose. Flack (33, p. 1) stated that, "With the establishment of the Yale Alumni Fund in 1890, an entirely new idea came into being so far as the raising of funds for colleges and universities was concerned." According to Flack (33, p. 1), 1890 "...marks the beginning of the organized period of fund raising by alumni."

Large scale philanthropy to higher education emerged in the latter nineteenth and early twentieth centuries with gifts of Andrew Carnegie and John D. Rockefeller. Rockefeller's gift of six-hundred thousand dollars to help found the University of Chicago was followed in 1900 and 1901 by gifts

of a million dollars in each year. In 1902 Rockefeller "...established the General Education Board which he endowed with more than \$130 million to advance higher education and scientific research in the United States" (28, p. 34).

The Carnegie Institute was set up in Washington, D.C., by Andrew Carnegie in 1902. Carnegie

...endowed the Carnegie Foundation for the Advancement of Teaching in 1905, and in 1911 made his largest gift to establish the Carnegie Corporation. The last-named foundation, like the General Education Board, has played an important and influential role in the advancement of American higher education and the extension of knowledge (28, p. 34).

What Cutlip (28, p. 480) characterized as "...the first organized fund-raising campaign on behalf of a college or university..." was that of the 1904-1905 Harvard Campaign which was the effort of the Harvard Alumni Association. Under the leadership of the president of the Harvard Alumni Association, Bishop Lawrence, approximately 2,000 Harvard alumni contributed \$2.4 million. This money was to be used in "...her endowment fund for faculty salaries, for retiring allowance and for the permanent endowment of professorships" (33, p. 3). The fund raising "was done by personal interviews, by letters, and by circulars sent to all Harvard graduates" (33, p. 3).

Two other significant events in the development of fund raising by alumni in American colleges and universities occurred in the early part of the twentieth century. These were the formation of the Committee of Fifty at Princeton in 1904 and the \$1 million campaign for a new Student Union Building at the University of Michigan in 1914-15 (28).

Until World War I, the promotion of the existing alumni funds had been largely carried on under the direction of alumni associations or alumni offices. Following World War I, a definite trend began; colleges and universities "...set up special organizations with special offices charged with the responsibility of raising, not only the annual alumni funds, but also funds for endowment, buildings, other special projects, including the promotion of bequest programs" (33, p. 7). In reference to alumni organizations, Cutlip (28, p. 250) stated that, "Building a strong alumni organization was often the first step fund raisers took on a college campus."

Fund raising in higher education has been greatly aided by large fund raising firms. After years of experience in various fund raising endeavors, Charles S. Ward and Harvey Hill in 1919 "...opened their pioneering fund raising firm, Ward and Hill Association" (28, pp. 158-159). Later the same year, the firm became known as Ward, Hill, Pierce, and Wells with the addition of Lyman Pierce and H. Herbert Wells as partners. Two offshoots of this firm were those of Tamblin and Brown, founded in 1920, and Hedrick, Marts, and Lundy, which was organized in 1926 by the men whose name the company bore (28).

One of the leading lights in the early years of commercial fund raising was John Price Jones. According to Cutlip (28, p. 170),

Jones' fetish for research, for careful record keeping, and for thorough planning made the methodical Charles S. Ward appear slovenly and haphazard by comparison. Jones brought to fund raising a deep appreciation for the value of research and planning, an increased emphasis on public relations, and in his penchant for paper work he codified the principles and procedures for fund raising.

When Jones and his associates sold control of the firm in June, 1955, the Jones firm had raised \$237,206,696 for higher education in the United States (28). Jones' techniques were described by Cutlip (28, p. 183):

Jones brought great advances to the art of fund raising as well as financial success for himself. He had a genius that enabled him to harness the newly discovered power of publicity to the efficient business methods he admired, and thus to create a wholly new approach to fund raising. He undergirded fund appeals, from the early twenties on, with thorough research on the institution to be served, its degree of support, and the case to be presented in the fund appeal. He insisted on standardizing the procedures of fund-raising, yet knew that each campaign must be tailored to the institution for which it was waged.

In 1926 the John Price Jones Corporation made a survey

...of sixty-eight different college campaigns which had been conducted subsequent to 1919. These campaigns resulted in securing \$149,391,142.38 from 491,893 givers. The total amount given by alumni was \$68,797,129.35 from 315,493 alumni, or 46.1 per cent of the total amount raised. Of the total amount given to the endowed colleges and universities since the intensive campaign period from 1919 to 1926, an increasing percentage has been given by the alumni (33, p. 6).

Gifts and bequests to institutions of higher education solicited through alumni associations and professional fund raisers have greatly contributed to the financial stability of American colleges and universities. Cutlip (28, pp. 243-244) in discussing the trend in gifts and bequests to colleges and universities stated that:

The 30-year trend of gifts and bequests to educational institutions in general followed the trend of economic conditions. It was gradual and upward after 1921. It reached a peak in 1925-1926 due to several unusually large gifts (George F. Baker's gift of \$5 million to Harvard for its Graduate School of Business), and then fell back to a normal increase until it reached a new peak of \$92,007,000 in 1929-1930. Then came the depression and a fairly rapid decline in capital fund raising. The low point of this 30-year span was reached in 1933, when only \$23,174,000 was donated to colleges. From there on there was a fluctuating upward trend until the post-World War II years were reached - since then the upward movement has been rapid and steady. Where it will stop nobody knows. It is worth noting that the greater

part of this philanthropy has been in contributions by the living, less than one-third in bequests, reflecting the sure hand of the fund raiser. Over the 30-year span gifts constituted 69.37 per cent of the total, bequests the remainder.

The trend in giving to institutions of higher education during the 1950's and 1960 indicated increased support by Americans for colleges and universities. According to the American Association of Fund Raising Counsel (36, p. 7), Americans during this period

...increased their investment in the nation's philanthropically supported institutions at a faster pace than either personal income or the gross national product advanced. Private support of our religious, educational, health, and social welfare organizations increased 199 per cent in this period, while personal income rose 78 per cent, and the gross nation product 77 per cent.

The upward trend in gifts continued through the 1960's and early 1970's. However, costs of American higher education have continued to increase at a faster rate than ever before. American colleges and universities were founded on gifts in the seventeenth century - American colleges and universities needed gifts throughout their history to continue serving American society - American colleges and universities in the 1970's need gifts to continue to provide a high quality of higher education.

Related Research

No studies were found which treated directly the attitudes of donors where valid sampling criteria or statistical significance tests were used. However, several studies were found which dealt with research related to the present study.

Spaeth and Greeley (83) investigated the attitudes of a national sample of college alumni from the class of 1961 on several important issues in higher education: loyalty to one's alma mater; participation of students

in determining policies; and financing of higher education. According to the findings reported, alumni of 1961 would not be considered loyal supporters of their alma mater. Findings showed that approximately 75 percent of the alumni reported that they did not have strong feelings toward their alma mater; 20 percent had never visited their alma mater since graduation; and 60 percent did not belong to alumni organizations.

Alumni did not appear to favor student participation in campus decision making. Approximately four-fifths of the alumni responding opposed conceding rights to students to participate in decisions on faculty tenure, admission standards, and tuition. The report indicated that more than 50 percent were sympathetic to student protests while 60 percent thought students should have the right to participate in decisions on the organization of the curriculum.

The alumni sampled expressed their views on financing of higher education:

...nearly three in five agree that state taxes should be raised to provide more money for higher education. Forty-five percent agree that all colleges should receive federal aid to help cover operating expenses; 61 percent would favor federal aid to institutions with no religious affiliation; only 17 percent favor no federal aid at all. Opinions on state aid are very similar. Forty-one percent favor state aid to all colleges; 61 percent would extend such aid to public and nondenominational institutions (83, p. 6).

Findings indicated that alumni appeared to be "...aware of the problems of financing higher education, concerned that they be solved, willing to undergo at least a mild sacrifice to contribute to their solution, and receptive to government subsidies for schools and students" (83, p. 7). It was also found that campus unrest was not related to giving. The charac-

teristics of the college, the alumnus' loyalty to the college, and the alumnus' socioeconomic background were the most important kinds of variables found to be related to alumni giving.

Bacon and Pride (2) reported on an American College Public Relations Association survey which studied responsibilities and development goals related to fund raising and alumni affairs. Included in the study were 241 institutions of higher education: 39 state universities, 20 private universities, and 182 private colleges. Findings showed that over two-thirds of the institutions sampled reported that they had long-range objectives. Approximately 90 percent of the institutions who responded to the question reported that their long-range development goals were expressed in terms of dollars. "A slight tendency toward stating objectives in terms of dollars was evident at institutions raising the most money in all three institutional categories" (2, p. 10).

Trustees and the president had important functions in the fund raising process. Approximately 80 percent of the sampled colleges and universities stated that their trustees made personal contact with prospective donors with the purpose of explicitly requesting a gift. The percentage reporting solicitation calls by the president was over 90 percent.

Alumni offices reported that 20 to 40 percent of their time was devoted to fund raising. The median for private colleges was higher than for public and private universities.

Andrews (1) reported a research study on the attitudes of givers which was conducted by the National Opinion Research Center in 1953. Data were collected from interviews with people of various incomes measuring their attitudes on giving in general and was not specifically related to giving

in higher education. No valid sampling technique was used, the sample studied was small, and no tests of statistical significance were performed on the data. Findings indicated that: (1) many major contributors "...were, or had been, volunteer workers for the agencies which fared best in their giving" (1, p. 22); (2) to raise money an institution had to ask for it; (3) giving did something for the donor himself; and (4) giving arose from direct sympathy with the project being funded.

Concerns of Higher Education Relevant to the Study

The overall purpose of the present research was to describe and analyze the attitudes of donors concerning certain topical areas which are important in higher education. In the preliminary stages of designing the study to achieve this purpose, many factors were considered and decisions were made that culminated in the definition of scope and the specific objectives presented in the Introduction. Review of literature indicated the following areas to be relevant to the study: the philosophy and objectives of colleges and universities, the alumni office in the overall functioning of the college or university, and issues pertaining to financing and fund raising in higher education.

Philosophy and objectives of colleges and universities

Knowledge of, and respect for, the philosophy and objectives played a significant part in the total functioning of the university. If a college or university is to develop, the process of development should involve the whole of the college or university community (92). According to Wireman (92, p. 4), "...development is an effort on the part of the entire institu-

tion to analyze critically its educational philosophy, and program specific steps which must be taken to realize that philosophy...."

Gross and Grambsch (39) have shown that discrepancies existed between the perceived and preferred goals of colleges and universities. And yet, according to Eldridge (30, p. 29), "The first principle [in fund raising] is that a successful fund-raising campaign must grow out of a philosophy of education in general and of one's own institution in particular." Gould (37, p. 14) in discussing the weaknesses of higher education related that:

The real problem ... is that too many institutions of learning have no clear conception of their own particular purposes and goals. They all share in a common desire to be better and stronger and of greater service, but they have rarely gone through the intellectual exercise of determining just exactly what their roles are in the total spectrum of educational need.

In discussing the positive effects of the fund raising process in higher education and its relation to academic goals and philosophy and the self-study initiated within this process, Hanson (41, p. 14) stated that:

...it achieves understanding of problems and acceptance of goals on the part of the participants.... All public relations and fund raising activities are conceived and executed as means for helping to achieve the educational goals of the institution.... The knowledge, insight and skill of the members of the academic community are harnessed and used in carrying the program forward. The result is better morale and increased dedication to accepted ideals. In short, the development program becomes an educational enterprise, full of learning experiences, reaching high for the fuller achievement of the purposes of the institution.

Questions were being asked in the early 1970's regarding the role of institutions of higher education in relation to society and the student. American colleges and universities, public and private, have historically reflected prevailing societal values (58). However, questions have arisen as to whether institutions of higher education could best serve society in this manner or by being centers of independent thinking "...where social

and personal norms are under constant reevaluation" (58, p. 8). Research has shown that the preferred college experience encouraged critical thinking and a spirit of intellectual reflection (31, 48, 58, 83). Martin (58, p. 62) contended that:

The challenge before colleges and universities, then, is to persuade the general public that their role is to educate students to serve society as a critical conscience and a source of alternative futures.... ..society must be brought to see, despite great risks inherent in this process that students and faculty serve best when they criticize and create.

However, Martin (57, p. 29) claimed that:

Independence dare not mean isolation, because the next transformation of man will involve a world culture for the whole man. Yet, independence must mean free inquiry and independent thought if we are to effect a transformation.

Luria and Luria (54) suggested that there was a danger that colleges and universities only considered what they could do for society as it was rather than what role they could play in society's evolution. They stated (54, p. 77) that "...many people believe that the university has a critical responsibility to interact in an active rather than a passive role." Their claim was that (54, pp. 78-79):

Even though to do so represents a departure from some cherished illusions of neutrality and detachment, it amounts only to acknowledging the real situation and making the university's role in society less ambiguous. The university today is a major business enterprise, preempting facilities of increasing magnitude and competing with other sectors of the community for funds and Lebensraum.

In contrasting students of the 1950's with students of the 1960's, Sanford (76) suggested that "...we may anticipate educational innovation and reform. Changes will be guided by increased understanding of students' needs...." However, although individual development and emphasis on the student were stressed in the philosophy of many college and university cat-

alogues and also in their commencement addresses, Sanford (76) claimed that it tended to be ignored in practice.

Alumni office

The alumni office acted as a liaison between the alumni and other constituents of the university community (94). The importance of effective communication among the various constituencies was stressed by Gould (37).

He stated (37, p. 27):

If higher education wishes to regain public confidence, it will have to reorganize itself to be closer to the community it serves.... This community includes students, faculty, and alumni, who constitute its internal community; it also includes business, industry, civic leaders, cultural and social agencies, any group or any individuals concerned about the present and future patterns of American life.

Maintaining communication with alumni could be accomplished through a program of reunions, seminars, continuing education, and direct mailing. According to Bennett (3), experience has shown that colleges and universities with the soundest programs and the best communication vehicles for these programs would get their share and more of available funds. Bennett (3), Pollard (68), and Umbeck (87) emphasized the necessity of a sound, long-range development plan as prerequisite to a successful fund raising program. Attention, interest, involvement, and commitment were the important concepts in developing alumni support emphasized by McAnally (61).

Once the college or university had the attention of the alumni constituency, the interest of the alumni would be built. Discussing the concept of interest in one's alma mater, McAnally (61, p. 29) stated:

This is the primary function of the case statement, which should be a simple summary of the aims, objectives and needs of the institution which can be realized through alumni support....
...people are entitled to know why you are asking for money and

what you intend to do with it. You must give your alumni a reason to want to give to the college, and you must present it in such a way that it will precipitate affirmative action.

McAnally (61) concluded that involvement and commitment by alumni should proceed from a strong alumni program built on attention and interest.

Davis (29) and Eldridge (30) stressed the importance of suggesting to donors that gifts be given for specific purposes and that donors be informed as to the use being made of their gifts. It had been the experience of Eldridge (30, p. 29) "...that people who have the means to support higher education will respond to interesting ideas which are well presented."

Financing higher education

Financial policies of colleges and universities from early colonial times to the present were closely related to voluntary support for colleges and universities. American higher education in the colonial period was financed by student fees, endowment, and public subsidies (10, 74). Although these early institutions of higher education accepted gifts, they did not surrender control over the policies and objectives of the college (10). In the 1970's, a major question regarding financing of higher education was who should have control over the shaping and planning of the financial policies of colleges and universities.

Expenditures for American higher education increased from \$6.6 billion to \$21.0 billion during the 1960's. While expenditures for colleges and universities tripled, enrollment more than doubled from 3.6 million to 7.9 million for the same period (8, 49). Increased expenditures for American higher education created pressures on colleges and universities to find new sources of support or obtain greater support from existing sources. These

pressures had also caused concern regarding the inefficient use of existing resources (6, 19, 20, 37, 44, 79, 89).

The major sources of funds for institutions of higher education as a percentage of total income averaged over public and private institutions for the late 1960's were: Federal Government (approximately 24.0 percent); State (approximately 23.5 percent); student tuition and fees (approximately 22 percent); all other - including private gifts and endowment earnings (approximately 30.5 percent) (18, 40, 81).

Increasing state aid in the form of direct grants to private colleges and universities and grants to students who attended them appeared "...to be aggravating anew the conflict between public and private institutions of higher education" (80). In 1971, 35 states gave aid, at least indirectly, to private colleges and universities (27, 63). Two basic arguments were presented by advocates of state aid to private colleges and universities:

That such aid is cheaper in the long run for the states than starting new public institutions.

That if private colleges fail, the diversity of higher education will be destroyed (80, p. 5).

Support of higher education by the Federal Government "...originated with the provision for land grants in the Northwest Ordinances of the 1780's" (18, p. 16). Two of the greatest developments which influenced the American higher educational system came from the Federal Government: (1) the Morrill Land Grant Act of 1862 and the Second Morrill Act in 1890; and (2) federal support of scientific research during World War II (51). Brubacher (10, p. 235) stated that:

...through most of the history of federal aid to education, funds were granted directly to the states or to public institutions through the states. It was not until the 1930's that Washington

began to grant assistance in peacetime to private institutions, with which it commenced to deal directly. Even then, it did so by dispensing funds to individuals attending institutions of learning, rather than to the institutions themselves.

According to Wolk (93, p. 1):

From the end of World War II until the launching of the Soviet Sputnik, educators and government officials debated whether the federal government should aid higher education. "...the debate [today] revolves around the permanent form that the federal aid will take.

Five major alternative methods of federal funding for higher education have been suggested:

1. Categorical Aid - funds provided through grants, contracts, or loans in support of a specific project or goal designated by the granting agency.
2. Aid to Students - grants or loans directly to students or through institutions to cover all or part of educational expenses.
3. Grants to Institutions - funds provided to institutions for broad or undesignated purposes.
4. Tax Relief - assistance to taxpayers for educational expenses through exemptions, deductions, or credits in the payment of taxes....
5. Revenue Sharing - the return to the states of certain tax monies collected by the federal government (93, p. 9).

Fund raising

Financial planning was an aspect of fund raising which was a concern of various constituencies in the college or university community. Stressing the importance of planning in helping to solve the financial problems of colleges and universities, Pollard (68, p. 47) suggested carrying on a development program

...based on a) the mission of the institution, its particular role in society, b) intelligent planning in which all of its responsible elements - trustees, president, faculty, alumni, other friends, and students - take part fully, and c) cultivation and solicitation for an appropriate educational program, on a broad scale, among all of the institution's constituencies.

Identification of prospective donors and assistance in the fund raising process by students, parents of students, faculty, the president, trustees, alumni, and friends of the institution was also stressed by several authors (2, 23, 24, 30, 47, 67, 69, 92). A group of professional fund raisers and educators suggested that volunteers have an important function in the fund raising process (4, 30, 68, 71, 85).

Factors were identified which encouraged or discouraged potential donors to higher education. Factors identified as possibly encouraging potential donors were: loyalty, tax considerations, an altruistic impulse, confidence in the strength of the college or university, past accomplishments of gifts, and belief in the work of the institution (9, 34, 35, 53, 68, 87, 92). Factors identified as possibly discouraging potential donors were: problematic business conditions, an uncertain stock market, contributions to the church and other charitable organizations, campus unrest, lack of interest, lack of finances, and lack of contact with one's alma mater (28, 53, 68, 83, 88).

According to the Council for Financial Aid to Education report on Voluntary Support of Education 1970-1971, a distinct change in the pattern of voluntary support per institution by purpose emerged in the period 1965 to 1971. It was reported that (88, p. 66):

The most important of these [changes] concerns support given for physical plant - funds for the purchase, construction, improvement, operation and maintenance of buildings, grounds, equipment and other facilities. Support for this purpose which rose more than 13% per year prior to 1964-65, has shown no growth whatever in the past six years. In fact, the 1970-71 figure is 8.3% less than the amount reported in 1964-65. Since this is one of the principal categories of support for capital purposes, this observation is consistent with the fact that support for current operations has been responsible for all of the growth in total voluntary support since 1964-65.

Support designated for student aid, basic research, and unrestricted support maintained relatively stable growth patterns. Approximately one-third of voluntary support for higher education was unrestricted as to use, and about two-thirds was designated for specific purposes (88).

Many private business firms have participated in matching gift programs where they contribute an amount equal to that contributed by their employees. These companies have matching gift programs with both public and private institutions of higher education and most include public and private institutions on an equal basis (56). The total dollar amount from corporate support received through matching gift programs has risen every year since data were first tabulated in 1966-1967. The overall gain for the four-year period, 1966-1970, was 70 percent. Both an increase in the total number of gifts matched by business and industry and an increase in the size of the average gift matched were reflected in the growth (88).

Fund raising activities involving trusts and insurance programs which provided income to a college or university while continuing to offer protection to the donor could help to assure ultimate capital gifts (30, 33, 67). A drop of 11.7 percent was reported in the total of deferred giving in 1970-1971. However, bequests accounted for over one-third of the total support received from individuals in 1970-1971, which was an increase of 43.3 percent (88). According to Webster (90), a bequest is a gift of money or other personal property left by will. Cash contributions continued to be a favored form of giving to colleges and universities in 1970-1971.

Tax incentives had helped colleges and universities to obtain gifts that donors previously thought they could not afford, and they had encour-

aged donors to increase the size of gifts (32, 45, 46, 68). However, the Tax Reform Act of 1969 provided that deductions for gifts-in-kind could be valued only at cost. Deductions were previously allowed on such gifts at their market value (27, 62). The net effect of this legislation was not yet clear (88).

The investment policies of colleges and universities "...involves not only choosing good securities, but, more important, the selection of the right combination of securities of different kinds to provide a constant maximum return consistent with investment objectives" (40, p. 38). Three of the principal categories of securities in which institutions of higher education have invested were: common and preferred stocks, bonds, and real estate (17, 22, 40, 44, 52, 56, 75, 84). Investing of college and university funds was usually carried out by a committee of trustees - individuals experienced in investments and industry or a volunteer alumni committee, a large bank or investment house, or a small investment house (17, 22, 56, 75).

METHOD OF PROCEDURE

The purpose of the present study was to describe and analyze the attitudes of alumni donors concerning certain topical areas which are considered important in higher education. These areas pertain to the philosophy and objectives of colleges and universities, the role of the alumni office in the overall functioning of the college or university, and issues concerned with financing and fund raising. Procedures used in research design, sample selection, instrument development, data collection and analysis were described in this chapter.

Research Design

A survey method of investigation was used to determine the attitudes of donors. Because of the wide geographical distribution of the sample, it was considered to be reasonable and economical to collect data by mail. The survey was conducted in one phase using a survey instrument.

Population and Sample

Based on factors of time and economy, it was decided to limit the study to donors from three institutions of higher education within Iowa. These institutions were characteristic of three types of colleges and universities: the private college, the private university, and the public university. The selected college and universities were: Cornell College, a private college; Drake University, a private university; and Iowa State University, a public university. The sampled population were alumni from these three institutions of higher education.

It was believed that the attitudes of alumni who attended college in certain time periods might differ from alumni of other time periods due to different social, political, and economic factors. The following periods of time were established as being relevant for the study: Pre-1930, 1930-39, 1940-49, 1950-59, and 1960-68. The rationale for selecting these eras was:

Pre-1930: The Pre-1930 era included the pre-World War I period and the World War I period. In the period preceding World War I, the United States shed its nineteenth century isolationism and emerged as a world power. Large scale philanthropy which influenced colleges and universities began (28). There was little fund raising by the three selected institutions of higher education. World War I brought financial problems to practically all colleges and universities (33). The era of the intensive campaign, the post-war period, was

...ideal for ...[fund raising] drives, first because the need for funds was imperative; second, the country was in a condition of unprecedented prosperity; third, the American people were still in the habit and spirit of giving to worthwhile causes; and fourth, a highly developed technique had been evolved for nationwide intensive campaigns as a result of the war service drives (33, p. 5).

1930-39: The financial resources of most Americans were affected by the great depression. The depression years also brought economic hardships to many colleges and universities. The Federal Government responded with the establishment of the Federal Emergency Relief Act in 1933, the founding of the National Youth Administration in 1935, and in 1937 the establishment of the National Cancer Institute Act and the Civilian Conservation Corps (93). An increase in enrollments was experienced during this era putting increasing financial pressures on colleges and universities.

1940-49: With World War II and its aftermath, the 1940's provided a challenging era to higher education. Until World War II, "There was no continuing federal involvement with higher education" (51, p. 52). Enrollment was low in the early 1940's, but with the passage of the G.I. Bill in 1944, a dramatic increase in enrollment in higher education was experienced.

1950-59: The Korean War, the McCarthy era, and the launching of the Soviet space satellite were forces that influenced the direction of higher education in the 1950's. Broadening of federal support to higher education was provided by the establishment of the National Science Foundation in 1950, the Housing Act in the same year, and the passage of the National Defense Education Act in 1958.

Sanford (76, p. 32) commented on the effect of the period on colleges:

During ...[this] period there was a relative shortage of young people of college age, which had resulted from the lower birth rate of the Depression years. At the same time, there was great emphasis on economic growth and national security. Such a combination produces conservative ideology.... Education was geared to produce young people who would strengthen the society and its economy.

1960-68: The 1960's witnessed a great increase in enrollments at colleges and universities, and national attention was being focused on campus events. During the 1960's, the Kennedy civil rights movement

...has waxed and waned and has been replaced by Black Power and Black Separatism. Vietnam has raised an entirely new set of issues. And both racism and the actions of the military-industrial complex have moved, as sources of concern, from somewhere "out there" to become foci of direct relevance to a college or university (83, p. 1).

In discussing alumni of the early 1960's, Greeley (38, p. 2) contended that, "However they may differ from their predecessors in style, the 1961 alumni ...have much in common with those who came after them."

Sampling technique

The sampled population was stratified by era of graduation and donor classification. Since alumni from similar eras of graduation were hypothesized to be more homogeneous with respect to their attitudes, stratification was expected to produce greater precision in the estimation of population characteristics. Cochran (21, p. 88) stated that, "If each stratum is homogeneous, ...a precise estimate of any stratum mean can be obtained from a small sample in that stratum. These estimates can then be combined into a precise estimate for the whole population." Alumni were selected for each era on the basis of their year or projected year of graduation. It was decided that a further gain in precision would be obtained by listing alumni alphabetically by college or division in which they earned their first degree at the university being sampled for each year of graduation.

For the two universities included in the study, the colleges or divisions within each university were ordered alphabetically. The College of Divinity at Drake University was discontinued in 1968. However, the sampled population from Drake included alumni from this college and so it was included in the listing of colleges. The ordering of colleges for Drake University was: College of Business Administration, College of Divinity, College of Education, College of Fine Arts, School of Journalism, Law School, College of Liberal Arts, and College of Pharmacy. The ordering for Iowa State University was: College of Agriculture, College of Education, College of Engineering, College of Home Economics, College of Sciences and Humanities, and College of Veterinary Medicine. Alumni from the Graduate College at Iowa State University were included in the college of their major subject.

Listings of major donors, consecutive donors, non-consecutive donors, and non-donors were compiled from the files at the Development Offices of Cornell College and Drake University and from the Alumni Office at Iowa State University. Because the number of major donors at each of the selected institutions of higher education was less than 75, the whole population of major donors was included in the study. A stratified systematic sampling technique was used to select 75 alumni from each of the remaining donor classifications at each of the three institutions.

Development of the Instrument¹

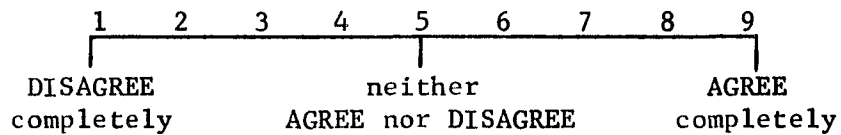
The purpose of the instrument was to obtain, as accurately and completely as possible, information concerning the attitudes of donors at Cornell College, Drake University, and Iowa State University on topical areas which are important in higher education. The characteristics desired for the instrument were that it:

1. measure the attitudes of donors;
 2. permit a range of responses;
 3. yield scores that could be treated statistically;
- and, 4. be relatively short.

A nine-point scale was constructed using numerical designations and descriptive phrases to define the points on a continuum. In the instructions provided, each respondent was requested to consider the extent of his agreement with each of the first 91 items and then record his judgment by entering the appropriate number in the blank before each item.

¹Item 79 was inadvertently omitted in the reproduction of the instrument.

The scale used was:



In the final part of the instrument, a statement was presented to which the respondent was to respond by writing in the percentages which in his opinion were appropriate.

The instrument was pre-tested with college and university alumni who were not in the sample. These alumni represented a wide range of majors and ages. Revisions were made based on a review of the interpretation of specific questions, style of questions, layout of the instrument, and the time required to complete the instrument.

The items selected for the instrument were based on issues identified in the literature as being of interest to donors in higher education. These issues pertained to the philosophy and objectives of colleges and universities, the role of the alumni office in the overall functioning of the college or university, and issues concerned with financing and fund raising in higher education.

Items 1 through 8 dealt with the attitudes of alumni concerning the philosophy and objectives of colleges and universities. Included were items which related to the philosophy and objectives of the college or university in relation to society, students, the clarity and internal consistency of the philosophy and objectives, and the retention of private colleges and universities in the American system of higher education.

The attitudes of alumni relating to the role of the alumni office in the overall functioning of the college or university were covered in items

27 through 42. Although fund raising through alumni has been the function of the Development Offices at Cornell College and Drake University since 1964, it was believed that most alumni associate fund raising with the alumni office and thus the term alumni office was used in these items. Included were items pertaining to the communication of the alumni office with alumni, monetary gifts to one's alma mater in relation to the alumni office, and evaluation of the program of the alumni office.

Items 10 through 26 and 93 through 100 pertained to the financing of higher education. Issues included were those relating to the lack of financial support for colleges and universities, the forces that are effective in shaping or changing the financial planning of colleges and universities, the role of the Federal Government in increased funding for higher education, and an analysis of the contributions from the major sources of support for higher education.

Fund raising in higher education was treated in items 43 through 92. Included were items pertaining to the role of various constituents in the fund raising process, preferred forms of giving by alumni, uses to be made of gifts received in fund raising, investment of monies received through gifts, tax incentives in relation to gifts, and factors which encourage or discourage alumni gifts.

Data Collection

At the time of the initial mailing of the instrument, June 1, 1972, a total of 843 alumni composed the sample. A copy of the instrument, Appendix A, with an accompanying letter explaining the purpose of the instrument, Appendix B, and a stamped, self-addressed envelope were sent to each of the

843 alumni. The instrument was marked with a code number to facilitate follow-up. In the cover letter, the respondents were assured that their responses would be treated with strict confidence and that the code number had been included only for follow-up purposes.

Approximately two weeks after the initial mailing, a follow-up letter, Appendix B, was sent to all of those who had not replied. A second follow-up letter, Appendix B, was sent approximately two weeks after the first, accompanied by a copy of the instrument and a stamped, self-addressed envelope. First class postage was used in all mailings.

Analysis of Data

Pearson product moment correlation coefficients (81) were calculated for the first 91 items of the instrument. The correlation coefficients were tested for significance to study the relationships among the items.

Factor analyses (43, 65) by the principal components technique and varimax rotation were performed on items 1 through 42 and items 43 through 92 to determine common factors. Factor analyses by the principal components technique and varimax rotation for items 1 through 8 and items 27 through 42 were performed to determine common factors for these two groups of items.

The coefficient of reliability (73) was calculated for each of the groups except group 5 which included the items for which responses were recorded in percentages rather than a nine-point rating scale. Richardson defined the coefficient of reliability (R) as:

$$R = \frac{n\bar{r}}{1 + (n-1)\bar{r}}$$

where n = the number of items and \bar{r} is the average intercorrelation among the items. However, since the statements within each group were analyzed individually and not as a composite, reliability coefficients were only reported for future reference.

Because of the unequal numbers of observations on the various treatments, an unweighted factorial analysis of variance (82, 91) using three factors (colleges, donor classifications, and eras of graduation) was performed on each item to analyze the variation of the data by type of college, donor classification, and era of graduation, and the interaction effects of these factors. Since there were no major donors from Cornell's 1960-68 era, a degree of freedom was lost from the three-way interaction of colleges, donor classifications, and eras of graduation. Scheffé's test (77) was used for testing hypotheses regarding differences between means when compared on a paired basis.

The five percent level of significance was chosen as the level of rejection of the null hypotheses. Throughout this study, conclusions in regard to whether the null hypotheses were rejected were implied from the reported results of the statistical analyses.

FINDINGS

The present study investigated the attitudes of donors concerning certain topical areas which are considered important in higher education (3, 51, 76, 92). Following the discussion of response to the instrument and determination of groupings, the findings of the study are presented in relation to the following areas: the philosophy and objectives of colleges;¹ the role of the alumni office in the overall functioning of the college; and issues pertaining to financing and fund raising in higher education.

The specific null hypotheses to be tested were:

There were no significant differences in the attitudes of donors by:

- a) Type of college
- b) Donor classification
- c) Era of graduation.

Response to the Instrument

The percentage distribution of respondents is shown in Table 1. The number of respondents was not reported because of the confidential nature of the number of major donors. Six hundred and thirty of the alumni in the sample, or 74.7 percent, completed the instrument. The percentages of alumni who responded by college were 76.3, 67.7, and 80.5 for Cornell, Drake, and Iowa State University, respectively. When alumni were categorized by donor classification as major, consecutive, non-consecutive, and non-donor, the percentages who responded were 70.8, 82.7, 79.6, and 64.9, respectively. The percentages of respondents by era of graduation

¹Throughout the remainder of this study, colleges and universities are referred to as colleges.

Table 1. Percentage distribution of respondents classified by college, donor classification, and era of graduation

College	Era of graduation	Donor classification ^a				Total
		M	C	NC	ND	
Cornell	Pre-1930	68.0	80.0	80.0	33.3	65.7
	1930-39	87.0	86.7	73.3	66.7	77.4
	1940-49	71.4	93.3	86.7	80.0	80.0
	1950-59	100.0	86.7	73.3	73.3	78.3
	1960-68		86.7	86.7	66.7	80.0
	Total		73.2	86.7	80.0	64.0
Drake	Pre-1930	60.0	80.0	80.0	33.3	62.7
	1930-39	61.5	80.0	66.7	60.0	67.2
	1940-49	66.7	73.3	86.7	53.3	70.2
	1950-59	54.5	66.7	80.0	66.7	67.9
	1960-68	80.0	80.0	73.3	66.7	74.0
	Total		62.0	76.0	77.3	56.0
Iowa State	Pre-1930	81.8	93.3	86.7	46.7	77.2
	1930-39	76.9	80.0	80.0	86.7	81.0
	1940-49	88.9	93.3	86.7	66.7	83.3
	1950-59	66.7	80.0	73.3	86.7	77.8
	1960-68	100.0	80.0	80.0	86.7	83.3
	Total		80.4	85.3	81.3	75.0
Grand Total		70.8	82.7	79.6	64.9	74.7

^aM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

were 68.4, 75.2, 79.1, 74.7, and 79.0 for the Pre-1930, 1930-39, 1940-49, 1950-59, and the 1960-68 eras, respectively.

Response to the instrument was highest for alumni from Iowa State and lowest for Drake alumni. The percentage of alumni contributing to the annual fund during 1970-71 for Cornell, Drake, and Iowa State was 19.20, 13.67, and 13.30, respectively (88). From these data, it might be expected

that Cornell would have the highest percentage of respondents. A partial explanation for Iowa State having the highest percentage of respondents might be that the study was being conducted by a student of Iowa State. Cornell is a small private college, and it is possible that a closer bond is felt by alumni to their alma mater than at a large private institution such as Drake. This could account for the higher percentage of respondents from Cornell than from Drake.

By donor classification, the largest percentage of respondents was in the consecutive donor classification, followed closely by non-consecutive donors. Consecutive donors, by definition, were donors who had contributed each year during the specified time period and might be expected to have the highest percentage of respondents. However, the high percentage of respondents from the non-consecutive donor group was unexpected. It was noted that of the seven items concerned with why alumni are discouraged from giving to their alma mater, "lack of finances" had the highest mean response for non-consecutive donors. A partial explanation for the high percentage of responses from non-consecutive donors might be that they were still interested in their alma mater but due to lack of finances did not contribute each year. It was of interest to note that Drake's non-consecutive donors had a higher percentage of responses than its consecutive donors.

A possible explanation for the relatively low percentage of respondents from the major donor classification might be that a larger percentage of major donors were from the Pre-1930 era (40.24 percent). Among the different eras of graduation, the Pre-1930 era had the lowest percentage of respondents. Non-donors had the lowest percentage of respondents.

Percentage distribution of respondents by era of graduation was highest for the 1940-49 era (79.1 percent); the 1960-68 era had a 79.0 percent response; the Pre-1930 era had the lowest percentage of respondents.

Examination of non-respondents showed that 50 alumni, or 5.6 percent of the sample, did not cooperate because of sickness, death, lack of interest, or because completed instruments were received after the cutoff date. It had been anticipated that since there would be alumni from the Pre-1930 era who graduated prior to 1900, the sample would include alumni who were incapacitated or had already died, but alumni office lists had not been updated.

There was 19.3 percent of alumni who did not respond to any of the mailings. A five percent sample of these non-respondents would be eight alumni. It was decided that since the number of respondents was large, 630, the procedure of sampling five percent of non-respondents would not significantly alter the findings.

Determination of Groupings

Relationships between variables were estimated by calculating Pearson product moment correlation coefficients¹ (Appendix C) and factor analyses of items 1 through 92 (Appendix D).

Factor analyses by the principal components technique and varimax rotation of the principal components solution were performed on items 1 through 92 to determine common factors. Because of the large number of

¹In all correlation matrices included in this study, the decimal point has been omitted and only the first two digits of each coefficient are given.

factors extracted, it was decided to analyze the data by groupings as indicated by Pearson product moment correlation coefficients, factor analyses, and organization of the instrument.

There were 91 items analyzed in 12 groups; the eight remaining statements were analyzed individually. Groups and statements classified under four topical areas were:

1. Philosophy and objectives of colleges

Group 1: items 1 through 8

2. Alumni office in the overall functioning of the college

Group 2: items 27 through 42

3. Financing higher education

Items 9, 10, and 11

Group 3: items 12 through 21

Group 4: items 22 through 26

Group 5: items 93 through 100

4. Fund raising in higher education

Items 43, 44, 53, 54, and 55

Group 6: items 45 through 52

Group 7: items 56 through 63

Group 8: items 64 through 66

Group 9: items 67 through 71

Group 10: items 72 through 78

Group 11: items 80 through 86

Group 12: items 87 through 92

Analysis of Areas

Factorial analyses of variance were used to test for significant differences among main effects (colleges, donor classifications, and eras of graduation) and significant interaction effects of these factors. Tables for items where no main effect was found to be significant are given in Appendix E. Fifteen significant interaction effects were noted. Interactions which were found to be significant but which had no corresponding significant main effect were not discussed. Thirty-one significant differences and 59 highly significant differences were found for main effects. Summary of significant differences for main effects is presented in Table 2. The numbers of significant differences found among colleges, donor classifications, and eras of graduation were 32, 28, and 30, respectively.

Where a main effect was significant at the .05 level, Scheffé's test was used to test for significant differences between means when compared on

Table 2. Summary of the numbers of significant differences among colleges, donor classifications, and eras of graduation by area

Area	No. significant differences by college	No. significant differences by donor	No. significant differences by era
Philosophy and objectives	3	0	1
Alumni office	4	4	6
Financing	12	2	5
Fund raising	13	22	18
Total	32	28	30

paired basis. Means and standard deviations for all items classified by college, donor classification, and era of graduation are presented in Appendix F. Table 3 presents the summary of the numbers of significant differences between colleges, donor classifications, and eras of graduation. The numbers of significant differences noted between colleges, donor classifications, and eras of graduation were 45, 36, and 35, respectively.

Table 3. Summary of the numbers of significant differences between colleges,^a donor classifications,^b and eras of graduation^c by area

Comparison	Area				Total
	Philosophy and objectives	Alumni office	Financing	Fund raising	
CO-D		3	1	7	11
CO-IS	2	1	9	8	20
D-IS	1		8	5	14
M-C			1	4	5
M-NC		1	1	5	7
M-ND		3	2	10	15
C-NC				1	1
C-ND		3		5	8
NC-ND					
E1-E2					
E1-E3		5		4	9
E1-E4		2		5	7
E1-E5	1	2	1	10	14
E2-E3		1			1
E2-E4		1			1
E2-E5		1	1		2
E3-E4					
E3-E5			1		1
E4-E5					

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Philosophy and objectives of colleges

Items pertaining to the philosophy and objectives of colleges formed group 1. Statements numbered as in the instrument were:

1. Colleges and universities should have a philosophy and objectives relevant to today's society.
2. Colleges and universities should have clarity and internal consistency in their philosophy and objectives.
3. Colleges and universities should be responsive to students' goals.
4. Colleges and universities should be centers of independent thinking.
5. Colleges and universities should evolve with society.
6. Colleges and universities should have extracurricular activities related to the objectives of the school.
7. Colleges and universities should be mediums for social change.
8. Private colleges and universities should be retained in the American system of higher education.

Although none of the mean responses to the statements on the instrument was rated "agree completely" by the respondents, degrees of agreement, disagreement, and uncertainty were indicated by the mean ratings. Each mean had a possible value from one to nine. Mean ratings of 3 or below were indicative of disagreement. Weak disagreement was indicated by means between 3 and 4. Ratings of 4 through 6 indicated uncertainty, that is, respondents neither agreed nor disagreed with the statements. Weak agreement was indicated by means between 6 and 7. Means of 7 or above were considered indicative of agreement with the statements.

Means and standard deviations for donors are presented in Table 4. To facilitate discussion, the items in this and subsequent tables are numbered as in the instrument.

Table 4. Means and standard deviations of responses on items 1 through 8 for donors

Item no.	Donors	
	Mean	S.D.
1	7.70	1.65
2	7.94	1.70
3	7.02	1.80
4	7.22	2.03
5	7.13	1.82
6	7.40	1.81
7	5.61	2.47
8	8.65	1.06

Donors indicated agreement with all statements in the group except item 7. In response to item 7 that "Colleges should be mediums for social change," donors indicated uncertainty, neither agreeing nor disagreeing with the statement. The standard deviation was high on this item indicating that donors did not agree about what influence colleges should have as mediums for social change. In this and subsequent tables, mean responses between 4 and 6 along with high standard deviations (2 or above) indicated a wide variation in responses.

Findings indicated agreement with Frantzreb (69) in that clarity, consistency, and relevance to today's society were considered important aspects of the philosophy and objectives of colleges. This was important because, as Frantzreb (69, p. 7) emphasized, the first thing for a college

to do in the fund raising process is "...to decide upon a mission and then be sure it is relevant to today's society." In practice, Gross and Grambsch (39) noted that discrepancies existed between the perceived and preferred goals of colleges.

Agreement by donors that colleges should be centers of independent thinking and that colleges should evolve with society were indicated. Donors seemed to agree with the findings of Spaeth and Greeley (83) and Feldman and Newcomb (31) and the writings of Katz (48) and Martin (57) that colleges could best serve society by being centers of independent thinking.

Donors also seemed to agree with Sanford (76) that colleges should be more responsive to students' goals. However, as noted in the review of literature, Sanford (76) claimed that although emphasis on the student was stressed in the philosophy of many college catalogs and also in their commencement addresses, it tended to be ignored in practice. The findings of Gross and Grambsch's study of administrators, governing boards, and a 10 percent sampling of faculty at 68 universities, both public and non-denominational private, indicated that "...goals related to students receive relatively little emphasis at American universities...." (39, p. 109).

Donors agreed very strongly that private colleges should be retained in the American system of higher education. This could help to ensure diversity and provide alternatives within the higher educational system.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients were employed to test the relationships between each of the eight items related to the philosophy and objectives of colleges. The correlation matrix is presented in Table 5. A correlation coefficient of .08 was significantly different from zero at the .05 level

Table 5. Intercorrelations for items related to philosophy and objectives of colleges

Item no.	1	2	3	4	5	6	7	8
1								
2	22							
3	41	12						
4	34	01	38					
5	48	11	42	36				
6	21	29	22	05	24			
7	35	-01	31	41	36	14		
8	06	11	08	07	07	16	05	

with 628 degrees of freedom. The coefficient of reliability for the group was .70.

Factor analyses Factor analyses of items 1 through 8 were used to determine common factors. Results of principal components factor analysis and varimax rotation of the principal components solution are presented in Tables 6 and 7, respectively.

After varimax rotation of the principal components solution, items 1, 3, 4, 5, and 7 loaded highly (.450 or above) on factor I. Items 2 and 6 loaded highly on factor II. Item 8 did not load highly on either factor. Although the percent of total variance accounted for by the two factors was relatively low, 33.677, it appeared that at least two things were being measured:

1. The internal consistency of the philosophy and objectives of colleges, and
2. Colleges in relation to the external expression of their philosophy and objectives.

Table 6. Results of principal components factor analysis, items 1 through 8 on two factors

Item no.	Factor		h^2
	I	II	
1	-.665	-.049	.444
2	-.227	-.480	.281
3	-.614	.022	.377
4	-.569	.304	.416
5	-.676	.028	.458
6	-.358	-.443	.324
7	-.547	.215	.345
8	-.138	-.167	.047

Percent
variance accounted for 26.193 7.454

Percent of total variance accounted for by two factors = 33.677

Table 7. Results of varimax rotation of principal components factor analysis, items 1 through 8 on two factors

Item no.	Factor	
	I	II
1	.587	.316
2	.011	.530
3	.569	.231
4	.643	-.045
5	.629	.251
6	.145	.551
7	.587	.027
8	.058	.209

Because of the relatively low percent of total variance accounted for by the two factors, 33.677 percent, it was decided to analyze statements in this group individually.

Analyses of variance Factorial analyses of variance were used to test for mean differences among colleges, donor classifications, and eras of graduation and the interaction effects of these variables. Summary of significant differences for main effects on items 1 through 8 is presented in Table 8. One significant difference and three highly significant differences for main effects were found.

Table 9 shows the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Five significant differences between means were noted.

Table 8. Summary of significant differences for main effects on items 1 through 8

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
1			
2			
3	HS**		HS**
4	S*		
5			
6			
7			
8	HS**		

*Significant at .05 level.

**Significant at .01 level.

Table 9. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 1 through 8

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
1	7.71			
2	7.98			
3	7.06	CO-IS		E1-E5
4	7.18	CO-D CO-IS		
5	7.13			
6	7.44			
7	5.54			
8	8.63	D-IS		

^aCO, Cornell; D, Drake, IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930, E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Results of factorial analyses of variance on items 3, 4, and 8 are presented in Tables 10, 11, and 12, respectively.

Highly significant differences among both colleges and eras of graduation were found on item 3. Cornell had a significantly different mean response from Iowa State. The two private colleges, Cornell and Drake, agreed that colleges should be responsive to students' goals while Iowa State was in weak agreement with the statement. All eras except the Pre-1930 era agreed with the statement. However, the Pre-1930 era differed significantly from the 1960-68 era. The 1960-68 era had the highest mean response, 7.45, while the lowest mean response was 6.61 for the Pre-1930 era. A possible explanation for this difference could be the emphasis

Table 10. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 3

Source of variation	df	MS	F ^a
Colleges (A)	2	17.90	5.34*
Donors (B)	3	4.71	1.41
Eras (E)	4	12.57	3.75**
Interactions:			
A x B	6	0.94	<1
A x E	8	1.75	<1
B x E	12	2.13	<1
A x B x E	23	4.31	1.29
Error	571	3.35	
Significantly different means between colleges: ^b CO-IS			
Significantly different means between donors: ^c			
Significantly different means between eras: ^d E1-E5			

$${}^a F(.05) 3,571 = 2.62 > 1.41$$

$$F(.05) 23,571 = 1.55 > 1.29.$$

$${}^* F(.01) 2,571 = 4.65 < 5.34, p < .01.$$

$${}^{**} F(.01) 4,571 = 3.35 < 3.75, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

writers in higher education (31, 48, 76) are putting on students rather than programs, and their writings might be better known to alumni of the 1960's.

Although a significant difference among colleges was found on item 4, the three colleges agreed that colleges should be centers of independent

Table 11. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 4

Source of variation	df	MS	F ^a
Colleges (A)	2	18.64	4.42*
Donors (B)	3	10.00	2.37
Eras (E)	4	6.50	1.54
Interactions:			
A x B	6	6.96	1.65
A x E	8	4.59	1.09
B x E	12	2.10	<1
A x B x E	23	4.73	1.22
Error	571	4.22	
Significantly different means between colleges: ^b		CO-D	
		CO-IS	
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 2.37
F(.05) 4,571 = 2.39 > 1.54
F(.05) 6,571 = 2.11 > 1.65
F(.05) 8,571 = 1.96 > 1.09
F(.05) 23,571 = 1.55 > 1.22.

*F(.05) 2,571 = 3.01 < 4.42, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

thinking. Significant differences were noted between Cornell and both Drake and Iowa State.

A highly significant difference among colleges was found on item 8, "Private colleges should be retained in the American system of higher edu-

Table 12. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 8

Source of variation	df	MS	F ^a
Colleges (A)	2	8.22	7.21*
Donors (B)	3	1.28	1.12
Eras (E)	4	1.39	1.22
Interactions:			
A x B	6	0.43	<1
A x E	8	0.31	<1
B x E	12	1.00	<1
A x B x E	23	0.72	<1
Error	571	1.14	
Significantly different means between colleges: ^b			D-IS
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 1.12
F(.05) 4,571 = 2.39 > 1.22.

*F(.01) 2,571 = 4.65 < 7.21, p < .01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

cation." All three colleges were in agreement with the statement. Yet, Drake had a significantly different mean response from Iowa State. Although Iowa State had the lowest mean response, 8.43, Iowa State was in strong agreement with retaining private colleges at a time when controversy exists over pluralism and diversity in American higher education (72).

Alumni office in the overall functioning of the college

Items related to the alumni office in the overall functioning of the college comprised group 2.

Group 2: items 27 through 42 Statements included in this group were:

27. The Alumni Office should have consistent communication with its alumni.
28. The Alumni Office should provide opportunities for alumni reunions and area meetings.
29. The Alumni Office should show the uses to be made of gifts received in fund raising programs.
30. The Alumni Office should propose gifts for specific purposes.
31. The Alumni Office should inform alumni of the possible financial benefits to donors from giving.
32. The Alumni Office should have matching gift programs with business and industry.
33. The Alumni Office should ask for money the college or university needs.
34. The Alumni Office should ask for money it thinks it can get.
35. The Alumni Office should have an ongoing evaluation of its program.

The Alumni Office should provide information on what is happening regarding the following:

36. Athletics
37. Cultural Events
38. Continuing Education Programs

- 39. Curricular Developments
- 40. The Plans of the College or University
- 41. Changes in the Philosophy and Objectives of the Institution
- 42. Travel Opportunities

Means and standard deviations for donors on items 27 through 42 are presented in Table 13. Donors expressed agreement with all statements except items 34 and 42. On statement 34, "The alumni office should ask for money it thinks it can get," a high percentage of uncertain responses was noted among all donor groups. With the exception of "travel opportunities", donors agreed that the alumni office should provide information on what is happening regarding athletics, cultural events, continuing education pro-

Table 13. Means and standard deviations of responses on items 27 through 42 for donors

Item no.	Donors	
	Mean	S.D.
27	8.07	1.63
28	7.56	1.89
29	8.07	1.53
30	7.30	1.95
31	7.94	1.63
32	7.36	2.09
33	7.07	2.21
34	5.55	2.67
35	8.33	1.34
36	7.15	2.15
37	7.69	1.67
38	8.03	1.59
39	7.90	1.65
40	8.31	1.35
41	8.27	1.39
42	5.90	2.55

grams, curricular developments, the plan of the college, and changes in the philosophy and objectives of the college.

Donors were in agreement with Bennett (3) and Gould (37) that effective communication should exist between alumni and their alma mater. Findings supported the writings of Davis (29), Eldridge (30), and McAnally (61) as to the importance of suggesting gifts for specific purposes and of keeping donors informed as the use being made of these gifts.

Some donors indicated that they did not understand why item 34 was included in the instrument as they found it redundant. Yet, donors lent support to Frantzreb's suggestion that when asking for money "...ask not for what you think you can get, but ask for what you need" (69, p. 7). The results were in partial agreement with the findings of Andrews (1) that to raise money an institution has to ask for it.

When mean responses for donors on items 36 through 42 were ranked from high to low, the results were:

1. The plans of the college or university
2. Changes in the philosophy and objectives of the institution
3. Continuing education programs
4. Curriculum development
5. Cultural events
6. Athletics
7. Travel opportunities

It would appear that donors were most interested in finding out information about "the plans of the college" and "changes in the philosophy and objectives of the institution" and least interested in "athletics" and

"travel opportunities." However, no tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product correlation coefficients for items in group 2 are shown in Table 14. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability for this group was .86.

Table 14. Intercorrelations for items related to the alumni office

Item no.	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
27															
28	65														
29	36	38													
30	23	31	46												
31	35	35	37	41											
32	24	24	24	24	40										
33	21	12	16	25	29	31									
34	12	17	09	19	20	17	25								
35	26	24	29	25	34	16	31	14							
36	41	38	23	22	33	14	15	19	20						
37	37	35	27	19	32	13	22	18	17	67					
38	32	28	29	20	25	13	16	07	18	43	63				
39	28	19	23	19	19	12	15	05	18	38	48	70			
40	29	27	36	27	32	19	22	09	26	37	45	61	62		
41	26	19	23	17	22	15	19	05	22	31	39	50	52	66	
42	21	31	15	17	17	08	07	17	05	35	39	28	27	24	22

Factor analyses Factor analyses of items 27 through 42 were employed to determine common factors. Results of principal components factor analysis and varimax rotation of the principal components solution are presented in Tables 15 and 16, respectively. After varimax rotation of the principal components solution, items 27 and 28 loaded highly (.450 or

Table 15. Results of principal components factor analysis, items 27 through 42 on four factors

Item no.	Factor				h ²
	I	II	III	IV	
27	-.592	-.267	.218	-.192	.495
28	-.602	-.423	.390	-.337	.507
29	-.509	-.249	-.123	-.158	.349
30	-.444	-.310	-.181	.003	.317
31	-.545	-.355	-.165	.116	.375
32	-.342	-.303	-.206	.083	.228
33	-.357	-.216	-.279	.257	.245
34	-.240	-.203	-.016	.269	.128
35	-.386	-.213	-.207	.016	.219
36	-.640	.054	.304	.229	.501
37	-.730	.225	.310	.317	.612
38	-.713	.397	.005	-.038	.633
39	-.649	.433	-.096	-.088	.572
40	-.723	.302	-.285	-.165	.600
41	-.587	.307	-.208	-.121	.471
42	-.403	.048	.221	.094	.220

Percent of
variance

accounted for 30.09

8.43

5.08

3.45

Percent of total variance accounted for by four factors = 47.05

above) on factor IV; items 30 through 33 loaded highly on factor II; items 36 and 37 loaded highly on factor III; and items 38 through 41 loaded highly on factor I. Items 29, 34, 35, and 42 did not load highly on any of the factors. Although the percent of total variance accounted for by the four factors was relatively low, 47.05 percent, it appeared that at least four things were being measured.

1. The alumni office and communication with its alumni
2. The alumni office in relation to gifts to the college

Table 16. Results of varimax rotation of principal components factor analysis, items 27 through 42 on four factors

Item no.	Factor			
	I	II	III	IV
27	.177	.256	.259	.584
28	.067	.210	.259	.831
29	.247	.403	.031	.370
30	.140	.496	.050	.241
31	.134	.601	.169	.236
32	.066	.484	.035	.133
33	.103	.540	.115	.047
34	-.056	.338	.233	.007
35	.171	.429	.030	.153
36	.255	.187	.640	.219
37	.392	.154	.767	.122
38	.703	.086	.384	.134
39	.737	.072	.266	.080
40	.788	.261	.116	.137
41	.668	.167	.127	.085
42	.174	.075	.393	.177

3. The alumni office providing information on athletics and cultural events

4. The alumni office providing information on continuing education programs, curricular developments, plans of the college, and changes in the philosophy and objectives of the college.

Because of the relatively low percent of total variance accounted for by the four factors, 47.05 percent, it was decided to analyze statements in this group individually.

Analyses of variance Summary of significant differences for main effects on items in group 2 is presented in Table 17. Fourteen significant or highly significant differences were found.

Table 17. Summary of significant differences for main effects on items 27 through 42

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
27		HS**	HS**
28	S*	HS**	HS**
29			
30			S*
31			
32	HS**	HS**	
33	HS**	HS**	
34			HS**
35			
36			
37			S*
38			
39			
40			
41			
42	S*		HS**

*Significant at .05 level.

**Significant at .01 level.

Table 18 gives the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Four significant differences between colleges, seven significant differences between donor classifications, and 12 significant differences between eras of graduation were found.

Results of factorial analyses of variance on items 27, 28, 30, 32, 33, 34, 37, and 42 are presented in Tables 19, 20, 21, 22, 23, 24, 25, and 26, respectively.

Table 18. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 27 through 42

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
27	7.96		M-NC M-ND C-ND	E1-E3 E1-E4
28	7.48		M-ND	E1-E3 E1-E4 E1-E5 E2-E3 E2-E4 E2-E5
29	8.10			
30	7.21			E1-E5
31	7.92			
32	7.24	CO-D	C-ND	
33	6.89	CO-D CO-IS	M-ND C-ND	
34	5.50			E1-E3
35	8.31			
36	7.10			
37	7.65			E1-E3
38	8.04			
39	7.85			
40	8.30			
41	8.24			
42	5.91	CO-D		E1-E3

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 19. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 27

Source of variation	df	MS	F ^a
Colleges (A)	2	5.56	2.04
Donors (B)	3	16.99	6.22*
Eras (E)	4	16.78	6.15**
Interactions:			
A x B	6	1.97	<1
A x E	8	1.75	<1
B x E	12	.57	<1
A x B x E	23	2.97	1.09
Error	571	2.73	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-NC
M-ND
C-ND

Significantly different means between eras:^d E1-E3
E1-E4

$${}^a F(.05) 2,571 = 3.01 > 2.04$$

$$F(.05) 23,571 = 1.55 > 1.09.$$

$${}^*F(.01) 3,571 = 3.82 < 6.22, p < .01.$$

$${}^{**}F(.01) 4,571 = 3.35 < 6.15, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Highly significant differences among both donor classifications and eras were found on item 27. Although all donor groups agreed that "The alumni office should have consistent communication with its alumni," significant differences were found between major donors and both non-consecu-

Table 20. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation item 28

Source of variation	df	MS	F ^a
Colleges (A)	2	10.25	3.03*
Donors (B)	3	13.06	3.86**
Eras (E)	4	37.30	11.04***
Interactions:			
A x B	6	2.86	<1
A x E	8	2.56	<1
B x E	12	0.72	<1
A x B x E	23	4.08	1.21
Error	571	3.38	
Significantly different means between colleges: ^b			
Significantly different means between donors: ^c M-ND			
Significantly different means between eras: ^d			
		E1-E3	
		E1-E4	
		E1-E5	
		E2-E3	
		E2-E4	
		E2-E5	

^aF(.05) 23,571 = 1.55 > 1.21.

*F(.05) 2,571 = 3.01 < 3.03, p<.05.

**F(.01) 3,571 = 3.82 < 3.86, p<.01.

***F(.01) 4,571 = 3.35 < 11.04, p<.01.

^bCO, Cornell; D, Drake, IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2-1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 21. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 30

Source of variation	df	MS	F ^a
Colleges (A)	2	4.33	1.15
Donors (B)	3	9.09	2.42
Eras (E)	4	12.14	3.23*
Interactions:			
A x B	6	10.62	2.82**
A x E	8	3.26	<1
B x E	12	6.60	1.76
A x B x E	23	2.49	<1
Error	571	3.76	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E5

$${}^a F(.05) 2,571 = 3.01 > 1.15$$

$$F(.05) 3,571 = 2.62 > 2.42$$

$$F(.05) 12,571 = 1.77 > 1.76.$$

$${}^* F(.05) 4,571 = 2.39 < 3.23, p < .05.$$

$${}^{**} F(.05) 6,571 = 2.11 < 2.82, p < .05.$$

^bCO, Cornell; D, Drake, IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

tive donors and non-donors. The mean response for the consecutive donor group also differed significantly from non-donors. The Pre-1930 era had a significantly different mean response from both the 1940-49 and the 1950-59 eras. However, all eras agreed with the statement. It was noted that the oldest eras had the strongest agreement with the statement, and except for

Table 22. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 32

Source of variation	df	MS	F ^a
Colleges (A)	2	20.45	5.69*
Donors (B)	3	17.92	4.17**
Eras (E)	4	2.97	<1
Interactions:			
A x B	6	6.17	1.43
A x E	8	4.75	1.10
B x E	12	9.02	2.10***
A x B x E	23	2.55	<1
Error	571	4.30	
Significantly different means between colleges: ^b CO-D			
Significantly different means between donors: ^c C-ND			
Significantly different means between eras: ^d			

$${}^a F(.05) 6,571 = 2.11 > 1.43$$

$$F(.05) 8,571 = 1.96 > 1.10.$$

$${}^* F(.01) 2,571 = 4.65 < 5.69, p < .01.$$

$${}^{**} F(.01) 3,571 = 3.82 < 4.17, p < .01.$$

$${}^{***} F(.05) 12,571 = 1.77 < 2.10, p < .05.$$

^b CO, Cornell; D, Drake; IS, Iowa State.

^c M, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^d E1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

a slight difference between the 1940-49 and the 1950-59 eras, the mean responses had a direct relationship to years since graduation.

A significant difference among colleges and highly significant differences among both donor groups and eras were noted on item 28, "The alumni

Table 23. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 33

Source of variation	df	MS	F ^a
Colleges (A)	2	69.05	14.21*
Donors (B)	3	34.01	7.00**
Eras (E)	4	5.64	1.16
Interactions:			
A x B	6	1.19	<1
A x E	8	9.03	1.86
B x E	12	3.70	<1
A x B x E	23	5.71	1.17
Error	571	4.86	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-ND
C-ND

Significantly different means between eras:^d

^aF(.05) 4,571 = 2.39 > 1.16
 F(.05) 8,571 = 1.96 > 1.86
 F(.05) 23,571 = 1.55 > 1.17.

*F(.01) 2,571 = 4.65 < 14.21, p<.01.

**F(.01) 3,571 = 3.82 < 7.00, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 24. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 34

Source of variation	df	MS	F ^a
Colleges (A)	2	20.42	2.98
Donors (B)	3	10.67	1.56
Eras (E)	4	35.55	5.18*
Interactions:			
A x B	6	6.96	1.01
A x E	8	3.49	<1
B x E	12	9.53	1.39
A x B x E	23	5.30	<1
Error	571	6.86	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E3

$$\begin{aligned}
 &^a F(.05) 2,571 = 3.01 > 2.98 \\
 &F(.05) 3,571 = 2.62 > 1.56 \\
 &F(.05) 6,571 = 2.11 > 1.01 \\
 &F(.05) 12,571 = 1.77 > 1.39.
 \end{aligned}$$

$$*F(.01) 4,571 = 3.35 < 5.18, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

office should provide opportunities for alumni reunions and area meetings."

No significant differences were found between colleges. Although all donor classifications agreed with the statement, major donors differed significantly from non-donors. The rank order of agreement for donor classification was major, consecutive, non-consecutive, and non-donors.

Table 25. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 37

Source of variation	df	MS	F ^a
Colleges (A)	2	5.97	2.12
Donors (B)	3	2.64	<1
Eras (E)	4	8.03	2.85*
Interactions:			
A x B	6	5.55	1.97
A x E	8	4.17	1.48
B x E	12	3.93	1.39
A x B x E	23	2.23	<1
Error	571	2.82	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E3

^aF(.05) 2,571 = 3.01 > 2.12
 F(.05) 6,571 = 2.11 > 1.97
 F(.05) 8,571 = 1.96 > 1.48
 F(.05) 12,571 = 1.77 > 1.39.

*F(.05) 4,571 = 2.39 < 2.85, p < .05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

The Pre-1930 era had the strongest agreement with statement 28. The mean response for the Pre-1930 era was significantly different from all other eras except the 1930-39 era. Significant differences were also noted between the 1930-39 era and the following eras: 1940-49, 1950-59, and 1960-68. The oldest eras had the strongest agreement with the statement,

Table 26. Analysis of variance and significant different means between colleges, donor classifications, and eras of graduation on item 42

Source of variation	df	MS	F ^a
Colleges (A)	2	25.31	3.88*
Donors (B)	3	1.03	<1
Eras (E)	4	22.33	3.42**
Interactions:			
A x B	6	9.36	1.43
A x E	8	3.47	<1
B x E	12	8.94	1.37
A x B x E	23	6.00	<1
Error	571	6.53	

Significantly different means between colleges:^b CO-D

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E3

$${}^a F(.05) 6,571 = 2.11 > 1.43$$

$$F(.05) 12,571 = 1.77 > 1.37.$$

$${}^*F(.05) 2,571 = 3.01 < 3.88, p < .05.$$

$${}^{**}F(.01) 4,571 = 3.35 < 3.42, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

and except for a slight difference between the 1950-59 and 1960-68 eras, the mean responses had a direct relationship to years since graduation.

A significant difference among eras was found on item 30, "The alumni office should propose gifts for specific purposes." The Pre-1930 and the 1960-68 eras were found to differ significantly. Although the interaction

of colleges with donors was found to be significant, it was not investigated further since neither of the corresponding main effects was significant.

On item 32, "The alumni office should have matching gift programs with business and industry," highly significant differences among both colleges and donor classifications were noted. A significant difference between Cornell and Drake was found. Cornell and Iowa State indicated agreement with the statement while Drake showed weak agreement. The mean response for consecutive donors was significantly different from non-donors. However, this significant difference among donor groups must be interpreted in the light of the significant interaction of donor groups with eras which is shown graphically in Figure 1. Significant differences among donor groups were also found within both Cornell and Iowa State. It was of interest to note the high fluctuation in mean responses across eras for major donors and the low mean response for consecutive donors from the 1930-39 era.

Highly significant differences among both colleges and donor classifications were found on item 33. Cornell had a highly significant different mean response from both Drake and Iowa State. Cornell agreed that the alumni office should ask for money the college needs. Drake and Iowa State indicated weak agreement with the statement. A partial explanation for this difference might be that Drake's fund raising program is carried out through the Development Office, and Drake alumni might have taken the statement too literally. However, as noted in the review of literature, fund raising at Cornell is also a function of the Development Office and at Iowa State a function of both the Alumni Office and the Development Office.

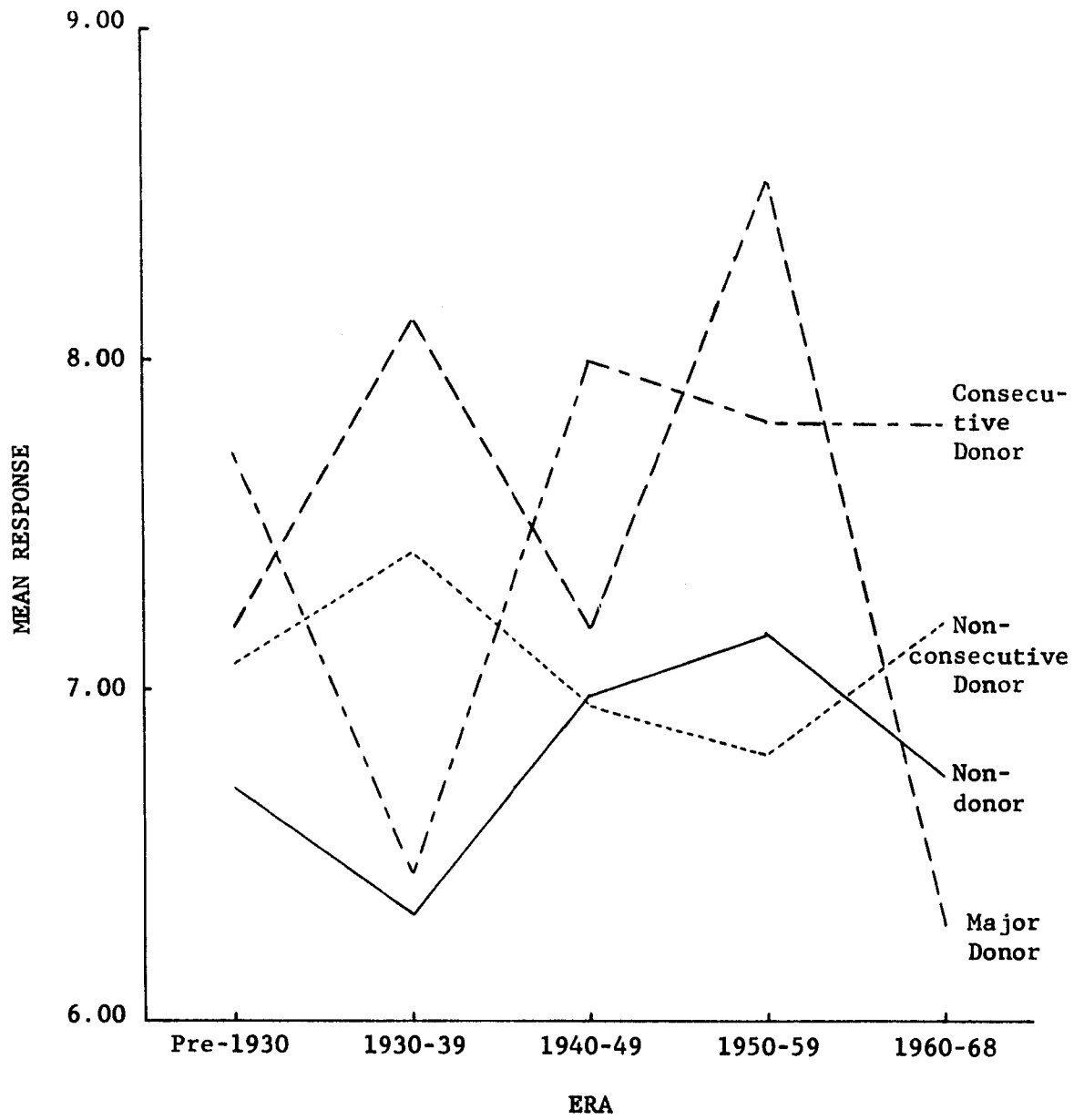


Figure 1. Interaction of donor classifications with eras on item 32

Non-donors differed significantly from both major and consecutive donors on item 33. Major and consecutive donors agreed with the statement whereas non-consecutive donors and non-donors were in weak agreement.

On item 34, "The alumni office should ask for money it thinks it can get," a highly significant difference among eras was found. The Pre-1930 and the 1940-49 eras differed significantly. The Pre-1930 era was the only era which indicated even weak agreement with the statement; all other eras expressed uncertainty in their mean responses.

On item 37 a significant difference among eras was found. Although all eras were in agreement with the statement, the Pre-1930 and the 1940-49 eras differed significantly on whether the alumni office should provide information on what is happening regarding cultural events.

A significant difference among colleges and a highly significant difference among eras were noted on item 42. Cornell and Drake differed significantly as to whether the alumni office should provide information on travel opportunities. Drake and Iowa State expressed uncertainty in their mean responses to the statement while Cornell was in weak agreement. A significant difference was found between the Pre-1930 and the 1940-49 eras. The Pre-1930 era agreed weakly with the statement; all other eras expressed uncertainty in their mean responses. All eras had high standard deviations.

Financing higher education

Statements pertaining to the financing of higher education were analyzed as three groups with statements 9, 10, and 11 analyzed separately. The groupings of items were: group 3, items 12 through 21; group 4, items 22 through 26; and group 5, items 93 through 100.

Items 9 through 11 Statements were:

9. Private colleges and universities should receive public assistance equivalent to public institutions of higher education.
10. Colleges and universities are not really underfinanced.
11. One of the major problems in financing higher education is the inefficient use of existing resources.

Table 27 shows the means and standard deviations for donors on items 9 through 11. Donors did not indicate agreement with any of the three statements. All of the overall mean responses for donors indicated uncertainty, and the standard deviations were high. Although experts on financing of higher education (6, 19, 20, 37, 44, 79, 89) expressed concern about the inefficient use of existing resources, donors did not seem to agree about the inefficient use of existing resources.

Analyses of variance Summary of significant differences for main effects is given in Table 28. Three significant or highly significant differences were found.

Table 27. Means and standard deviations of responses on items 9 through 11 for donors

Item no.	Donors	
	Mean	S.D.
9	4.31	2.71
10	4.19	2.38
11	5.59	2.23

Table 28. Summary of significant differences for main effects on items 9 through 11

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
9	HS**		
10	S*		
11	S*		

*Significant at .05 level.

**Significant at .01 level.

Table 29 shows the overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Four significant differences between colleges were noted.

Tables 30, 31, and 32 give the results of factorial analyses of variance on items 9, 10, and 11, respectively.

Although a highly significant difference among colleges was found on item 9, none of the colleges indicated agreement or disagreement in mean responses to the statement that "Private colleges and universities should receive public assistance equivalent to public institutions of higher education." Significant differences were noted between Iowa State and both Cornell and Drake. Iowa State, a public college, had the lowest mean response, 3.75, while the two private colleges, Cornell and Drake, had mean responses of 4.57 and 4.64, respectively.

Table 29. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 9 through 11

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
9	4.30	CO-IS D-IS		
10	4.28	CO-IS		
11	5.64	CO-D		

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A significant difference among colleges was found on item 10, "Colleges and universities are not really underfinanced." However, there was also a significant interaction of colleges with eras which is shown graphically in Figure 2. A highly significant difference among Cornell's eras of graduation was also noted. The Pre-1930 era differed significantly from the following eras: 1930-39, 1940-49, and 1950-59. It was of interest to note that the highest agreement on item 10 among Cornell's eras was the Pre-1930 era. Thus, the significant difference found between Cornell and Iowa State must be interpreted in the light of the interaction of colleges with eras. Weak agreement with the item was indicated by Cornell; Drake and Iowa State expressed uncertainty. However, the large number of means between 4 and 6 indicated wide variation in responses.

Table 30. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 9

Source of variation	df	MS	F ^a
Colleges (A)	2	53.06	7.25*
Donors (B)	3	12.63	1.73
Eras (E)	4	10.41	1.42
Interactions:			
A x B	6	6.07	<1
A x E	8	8.19	1.12
B x E	12	8.92	1.22
A x B x E	23	8.27	1.13
Error	571	7.32	
Significantly different means between colleges: ^b		CO-IS	
		D-IS	
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 1.73
 F(.05) 4,571 = 2.39 > 1.42
 F(.05) 8,571 = 1.96 > 1.12
 F(.05) 12,571 = 1.77 > 1.22
 F(.05) 23,571 = 1.55 > 1.13.

*F(.01) 2,571 = 4.65 < 7.25, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Although a significant difference among colleges was noted on item 11, "One of the major problems in financing higher education is the inefficient use of existing resources," there was also a significant interaction of colleges with eras (Figure 3). A significant difference among Cornell's eras

Table 31. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 10

Source of variation	df	MS	F ^a
Colleges (A)	2	19.41	3.68*
Donors (B)	3	10.45	1.98
Eras (E)	4	8.20	1.56
Interactions:			
A x B	6	10.27	1.95
A x E	8	10.37	1.97**
B x E	12	8.58	1.63
A x B x E	23	5.80	1.10
Error	571	5.27	
Significantly different means between colleges: ^b			CO-IS
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 1.98
 F(.05) 4,571 = 2.39 > 1.56
 F(.05) 6,571 = 2.11 > 1.95
 F(.05) 12,571 = 1.96 > 1.63
 F(.05) 23,571 = 1.55 > 1.10.

*F(.05) 2,571 = 3.01 < 3.68, p < .05.

**F(.05) 8,571 = 1.96 < 1.97, p < .05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 32. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 11

Source of variation	df	MS	F
Colleges (A)	2	20.02	4.12*
Donors (B)	3	4.23	<1
Eras (E)	4	1.69	<1
Interactions:			
A x B	6	3.77	<1
A x E	8	9.74	2.00**
B x E	12	3.98	<1
A x B x E	23	4.65	<1
Error	571	4.86	

Significantly different means between colleges:^a CO-D

Significantly different means between donors:^b

Significantly different means between eras:^c

*F(.05) 2,571 = 3.01 < 4.12, p<.05.

**F(.05) 8,571 = 1.96 < 2.00, p<.05.

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

was also found. The Pre-1930 era had significantly different mean responses from the 1950-59 era. Thus, the significant difference found between Cornell and Drake must be interpreted in the light of the interaction of colleges with eras. All colleges indicated uncertainty in their mean responses, and all colleges had high standard deviations.

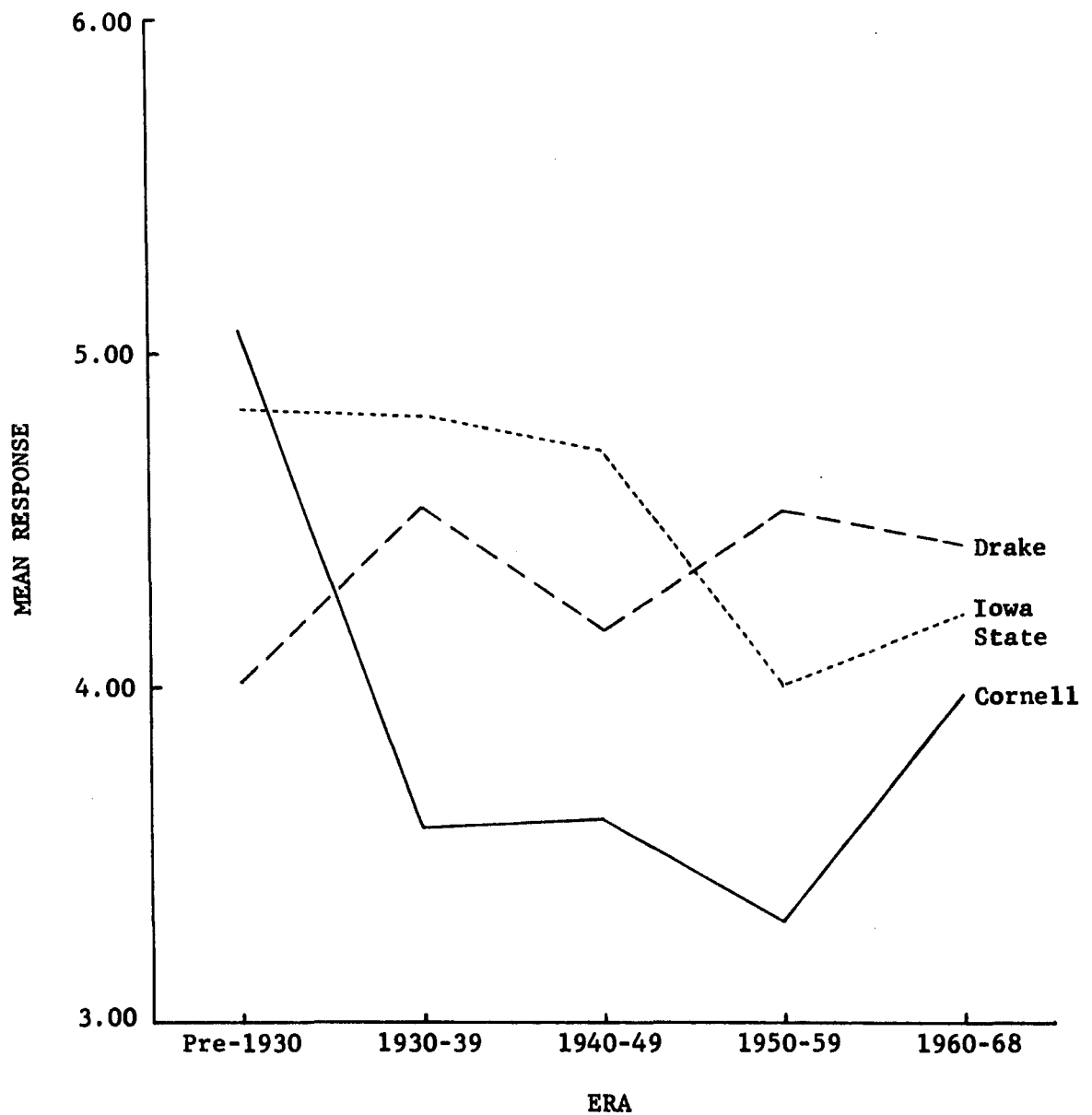


Figure 2. Interaction of colleges with eras on item 10

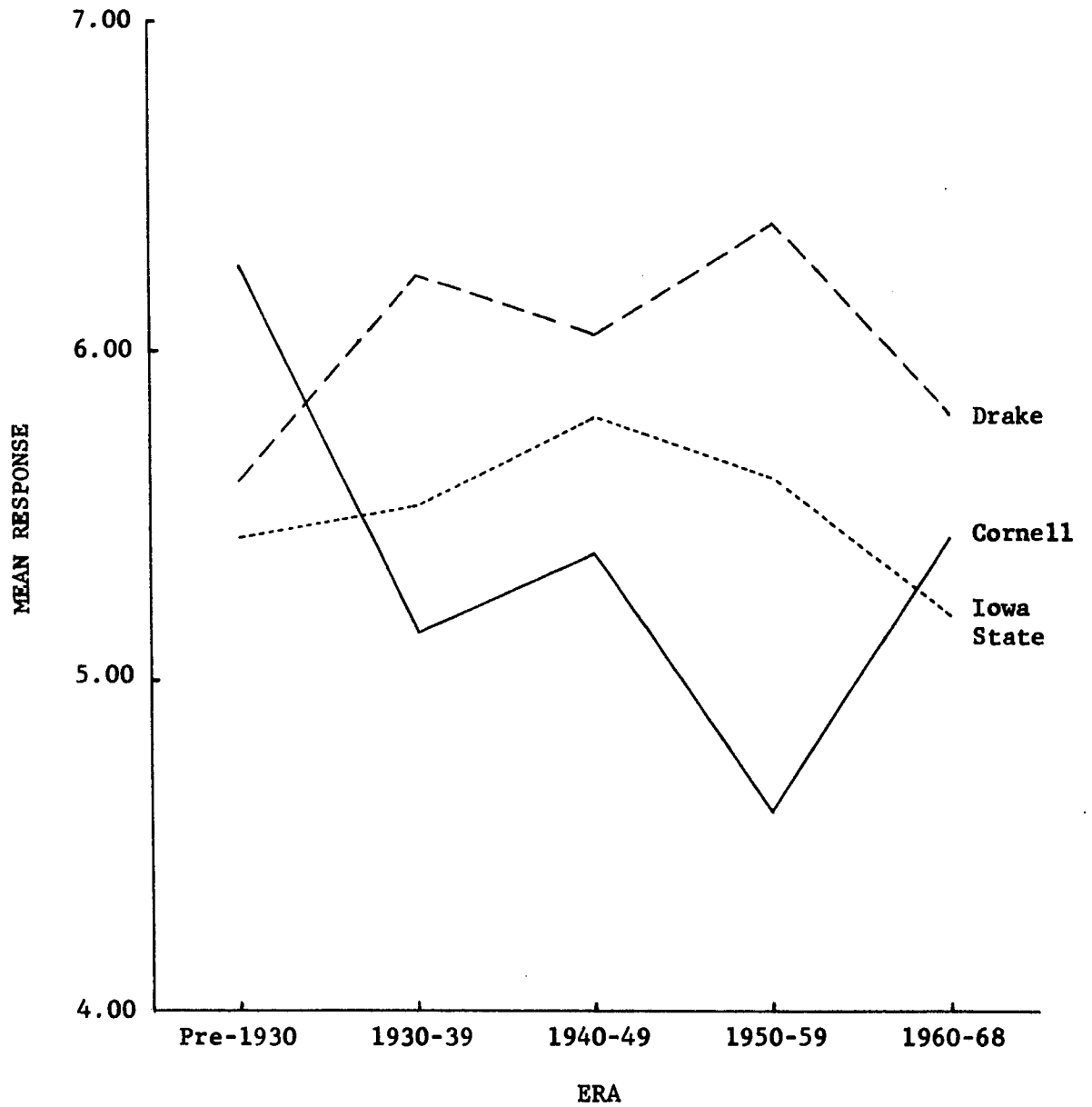


Figure 3. Interaction of colleges with eras on item 11

Group 3: items 12 through 21 Statements analyzed in group 3 were:

The following should be effective forces in shaping or changing the financial planning of colleges and universities:

12. Students
13. Faculty
14. Alumni
15. Taxpayers
16. Administrators
17. Board of Trustees (Regents)
18. State Legislature
19. Federal Government
20. Agencies supplying funds for contract grants
21. Sources of large private grants or endowments

Means and standard deviations for donors on items 12 through 21 are shown in Table 33. Donors agreed that the Board of Trustees (Regents) and administrators should be effective forces in shaping or changing the financial planning of colleges. Weak agreement was expressed by donors that alumni, faculty, and the state legislature should be effective forces in shaping or changing the financial planning of colleges.

When mean responses for donors were ranked from high to low, the results were:

1. Board of Trustees (Regents)
2. Administrators
3. Alumni
4. Faculty
5. State Legislature

Table 33. Means and standard deviations of responses on items 12 through 21 for donors

Item no.	Donors	
	Mean	S.D.
12	4.55	2.66
13	6.22	2.31
14	6.52	2.00
15	5.83	2.51
16	7.93	1.43
17	8.05	1.49
18	5.98	2.62
19	4.54	2.67
20	4.86	2.61
21	5.43	2.65

6. Taxpayers
7. Sources of large private grants or endowments
8. Agencies supplying funds for contract grants
9. Students
10. Federal Government

It appeared that donors thought that the Board of Trustees (Regents) and administrators should be the two most effective forces in shaping or changing the financial planning of colleges. Alumni were ranked third. There was a large difference between the highest mean response, 8.05 for the Board of Trustees (Regents), and the lowest mean response, 4.54 for the Federal Government. The range for mean responses was 3.51. However, no tests of significance were performed on differences in mean responses across items.

Ranking at the bottom were agencies supplying funds for contract grants, students, and the Federal Government. In general, the standard

deviations were high, indicating that throughout the sample there was not substantial agreement about the role which each person or group held. A partial explanation seemed to lie in the inclusion of both private and public colleges in the sample. However, at a public college, state legislature, Federal Government, and taxpayers traditionally have had more power than at private institutions where large private donors have considerable influence (83). However, the Federal Government had low mean ratings across all three colleges.

In the Gross and Grambsch study (39) where respondents were administrators, governing boards, and faculty, when the mean scores for potential power-holders at American colleges were ranked, the first two rankings were held by the president and the regents, respectively. Ranking at the bottom of the 16 potential power-holders were the alumni, students, citizens of state, and parents. Although the present study was not directly comparable to the Gross and Grambsch study, it was interesting to note the relatively high ranking of alumni and the low ranking of students when area responses of donors were ranked in the present study.

Intercorrelations and reliability coefficient Intercorrelations for items related to who should be effective forces in shaping or changing the financial planning of colleges are shown in Table 34. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability was .72.

Analyses of variance Table 35 gives the summary of significant differences for main effects on items in group 3. Four significant differences and five highly significant differences were found.

Table 34. Intercorrelations for items related to shaping or changing the financial planning of colleges

Item no.	12	13	14	15	16	17	18	19	20	21
12										
13	.54									
14	.20	.27								
15	.08	.02	.29							
16	-.01	.21	.18	.07						
17	-.13	-.07	.19	.21	.40					
18	.03	-.04	.12	.46	.13	.29				
19	.18	.07	.11	.30	.03	.10	.57			
20	.14	.08	.22	.24	.08	.12	.26	.49		
21	.10	.06	.29	.21	.05	.13	.23	.43	.76	

Table 35. Summary of significant differences for main effects on items 12 through 21

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
12			S*
13			S*
14			
15	HS**		
16			
17			S*
18	HS**		HS**
19			
20	HS**	S**	
21	HS**		

*Significant at .05 level.

**Significant at .01 level.

Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation is presented in Table 36. Seven significant differences between colleges, one significant difference between donor classifications, and two significant differences between eras of graduation were noted.

Results of factorial analyses of variance on items 12, 13, 15, 17, 18, 20, and 21 are presented in Tables 37, 38, 39, 40, 41, 42, and 43, respectively.

Table 36. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 12 through 21

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
12	4.60			
13	6.29			
14	6.49			
15	5.87	CO-IS D-IS		
16	7.92			
17	8.00			E3-E5
18	6.01	CO-IS D-IS		E2-E5
19	4.44			
20	4.93	CO-IS	M-ND	
21	5.46	CO-IS D-IS		

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 37. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 12

Source of variation	df	MS	F ^a
Colleges (A)	2	13.58	1.91
Donors (B)	3	6.18	<1
Eras (E)	4	18.03	2.53*
Interactions:			
A x B	6	6.74	<1
A x E	8	7.74	1.09
B x E	12	4.06	<1
A x B x E	23	5.46	<1
Error	571	7.12	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d

$${}^a F(.05) 2,571 = 3.01 > 1.91$$

$$F(.05) 8,571 = 1.96 > 1.09.$$

$${}^*F(.05) 4,571 = 2.39 < 2.53, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A significant difference among eras was found on item 12, that students should be effective forces in shaping or changing the financial planning of colleges. However, no significant differences were found between eras. All mean responses for eras indicated uncertainty and all eras had high standard deviations.

Table 38. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 13

Source of variation	df	MS	F ^a
Colleges (A)	2	6.06	1.20
Donors (B)	3	12.73	2.53
Eras (E)	4	16.39	3.25*
Interactions:			
A x B	6	13.71	2.72**
A x E	8	2.89	<1
B x E	12	6.50	1.29
A x B x E	23	7.07	1.40
Error	571	5.04	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d

^aF(.05) 2,571 = 3.01 > 1.20
 F(.05) 3,571 = 2.62 > 2.52
 F(.05) 12,571 = 1.77 > 1.29
 F(.05) 23,571 = 1.55 > 1.40

*F(.05) 4,571 = 2.39 < 3.25, p<.05.

**F(.05) 6,571 = 2.11 < 2.72, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Although the interaction of colleges with donors was significant on item 13, that faculty should be effective forces in shaping or changing the financial planning of colleges, since there were no significant differences among corresponding main effects, the effect of the interaction was not

Table 39. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 15

Source of variation	df	MS	F ^a
Colleges (A)	2	61.15	10.35*
Donors (B)	3	4.23	<1
Eras (E)	4	7.33	1.24
Interactions:			
A x B	6	4.33	<1
A x E	8	7.67	1.30
B x E	12	7.06	1.19
A x B x E	23	7.24	1.23
Error	571	5.91	
Significantly different means between colleges: ^b		CO-IS	
		D-IS	
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 4,571 = 2.39 > 1.24
 F(.05) 8,571 = 1.96 > 1.30
 F(.05) 12,571 = 1.77 > 1.19
 F(.05) 23,571 = 1.55 > 1.23.

*F(.01) 2,571 = 4.65 < 10.35, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

investigated. A significant difference among eras of graduation was found on item 13. All eras except the 1930-39 era indicated weak agreement with the statement. The 1930-39 era mean response was 5.99, which indicated uncertainty. Between eras there were no significant differences. High standard deviations for all eras indicated wide variation in responses.

Table 40. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 17

Source of variation	df	MS	F ^a
Colleges (A)	2	1.78	<1
Donors (B)	3	3.44	1.41
Eras (E)	4	8.10	3.32*
Interactions:			
A x B	6	4.95	2.03
A x E	8	1.54	<1
B x E	12	1.59	<1
A x B x E	23	1.41	<1
Error	571	2.44	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d E3-E5

^aF(.05) 3,571 = 2.62 > 1.41
F(.05) 6,571 = 2.11 > 2.03.

*F(.05) 4,571 = 2.39 < 3.32, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

On item 15, a highly significant difference among colleges was found. Individual significant differences were noted between Cornell and both Drake and Iowa State. Respondents from Iowa State weakly agreed that taxpayers should be effective forces in shaping or changing the financial planning of colleges, while respondents from Cornell and Drake appeared uncertain, neither agreeing nor disagreeing with the statement. A probable

Table 41. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 18

Source of variation	df	MS	F ^a
Colleges (A)	2	112.14	17.09*
Donors (B)	3	2.09	<1
Eras (E)	4	22.54	3.44**
Interactions:			
A x B	6	6.90	1.05
A x E	8	6.41	<1
B x E	12	6.71	1.02
A x B x E	23	3.89	<1
Error	571	6.56	
Significantly different means between colleges: ^b		CO-IS	D-IS
Significantly different means between donors: ^c			
Significantly different means between eras: ^d		E2-E5	

^aF(.05) 6,571 = 2.11 > 1.05
F(.05) 12,571 = 1.77 > 1.02.

*F(.01) 2,571 = 4.65 < 17.09, p<.01.

**F(.01) 4,571 = 3.35 < 3.44, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

explanation for this difference might be that Iowa State is a public college and Cornell and Drake are both private colleges. The standard deviation was high on this item indicating that respondents did not agree about what influence taxpayers should have in shaping or changing the financial planning of colleges.

Table 42. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 20

Source of variation	df	MS	F ^a
Colleges (A)	2	37.39	5.76*
Donors (B)	3	22.17	3.42**
Eras (E)	4	10.19	1.57
Interactions:			
A x B	6	6.52	1.00
A x E	8	5.57	<1
B x E	12	10.52	1.62
A x B x E	23	4.88	<1
Error	571	6.49	

Significantly different means between colleges:^b CO-IS

Significantly different means between donors:^c M-ND

Significantly different means between eras:^d

$$\begin{aligned} &^a F(.05) 4,571 = 2.39 > 1.57 \\ &F(.05) 6,571 = 2.11 > 1.00 \\ &F(.05) 12,571 = 1.77 > 1.62. \end{aligned}$$

$$*F(.01) 2,571 = 4.65 < 5.76, p < .01.$$

$$**F(.05) 3,571 = 2.62 < 3.42, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A significant difference was found among eras on item 17. All eras agreed that the Board of Trustees (Regents) should be an effective force in shaping or changing the financial planning of colleges. Mean responses for the 1940-49 and the 1960-68 eras differed significantly.

Table 43. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 21

Source of variation	df	MS	F ^a
Colleges (A)	2	92.23	14.10*
Donors (B)	3	11.49	1.76
Eras (E)	4	7.94	1.21
Interactions:			
A x B	6	5.57	<1
A x E	8	8.73	1.33
B x E	12	11.49	1.76
A x B x E	23	6.58	1.01
Error	571	6.54	
Significantly different means between colleges: ^b		CO-IS	
		D-IS	
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 1.76
 F(.05) 4,571 = 2.39 > 1.21
 F(.05) 8,571 = 1.96 > 1.33
 F(.05) 12,571 = 1.77 > 1.76
 F(.05) 23,571 = 1.55 > 1.01.

*F(.01) 2,571 = 4.65 < 14.10, p < .01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Highly significant differences among both colleges and eras were found on item 18. Iowa State differed significantly from both Cornell and Drake. Respondents from Iowa State weakly agreed that the Board of Trustees (Regents) should be an effective force in shaping or changing the financial

planning of colleges. Respondents from Cornell and Drake indicated uncertainty. High standard deviations for the three colleges indicated wide variation in responses. The 1930-39 and the 1960-68 eras differed significantly. The Pre-1930, 1930-39, and 1950-59 eras agreed weakly with the statement; the 1940-49 and 1960-68 eras expressed uncertainty in their mean responses. Again high standard deviations indicated wide variation in mean responses. A probable explanation for this could be the differences reflected by the private and public colleges. It was of interest to note that the 1960-68 era had the lowest mean responses on items 17 and 18.

A highly significant difference among colleges and a significant difference among donor classifications were found on item 20. Cornell and Iowa State had significantly different mean responses on item 20, whether agencies supplying funds for contract grants should be effective forces in shaping or changing the financial planning of colleges. Yet, all three colleges had mean responses which indicated uncertainty, and all colleges had high standard deviations.

Major donors and non-donors differed significantly on item 20. All mean responses were between 4 and 6, indicating that donors neither agreed nor disagreed that agencies supplying funds for contract grants should be effective forces in shaping or changing the financial planning of colleges. High standard deviations for all donor groups reflected the wide variation in responses.

Mean responses among colleges on item 21, whether sources of private grants or endowments should be effective forces in shaping or changing the financing planning of colleges, showed highly significant differences. Iowa State differed significantly from both Cornell and Drake. Cornell

showed weak agreement with the statement while Drake and Iowa State indicated uncertainty. High standard deviations were noted for all colleges.

Group 4: items 22 through 26 Group 4 included the following statements:

Increased Federal Funding for higher education should come from the following alternatives:

22. Categorical Aid (aid for specific purposes)
23. Aid to Students (scholarships, fellowships and loans)
24. Institutional Grants
25. Tax Relief
26. Revenue Sharing and Aid to States

Means and standard deviations for donors on items in group 4 are given in Table 44. Donors agreed that increased federal funding for higher education should come in the form of aid to students. Categorical aid, institutional grants, and tax relief were weakly agreed on by donors as alternative forms of increased federal funding for higher education.

Table 44. Means and standard deviations of responses on items 22 through 26 for donors

Item no.	Donors	
	Mean	S.D.
22	6.20	2.41
23	7.10	2.13
24	6.46	2.15
25	6.01	2.47
26	5.65	2.63

When mean responses for donors were ranked from high to low, the results were:

1. Aid to students
2. Institutional grants
3. Categorical aid
4. Tax relief
5. Revenue sharing and aid to states.

No tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for items 22 through 26 are presented in Table 45. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability for this group was .56.

Table 45. Intercorrelations for items related to increased federal funding for higher education

Item no.	22	23	24	25	26
22					
23	26				
24	33	34			
25	08	12	12		
26	10	16	26	26	

Analyses of variance Summary of significant differences for main effects on items 22 through 26 is presented in Table 46. Only one significant difference was found.

Table 46. Summary of significant differences for main effects on items 22 through 26

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
22			
23	S*		
24			
25			
26			

*Significant at .05 level.

**Significant at .01 level.

Table 47 gives the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. One significant difference between college means was noted.

Table 48 presents the results of factorial analysis of variance on item 23. A significant difference among colleges on increased federal funding for higher education coming in the form of aid to students was found. Cornell and Iowa State differed significantly. Cornell and Drake agreed with the statement; Iowa State showed weak agreement.

Table 47. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 22 through 26

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras
22	6.24			
23	7.16	CO-IS		
24	6.51			
25	6.03			
26	5.71			

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930, E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Group 5: items 93, through 100 Statements included in this group were:

The present approximate percentages of total income to public higher education by sources are presented below. Please write in the percentages which in your opinion the identified sources should be contributing to public higher education.

	<u>Presently</u>	<u>Should Be</u>
93. State	39%	_____
94. Federal Government	20%	_____
95. Students	20%	_____
96. Local Tax District	4%	_____

Table 48. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 23

Source of variation	df	MS	F ^a
Colleges (A)	2	18.17	3.98*
Donors (B)	3	8.62	1.89
Eras (E)	4	2.63	<1
Interactions:			
A x B	6	0.73	<1
A x E	8	4.35	<1
B x E	12	4.06	<1
A x B x E	23	5.49	1.20
Error	571	4.57	

Significantly different means between colleges:^b CO-IS

Significantly different means between donors:^c

Significantly different means between eras:^d

^aF(.05) 3,571 = 2.62 > 1.89
F(.05) 23,571 = 1.55 > 1.20.

*F(.05) 2,571 = 3.01 < 3.98, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

97. Alumni and Friends	4%	_____
98. Foundations	3%	_____
99. Business Corporations	2%	_____
100. Other (Community Groups, Endowment Earnings, etc.)	8%	_____
	<u>100%</u>	

Table 49 shows the means and standard deviations for donors on items 93 through 100. The Federal Government, alumni and friends, foundations, and business corporations were the identified sources that donors thought should be contributing more to public higher education. Donors felt that the state, students, and the local tax district should be contributing less to public higher education. Findings substantiated the observations of writers (3, 8, 11, 42, 56, 61) that alumni and friends, foundations, and business corporations should be contributing more to public higher education.

Table 49. Means and standard deviations of responses on items 93 through 100 for donors

Item no.	Donors	
	Mean	S.D.
93	35.97	10.27
94	20.60	9.83
95	19.63	8.47
96	3.15	2.65
97	6.31	4.38
98	4.30	3.07
99	4.33	3.90
100	6.61	3.59

Analyses of variance Summary of significant differences for main effects on items in group 5 is given in Table 50. Six highly significant differences were found.

Table 51 shows the summary of overall mean responses and significantly different means between colleges, donor classifications, and eras of graduation. Seven significant differences between colleges, three significant

Table 50. Summary of significant differences for main effects on items 93 through 100

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
93	HS**		
94			
95			
96			
97	HS**	HS**	
98	HS**		
99	HS**		HS**
100			

*Significant at .05 level.

**Significant at .01 level.

Table 51. Summary of overall mean responses and significantly different means between colleges, donor classifications, and eras of graduation on items 93 through 100

Item no.	Overall mean responses	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
93	36.22	CO-IS D-IS		
94	20.73			
95	19.36			
96	3.19			
97	6.08	CO-IS D-IS	M-C M-NC M-ND	
98	4.40	CO-IS D-IS		
99	4.40	D-IS		E1-E5
100	6.56			

^aCO, Cornell; D, Drake, IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

differences between donor classifications, and one significant difference between eras of graduation were noted.

Results of factorial analyses of variance on items 93, 97, 98, and 99 are shown in Tables 52, 53, 54, and 55, respectively.

Table 52. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 93

Source of variation	df	MS	F ^a
Colleges (A)	2	1236.10	12.26*
Donors (B)	3	90.03	<1
Eras (E)	4	104.82	1.04
Interactions:			
A x B	6	35.62	<1
A x E	8	81.27	<1
B x E	12	118.90	1.18
A x B x E	23	115.45	1.14
Error	490	100.85	
Significantly different means between colleges: ^b			CO-IS D-IS
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

$$^a F(.05) 4,571 = 2.39 > 1.04$$

$$F(.05) 12,571 = 1.78 > 1.18$$

$$F(.05) 23,571 = 1.55 > 1.14.$$

$$*F(.01) 2,571 = 4.65 < 12.26, p < .01.$$

^b CO, Cornell; D, Drake; IS, Iowa State.

^c M, major donor; C, consecutive donor; NC, non-consecutive donor; NC, non-donor.

^d E1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 53. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 97

Source of variation	df	MS	F ^a
Colleges (A)	2	142.34	8.96*
Donors (B)	3	112.27	7.07**
Eras (E)	4	29.15	1.84
Interactions:			
A x B	6	8.12	<1
A x E	8	21.42	1.35
B x E	12	16.75	1.05
A x B x E	23	12.63	<1
Error	490	15.88	
Significantly different means between colleges: ^b			CO-IS D-IS
Significantly different means between donors: ^c			M-C M-NC M-ND
Significantly different means between eras: ^d			

^aF(.05) 4,571 = 2.39 > 1.84
 F(.05) 8,571 = 1.96 > 1.35
 F(.05) 12,571 = 1.78 > 1.05.

*F(.01) 2,571 = 4.65 < 8.96, p<.01.

**F(.01) 3,571 = 3.83 < 7.07, p<.01.

^bCO, Cornell; D, Drake, IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 54. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 98

Source of variation	df	MS	F ^a
Colleges (A)	2	74.59	8.02**
Donors (B)	3	6.43	<1
Eras (E)	4	16.25	1.75
Interactions:			
A x B	6	9.30	1.00
A x E	8	20.36	2.19**
B x E	12	13.24	1.42
A x B x E	23	10.89	1.17
Error	490	9.30	

Significantly different means between colleges:^b CO-IS
D-IS

Significantly different means between donors:^c

Significantly different means between eras:^d

^aF(.05) 4,571 = 2.39 > 1.75
 F(.05) 6,571 = 2.12 > 1.00
 F(.05) 12,571 = 1.78 > 1.42
 F(.05) 23,571 = 1.55 > 1.17.

*F(.01) 2,571 = 4.65 < 8.02, p < .01.

**F(.05) 8,571 = 1.96 < 2.19, p < .05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A highly significant difference among colleges was noted on item 93. Iowa State differed significantly from both Cornell and Drake in the amount respondents thought the state should be contributing to public higher education. Respondents from Cornell and Drake felt that the state should be

Table 55. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 99

Source of variation	df	MS	F ^a
Colleges (A)	2	147.94	8.26*
Donors (B)	3	8.74	<1
Eras (E)	4	64.86	3.62**
Interactions:			
A x B	6	10.81	<1
A x E	8	28.14	1.57
B x E	12	10.96	<1
A x B x E	23	18.08	<1
Error	490	17.91	

Significantly different means between colleges:^b D-IS

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E5

^aF(.05) 8,571 = 1.96 > 1.57.

*F(.01) 2,571 = 4.65 < 8.26, p<.01.

**F(.01) 4,571 = 3.36 < 3.62, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

contributing less than the 39 percent which it contributed to public higher education in 1971.

According to respondents, alumni and friends of the college should be contributing a greater percentage to public higher education than they did in 1971 (four percent), item 97. A highly significant difference was found among colleges. Iowa State differed significantly from both Cornell and

Drake. The mean responses for Cornell, Drake, and Iowa State were 6.61, 6.69, and 5.11, respectively.

There was also a highly significant difference among donor groups found on item 97. Major donors differed significantly from each of the other donor groups. The mean percentages that donor classifications indicated alumni and friends of the college should be contributing to public higher education were 7.72, 5.75, 5.97, and 5.31 for the major, consecutive, non-consecutive, and non-donor classifications, respectively. The significant difference among colleges found on item 98 was not interpretable without consideration of the significant interaction of colleges with eras (Figure 4).

Significant differences were found between Iowa State and both Cornell and Drake regarding the percentage contributed to public higher education by foundations. Three percent was the amount presented as having been contributed to public higher education by foundations in 1971. The mean responses by college were 4.92, 4.66, and 3.74, for Cornell, Drake, and Iowa State, respectively. However, a significant difference among eras of graduation from Drake was noted. It was also of interest to note the low mean responses for Iowa State's eras.

Respondents indicated that business corporations should be contributing more to public higher education than the two percent which they had contributed in 1971, item 99. Highly significant differences among both colleges and eras were found on this item. Mean responses for Drake and Iowa State differed significantly. The Pre-1930 and the 1960-68 eras differed significantly. The lowest mean response was 3.47 for the Pre-1930 era. The 1960-68 era had the highest mean response, 5.37.

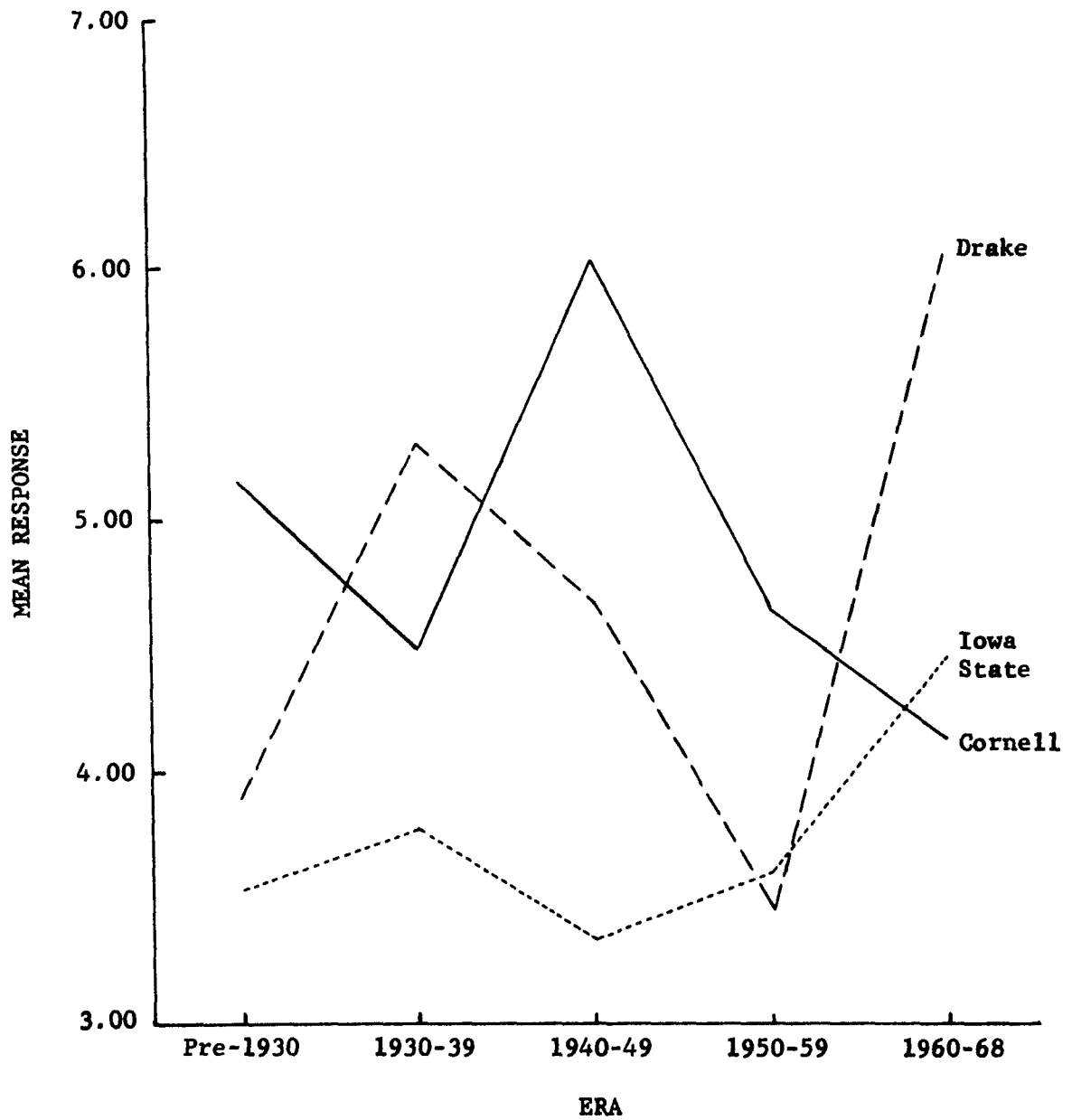


Figure 4. Interaction of colleges with eras on item 98

Fund raising in higher education

The items in this section were analyzed in seven groups with statements 43, 44, 53, 54, and 55 analyzed separately from the groupings.

Items 43, 44, 53, 54, and 55 Statements analyzed apart from the groups were:

- 43. In fund raising, a volunteer should have a better chance of getting money than a professional fund raiser.
- 44. Academic excellence should attract financial support to a college or university.

Monies contributed to a college or university should be invested by:

- 53. Committee of Trustees
- 54. Large Bank or Investment House
- 55. Small Investment House

Means and standard deviations for donors on items 43, 44, 53, 54, and 55 are presented in Table 56. Donors agreed that "Academic excellence should attract financial support to a college or university." Weak agreement that monies contributed to a college should be invested by a committee of trustees or a large bank or investment house was shown by donors.

Donors expressed uncertainty in mean responses to item 43. The standard deviation was high on this item indicating that donors did not agree about whether in fund raising a volunteer should have a better chance of getting money than a professional fund raiser. It is possible that ambiguity existed over the use of the term "professional fund raiser." Some personnel of alumni and development offices directly involved in the fund raising process are considered to be professional fund raisers. Yet,

Table 56. Means and standard deviations of responses on items 43, 44, 53, 54, and 55 for donors

Item no.	Donors	
	Mean	S.D.
43	5.32	2.49
44	8.08	1.34
53	6.41	2.63
54	6.33	2.43
55	4.27	2.18

alumni might have limited a professional fund raiser to one who works for a professional fund raising firm.

Analyses of variance Summary of significant differences for main effects is shown in Table 57. Eight significant or highly significant differences were noted.

Table 57. Summary of significant differences for main effects on items 43, 44, 53, 54, and 55

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
43	S*		HS**
44			HS**
53	S*		HS**
54			
55	HS**	S*	S*

*Significant at .05 level.

**Significant at .01 level.

Table 58 gives the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Eleven significant differences between means were found.

Table 58. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 43, 44, 53, 54, and 55

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
43	5.24	CO-IS		E1-E4 E1-E5
44	8.07			E1-E4
53	6.40	CO-IS		E1-E3 E1-E5
54	6.34			
55	4.27	CO-IS CO-D	M-C	E1-E5

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Results of factorial analyses of variance on items 43, 44, 53, and 55 are presented in Tables 59, 60, 61, and 62, respectively.

A significant difference among colleges and a highly significant difference among eras were noted on item 43. Cornell and Iowa State differed significantly in mean responses to the statement that "In fund raising, a volunteer should have a better chance of getting money than a professional

Table 59. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 43

Source of variation	df	MS	F ^a
Colleges (A)	2	24.56	3.99*
Donors (B)	3	11.68	1.90
Eras (E)	4	24.62	4.00**
Interactions:			
A x B	6	3.11	<1
A x E	8	8.83	1.43
B x E	12	10.55	1.71
A x B x E	23	4.64	<1
Error	571	6.16	
Significantly different means between colleges: ^b CO-IS			
Significantly different means between donors: ^c			
Significantly different means between eras: ^d E1-E4			
E1-E5			

^aF(.05) 3,571 = 2.62 > 1.90
 F(.05) 8,571 = 1.96 > 1.43
 F(.05) 12,571 = 1.77 > 1.71.

*F(.05) 2,571 = 3.01 < 3.99, p<.05.

**F(.01) 4,571 = 3.35 < 4.00, p<.01.

^bCO, Cornell; D, Drake, IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

fund raiser." The Pre-1930 era differed significantly from both the 1950-59 and the 1960-68 eras. However, all colleges and eras expressed uncertainty in their mean responses, and high standard deviations indicated wide variation in responses.

Table 60. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 44

Source of variation	df	MS	F ^a
Colleges (A)	2	1.39	<1
Donors (B)	3	2.87	1.56
Eras (E)	4	8.89	4.83*
Interactions:			
A x B	6	1.43	<1
A x E	8	1.08	<1
B x E	12	1.47	<1
A x B x E	23	1.32	<1
Error	571	1.84	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E4

^aF(.05) 3,571 = 2.62 > 1.56.

*F(.01) 4,571 = 3.35 < 4.83, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A highly significant difference among eras was found on item 44.

Although all eras agreed that academic excellence should attract financial support to a college, the Pre-1930 and the 1950-59 eras differed significantly. The order of agreement by eras from high to low was: Pre-1930, 1930-39, 1940-49, 1960-68, and 1950-59.

A significant difference among colleges and a highly significant difference among eras were noted on item 53, that monies contributed to a col-

Table 61. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 53

Source of variation	df	MS	F ^a
Colleges (A)	2	29.85	4.57*
Donors (B)	3	12.31	1.89
Eras (E)	4	27.98	4.28**
Interactions:			
A x B	6	7.71	1.18
A x E	8	7.88	1.21
B x E	12	4.49	<1
A x B x E	23	11.03	1.69
Error	571	6.53	

Significantly different means between colleges:^b CO-IS

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E3
E1-E5

$$^a F(.05) 3,571 = 2.62 > 1.89$$

$$F(.05) 6,571 = 2.11 > 1.18$$

$$F(.05) 8,571 = 1.96 > 1.21$$

$$F(.05) 23,571 = 1.55 > 1.69$$

$$*F(.05) 2,571 = 3.01 < 4.57, p < .05.$$

$$**F(.01) 4,571 = 3.35 < 4.28, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

lege should be invested by a committee of trustees. Cornell and Iowa State differed significantly. The three colleges agreed weakly with the statement. The Pre-1930 era differed significantly from both the 1940-49 and the 1960-68 eras. Only the Pre-1930 era agreed with the statement. How-

Table 62. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 55

Source of variation	df	MS	F ^a
Colleges (A)	2	48.89	10.84*
Donors (B)	3	12.82	2.84**
Eras (E)	4	15.29	3.39***
Interactions:			
A x B	6	1.77	<1
A x E	8	3.42	<1
B x E	12	6.96	1.54
A x B x E	23	4.58	1.02
Error	571	4.51	
Significantly different means between colleges: ^b CO-IS CO-D			
Significantly different means between donors: ^c M-C			
Significantly different means between eras: ^d E1-E5			

$${}^a F(.05)_{12,571} = 1.77 > 1.54$$

$$F(.05)_{23,571} = 1.55 > 1.02.$$

$${}^*F(.01)_{2,571} = 4.65 < 10.84, p < .01.$$

$${}^{**}F(.05)_{3,571} = 2.62 < 2.84, p < .05.$$

$${}^{***}F(.01)_{4,571} = 3.35 < 3.39, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

ever, high standard deviations for all colleges and eras indicated wide variation in responses.

A highly significant difference among colleges was found on item 55.

A significant difference among donor groups was also noted. Cornell dif-

ferred significantly from both Drake and Iowa State. However, none of the colleges agreed that monies contributed to a college should be invested by a small investment house. Major and consecutive donors differed significantly. Yet, none of the donor groups agreed with the statement. The Pre-1930 and the 1960-68 eras differed significantly. The Pre-1930 era disagreed weakly with the statement; the other eras expressed uncertainty. A high percentage of "5" ratings was noted on this item.

Group 6: items 45 through 52 Group 6 included the following statements:

The fund raising process should be an important concern of each of the following:

45. Students
46. Faculty
47. Alumni Office
48. President
49. Parents of Students
50. Board of Trustees (Regents)
51. Alumni and Friends of the Institution
52. Professional Fund Raiser

Means and standard deviations for donors on items included in this group are given in Table 63. Donors agreed that the fund raising process should be an important concern of the Board of Trustees (Regents), the president, the alumni office, and alumni and friends of the institution. That the fund raising process be an important concern of parents of students, faculty, and the professional fund raiser was weakly agreed on by donors.

Table 63. Means and standard deviations of responses on items 45 through 52 for donors

Item no.	Donors	
	Mean	S.D.
45	5.47	2.85
46	6.34	2.63
47	8.19	1.33
48	8.37	1.43
49	6.61	2.26
50	8.48	1.26
51	8.16	1.40
52	6.21	2.85

When the mean responses for donors were ranked from high to low, the rankings were:

1. Board of Trustees (Regents)
2. President
3. Alumni office
4. Alumni and friends of the institution
5. Parents of students
6. Faculty
7. Professional fund raiser
8. Students

Ranking the Board of Trustees (Regents) and the president in the first two places substantiated the findings of Bacon and Pride (2). The low mean response for students was contrary to the writings of Eldridge (30), Pollard (68), and Wireman (92), who emphasized the important role of students in the fund raising process. No tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for items in group 6 are shown in Table 64. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability was .76.

Table 64. Intercorrelations for items related to fund raising process being an important concern

Item no.	45	46	47	48	49	50	51	52
45								
46	76							
47	30	34						
48	32	39	25					
49	56	53	34	30				
50	17	20	22	42	29			
51	21	23	60	16	34	26		
52	09	06	08	15	08	16	11	

Analyses of variance Summary of significant differences for main effects on items 45 through 52 are presented in Table 65. Eight significant or highly significant differences were found.

Table 66 gives the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Three significant differences between college means, four significant differences between donor means, and two significant differences between era means were noted.

Results of factorial analyses of variance on items 46, 47, 48, 49, 51, and 52 are presented in Tables 67, 68, 69, 70, 71, and 72, respectively.

Table 65. Summary of significant differences for main effects on items 45 through 52

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
45			
46	HS**		
47		HS**	
48		S*	
49		S*	HS**
50			
51		HS**	HS**
52	HS**		

*Significant at .05 level.

**Significant at .01 level.

Table 66. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 45 through 52

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
45	5.56			
46	6.40	CO-D CO-IS		
47	8.12			
48	8.31		M-ND	
49	6.62			E1-E5
50	8.48			
51	8.11		M-NC M-ND C-NC	E1-E5
52	6.25	CO-IS		

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 67. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 46

Source of variation	df	MS	F ^a
Colleges (A)	2	32.61	4.90*
Donors (B)	3	14.19	2.13
Eras (E)	4	14.73	2.21
Interactions:			
A x B	6	14.18	2.13**
A x E	8	5.21	<1
B x E	12	9.13	1.37
A x B x E	23	6.15	<1
Error	571	6.66	
Significantly different means between colleges: ^b		CO-D	
		CO-IS	
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 2.13
 F(.05) 4,571 = 2.39 > 2.21
 F(.05) 12,571 = 1.77 > 1.37.

*F(.01) 2,571 = 4.65 < 4.90, p<.01.

**F(.05) 6,571 = 2.11 < 2.13, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Although a highly significant difference among colleges was noted on item 46, there was also a significant interaction of colleges with donor groups which is shown graphically in Figure 5. Non-consecutive donors from Cornell had a significantly different mean response from Cornell's major

Table 68. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 47

Source of variation	df	MS	F ^a
Colleges (A)	2	1.23	<1
Donors (B)	3	8.14	4.01*
Eras (E)	4	4.35	2.14
Interactions:			
A x B	6	2.20	1.08
A x E	8	1.19	<1
B x E	12	1.16	<1
A x B x E	23	1.92	<1
Error	571	2.03	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d

$${}^a F(.05)_{4,571} = 2.39 > 2.14$$

$$F(.05)_{6,571} = 2.11 > 1.08.$$

$${}^*F(.01)_{3,571} = 3.82 < 4.01, p < .01.$$

^bC, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

donors on whether the fund raising process should be an important function of the faculty. Thus, the significant difference found between Cornell and both Drake and Iowa State must be interpreted in the light of the interaction of colleges with donors. Cornell expressed uncertainty in their mean responses while Drake and Iowa State showed weak agreement with the item.

Table 69. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 48

Source of variation	df	MS	F ^a
Colleges (A)	2	3.74	1.59
Donors (B)	3	7.63	3.25*
Eras (E)	4	1.28	<1
Interactions:			
A x B	6	4.13	1.76
A x E	8	0.88	<1
B x E	12	2.19	<1
A x B x E	23	2.18	<1
Error	571	2.35	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-ND

Significantly different means between eras:^d

$${}^a F(.05) 2,571 = 3.01 > 1.59$$

$$F(.05) 6,571 = 2.11 > 1.76.$$

$${}^*F(.05) 3,571 = 2.62 < 3.25, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

High standard deviations for all colleges indicated wide variation in responses.

A highly significant difference among donor groups was found on item 47. However, all donor groups agreed that the fund raising process should be an important function of the alumni office. No significant differences were noted between donor classifications.

Table 70. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 49

Source of variation	df	MS	F ^a
Colleges (A)	2	7.73	1.59
Donors (B)	3	13.57	2.79*
Eras (E)	4	21.74	4.46**
Interactions:			
A x B	6	9.38	1.93
A x E	8	4.86	<1
B x E	12	8.17	1.68
A x B x E	23	5.00	1.03
Error	571	4.87	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d E1-E5

^aF(.05) 2,571 = 3.01 > 1.59
 F(.05) 6,571 = 2.11 > 1.93
 F(.05) 12,571 = 1.77 > 1.68
 F(.05) 23,571 = 1.55 > 1.03.

*F(.05) 3,571 = 2.62 < 2.79, p<.05.

**F(.01) 4,571 = 3.35 < 4.46, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

On item 48, a significant difference among donor groups was found. Major donors had a significantly different mean response from non-donors. However, all donor classifications agreed that the fund raising process should be an important function of the president.

Table 71. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 51

Source of variation	df	MS	F ^a
Colleges (A)	2	3.00	1.57
Donors (B)	3	15.86	8.30*
Eras (E)	4	7.37	3.86**
Interactions:			
A x B	6	1.14	<1
A x E	8	2.63	1.38
B x E	12	0.73	<1
A x B x E	23	0.93	<1
Error	571	1.91	

Significantly different means between colleges: ^b

Significantly different means between donors: ^c M-NC
M-ND
C-NC

Significantly different means between eras: ^d E1-E5

$${}^a F(.05) 2,571 = 3.01 > 1.57$$

$$F(.05) 8,571 = 1.96 > 1.38.$$

$${}^*F(.01) 3,571 = 3.82 < 8.30, p < .01.$$

$${}^{**}F(.01) 4,571 = 3.35 < 3.86, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A significant difference among donor groups and a highly significant difference among eras were found on item 49. However, no significant differences were noted between donor classifications. All donor groups agreed weakly that the fund raising process should be an important function of the

Table 72. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 52

Source of variation	df	MS	F ^a
Colleges (A)	2	39.05	4.86*
Donors (B)	3	8.39	1.04
Eras (E)	4	1.83	<1
Interactions:			
A x B	6	6.56	<1
A x E	8	6.66	<1
B x E	12	4.45	<1
A x B x E	23	5.46	<1
Error	571	8.04	

Significantly different means between colleges:^b CO-IS

Significantly different means between donors:^c

Significantly different means between eras:^d

^aF(.05) 3,571 = 2.62 > 1.04.

*F(.01) 2,571 = 4.65 < 4.86, p<.01.

^bCO, Cornell; D, Drake; IS Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

parents of students. High standard deviations indicated wide variation in responses. The Pre-1930 era and the 1960-68 eras differed significantly. The Pre-1930 era agreed that the fund raising process should be an important function of the parents of students; the 1960-68 era indicated uncertainty while the other eras showed weak agreement with the item. High standard deviations were noted for all eras except the Pre-1930 era.

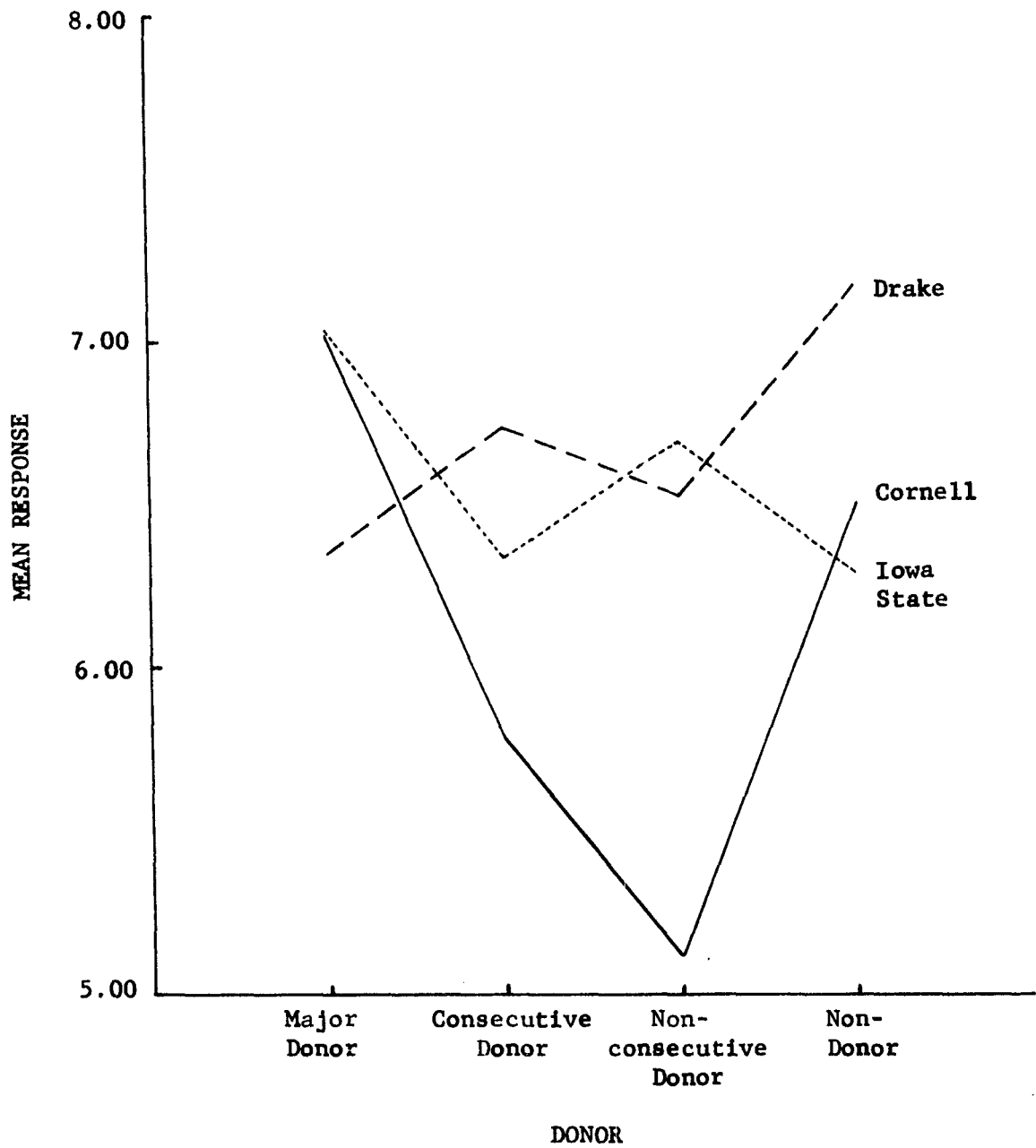


Figure 5. Interaction of colleges with donor classifications on item 46

Highly significant differences among both donor groups and eras were noted on item 51. Major donors differed significantly from both non-consecutive donors and non-donors; consecutive donors differed significantly from non-consecutive donors. All donor groups agreed quite strongly that the fund raising process should be an important function of alumni and friends of the institution. Although all eras agreed with the statement, the Pre-1930 and the 1960-68 eras differed significantly.

A highly significant difference among colleges was noted on item 52. Cornell and Iowa State differed significantly regarding the fund raising process being an important concern of the professional fund raiser. Cornell and Drake expressed weak agreement with the item; Iowa State indicated uncertainty in its mean response.

Group 7: items 56 through 63 The following items were included in group 7:

Alumni prefer their gifts to be used for:

56. Specific Projects
57. Unrestricted Projects
58. Current Operations
59. Capital Needs
60. Athletics
61. Organized Research
62. Student Aid
63. Endowments

Table 73 gives the means and standard deviations for donors on items 56 through 63. Donors agreed that alumni prefer their gifts to be used for specific projects. These findings seemed to concur with the findings on

Table 73. Means and standard deviations of responses on items 56 through 63 for donors

Item no.	Donors	
	Mean	S.D.
56	7.27	1.98
57	5.21	2.41
58	4.90	2.48
59	6.12	2.14
60	4.78	2.39
61	5.92	2.19
62	6.86	1.92
63	6.29	2.02

item 23, that federal funding for higher education be in the form of student aid, and item 30, that "The alumni office should propose gifts for specific purposes." That donors prefer their gifts be used for specific projects was also reflected in the approximately two-thirds of voluntary support for higher education in 1970-71 being designated for specific projects (87). Donors weakly agreed that gifts be used for capital needs, student aid, and endowments.

When the mean responses for donors were ranked from high to low, the rankings were:

1. Specific projects
2. Student aid
3. Endowments
4. Capital needs
5. Organized research
6. Unrestricted projects

7. Current operations

8. Athletics

Specific projects and student aid were ranked one and two, respectively. Current operations and athletics were ranked in the two last places. The low ranking of "current operations" did not concur with the fact that "...support for current operations has been responsible for all the growth in total voluntary support since 1964-1965" (88, p. 66). However, no tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for items in group 7 are shown in Table 74. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability for this group was .57.

Analyses of variance Table 75 gives the summary of significant differences for main effects on items in group 7. Ten significant or highly significant differences were found.

Table 74. Intercorrelations for items related to the use of alumni gifts

Item no.	56	57	58	59	60	61	62	63
56								
57	-24							
58	-08	22						
59	12	12	37					
60	19	-01	04	12				
61	15	07	18	10	13			
62	10	09	12	08	07	31		
63	23	12	09	23	13	24	32	

Table 75. Summary of significant differences for main effects on items 56 through 63

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
56			
57		HS**	HS**
58	HS**	S*	
59	HS**		
60			
61	S*	S*	
62	HS**		
63	HS**		HS**

*Significant at .05 level.

**Significant at .01 level.

Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation are shown in Table 76. Nine significant differences between colleges, two significant differences between donor classifications, and four significant differences between eras of graduation were noted.

Tables 77, 78, 79, 80, 81, and 82 present results of factorial analyses of variance on items 57, 58, 59, 61, 62, and 63, respectively.

Highly significant differences among both donor groups and eras of graduation were found on item 57. Consecutive and non-donors differed significantly that gifts be used for unrestricted projects. The Pre-1930 era differed significantly from both the 1940-49 and the 1950-59 eras. All donor groups and all eras had mean responses between 4 and 6 and high standard deviations.

Table 76. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 56 through 63

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
56	7.28			
57	5.04		C-ND	E1-E3 E1-E4
58	5.01	CO-D CO-IS D-IS		
59	6.12	D-IS		
60	4.71			
61	6.04	D-IS	M-ND	
62	6.84	CO-D D-IS		
63	6.24	CO-D CO-IS		E1-E4 E1-E5

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Although a highly significant difference among colleges was noted on item 58, there was also a significant interaction of colleges with eras which is shown graphically in Figure 6. Cornell differed significantly from both Drake and Iowa State, and Drake differed significantly from Iowa State. All mean responses for colleges expressed uncertainty. High standard deviations indicated that respondents did not agree about whether gifts should be used for current operations. However, the significant differences noted between colleges must be interpreted in the light of the college by era interaction. Iowa State had a highly significant difference

Table 77. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 57

Source of variation	df	MS	F ^a
Colleges (A)	2	16.26	2.83
Donors (B)	3	25.41	4.43*
Eras (E)	4	20.87	3.64**
Interactions:			
A x B	6	7.99	1.39
A x E	8	3.40	<1
B x E	12	5.57	<1
A x B x E	23	4.47	<1
Error	571	5.74	

Significantly different means between colleges:^b

Significantly different means between donors:^c C-ND

Significantly different means between eras:^d E1-E3
E1-E4

$${}^a F(.05) 2,571 = 3.01 > 2.83$$

$$F(.05) 6,571 = 2.11 > 1.39.$$

$${}^* F(.01) 3,571 = 3.82 < 4.43, p < .01.$$

$${}^{**} F(.01) 4,571 = 3.35 < 3.64, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

among eras. It was also of interest to note the low mean response for the 1950-59 era for Drake.

Although no significant differences were found between donor classifications on item 58, a significant difference was noted among donor groups. All mean responses for donor groups showed uncertainty. A larger percent-

Table 78. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 58

Source of variation	df	MS	F ^a
Colleges (A)	2	85.89	14.96*
Donors (B)	3	16.60	2.89**
Eras (E)	4	10.72	1.88
Interactions:			
A x B	6	7.27	1.27
A x E	8	12.65	2.20***
B x E	12	4.33	<1
A x B x E	23	5.98	1.04
Error	571	5.74	

Significantly different means between colleges:^b CO-D
CO-IS
D-IS

Significantly different means between donors:^c

Significantly different means between eras:^d

$${}^a F(.05) 4,571 = 2.39 > 1.88$$

$$F(.05) 6,571 = 2.11 > 1.27$$

$$F(.05) 23,571 = 1.55 > 1.04.$$

$${}^*F(.01) 2,571 = 4.65 < 14.96, p < .01.$$

$${}^{**}F(.05) 3,571 = 2.62 < 2.89, p < .05.$$

$${}^{***}F(.05) 8,571 = 1.96 < 2.20, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 79. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 59

Source of variation	df	MS	F ^a
Colleges (A)	2	22.05	4.84*
Donors (B)	3	8.97	1.97
Eras (E)	4	6.61	1.45
Interactions:			
A x B	6	3.26	<1
A x E	8	8.02	1.76
B x E	12	7.16	1.57
A x B x E	23	5.14	1.13
Error	571	4.56	

Significantly different means between colleges:^b D-IS

Significantly different means between donors:^c

Significantly different means between eras:^d

^aF(.05) 3,571 = 2.62 > 1.97
 F(.05) 4,571 = 2.39 > 1.45
 F(.05) 8,571 = 1.96 > 1.76
 F(.05) 12,571 = 1.77 > 1.57
 F(.05) 23,571 = 1.55 > 1.13

*F(.01) 2,571 = 4.65 < 4.48, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

age of "5" ratings on this item indicated that donors were uncertain about gifts being used for current operations.

A highly significant difference among colleges was found on item 59. Drake and Iowa State differed significantly. Cornell and Drake had weak

Table 80. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 61

Source of variation	df	MS	F ^a
Colleges (A)	2	16.24	3.52*
Donors (B)	3	15.18	3.29**
Eras (E)	4	2.12	<1
Interactions:			
A x B	6	5.40	1.17
A x E	8	5.15	1.11
B x E	12	4.42	<1
A x B x E	23	2.16	<1
Error	571	4.62	

Significantly different means between colleges:^b D-IS

Significantly different means between donors:^c M-ND

Significantly different means between eras:^d

$${}^a F(.05) 6,571 = 2.11 > 1.17$$

$$F(.05) 8,571 = 1.96 > 1.11.$$

$${}^* F(.05) 2,571 = 3.01 < 3.52, p < .05.$$

$${}^{**} F(.05) 3,571 = 2.62 < 3.29, p < .05.$$

^b CO, Cornell; D, Drake; IS, Iowa State.

^c M, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^d E1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

agreement that gifts should be used for capital needs while Iowa State's respondents indicated uncertainty.

Significant differences among both colleges and donor classifications were noted on item 61. Drake and Iowa State differed significantly, and major donors differed significantly from non-donors that gifts be used for

Table 81. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 62

Source of variation	df	MS	F ^a
Colleges (A)	2	49.22	13.71*
Donors (B)	3	7.69	2.14
Eras (E)	4	4.17	1.16
Interactions:			
A x B	6	0.07	<1
A x E	8	12.22	3.40**
B x E	12	2.73	<1
A x B x E	23	4.94	1.38
Error	571	3.59	
Significantly different means between colleges: ^b		CO-D	
		D-IS	
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

^aF(.05) 3,571 = 2.62 > 2.14
 F(.05) 4,571 = 2.39 > 1.16
 F(.05) 23,571 = 1.55 > 1.38.

*F(.01) 2,571 = 4.65 < 13.71, p<.01.

**F(.01) 8,571 = 2.54 < 3.40, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

organized research. Non-consecutive donors and non-donors agreed weakly with the item; major and consecutive donors expressed uncertainty.

A highly significant interaction of colleges with eras was found on item 62 (Figure 7). A highly significant difference among colleges was

Table 82. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 63

Source of variation	df	MS	F ^a
Colleges (A)	2	27.12	6.76*
Donors (B)	3	3.65	<1
Eras (E)	4	22.42	5.59**
Interactions:			
A x B	6	2.96	<1
A x E	8	4.05	1.01
B x E	12	4.16	1.04
A x B x E	23	3.16	<1
Error	571	4.01	
Significantly different means between colleges: ^b			CO-D CO-IS
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			E1-E4 E1-E5

^aF(.05) 8,571 = 1.96 > 1.01
F(.05) 12,571 = 1.77 > 1.04.

*F(.01) 2,571 = 4.65 < 6.76, p < .01.

**F(.01) 4,571 = 3.35 < 5.59, p < .01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

also noted. Drake differed significantly from both Cornell and Iowa State on whether gifts should be used for student aid. Iowa State agreed with the item; Cornell and Drake indicated weak agreement. However, these significant differences among colleges must be interpreted in the light of the

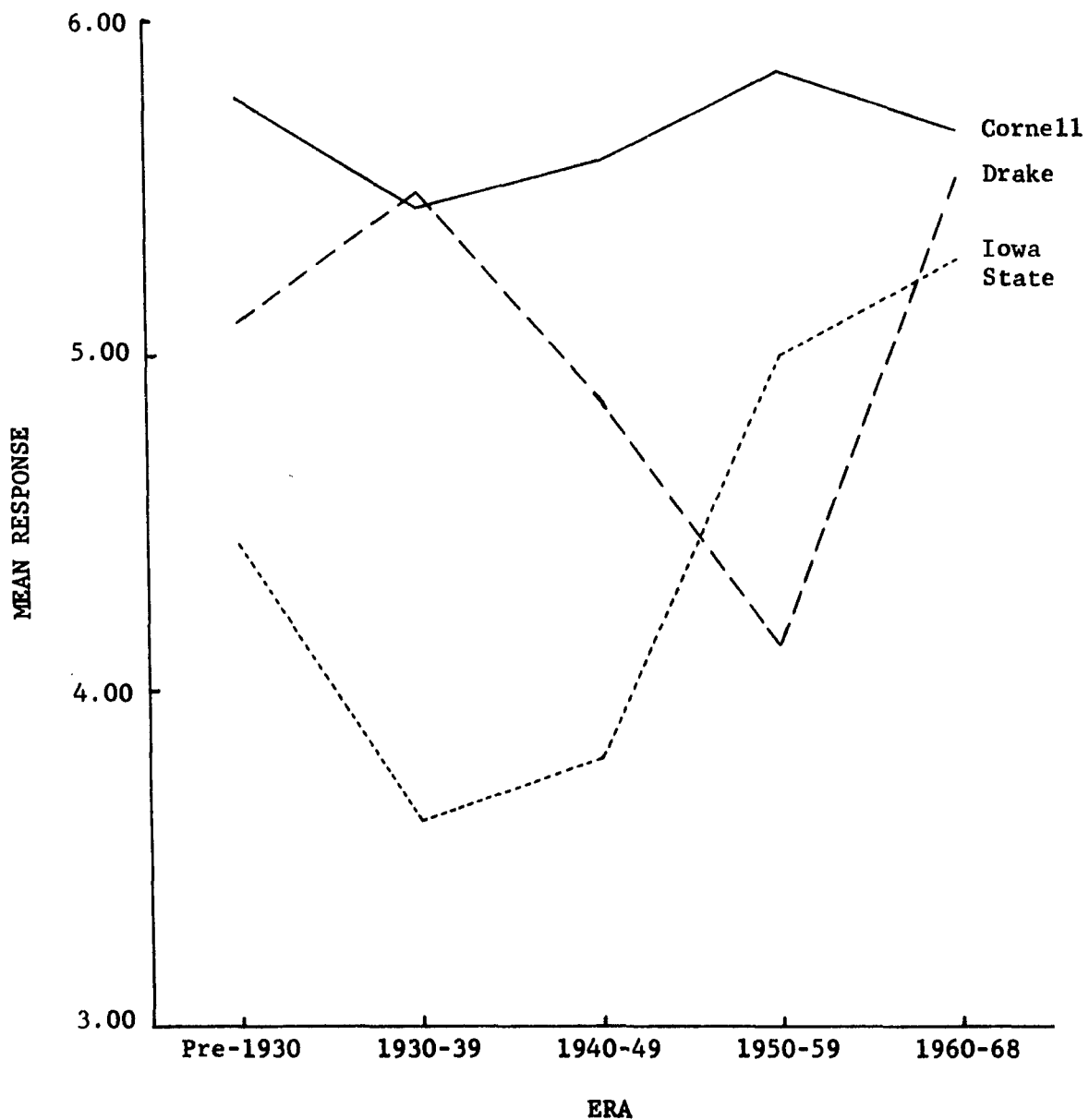


Figure 6. Interaction of colleges with eras on item 58

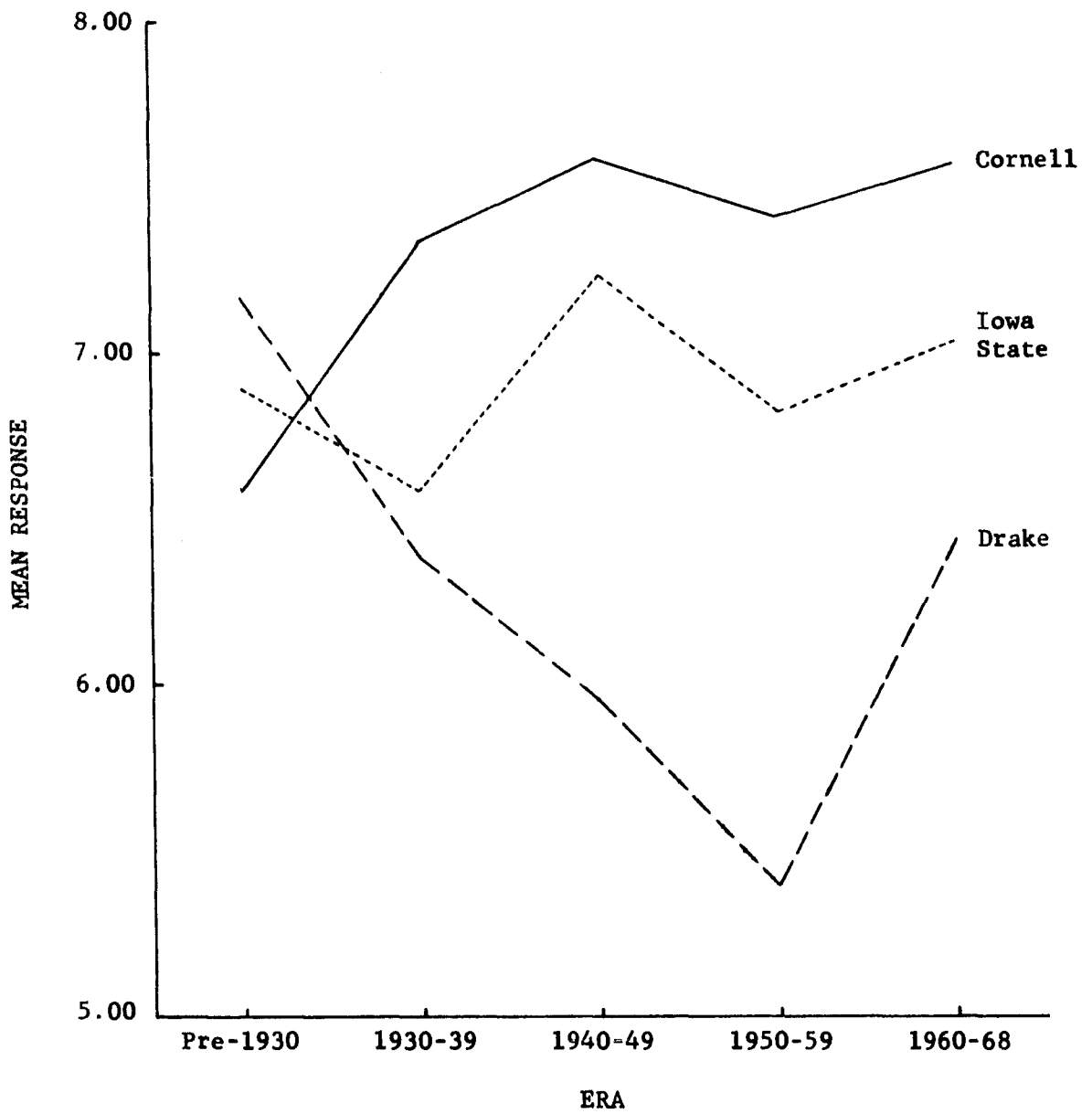


Figure 7. Interaction of colleges with eras on item 62

college by era interaction. A significant difference among eras for Cornell and a highly significant difference among eras for Drake were also found. It was of interest to note that the Pre-1930 and the 1950-59 eras from Drake differed significantly.

Item 63 had highly significant differences among both colleges and eras of graduation. Cornell differed significantly from both Drake and Iowa State. All colleges showed weak agreement that gifts should be used for endowments. The Pre-1930 era differed significantly from both the 1950-59 and the 1960-68 eras. Weak agreement was expressed by the Pre-1930, the 1930-39, and the 1940-49 eras; the 1950-59 and the 1960-68 eras showed uncertainty in their mean responses.

Group 8: items 64 through 66 Statements in this group were:

Monies contributed to a college or university should be invested in:

- 64. Stocks
- 65. Bonds
- 66. Real Estate

Table 83 gives the means and standard deviations for donors on items 64 through 66. Weak agreement was shown by donors on all three items. A

Table 83. Means and standard deviations of responses on items 64 through 66 for donors

Item no.	Donors	
	Mean	S.D.
64	6.18	2.11
65	6.81	1.91
66	6.14	2.21

high percentage of uncertain responses was noted for each of the three items.

When mean responses for donors were ranked from high to low, the results were:

1. Bonds
2. Stock
3. Real estate

It would appear that donors prefer monies contributed to a college be invested in bonds. However, no tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Correlation coefficients for item 64 through 66 are presented in Table 84. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability was .53.

Analyses of variance Table 85 presents the summary of significant differences for main effects on items in group 8. One significant difference and one highly significant difference were found.

Table 84. Intercorrelations for items related to what monies should be invested in

Item no.	64	65	66
64			
65	35		
66	23	23	

Table 85. Summary of significant differences for main effects on items 64 through 66

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
64		HS**	
65	S*		
66			

*Significant at .05 level.

**Significant at .01 level.

Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation are shown in Table 86. Two significant differences were noted between means.

Table 86. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 64 through 66

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
64	6.04		M-ND	
65	6.81	D-IS		
66	6.19			

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Results of factorial analyses of variance on items 64 and 65 are shown in Tables 87 and 88, respectively.

Although a highly significant difference among donor groups was found on item 64, only major donors and non-donors differed significantly. Major donors and consecutive donors expressed weak agreement that monies con-

Table 87. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 64

Source of variation	df	MS	F ^a
Colleges (A)	2	2.10	<1
Donors (B)	3	22.25	5.14*
Eras (E)	4	4.64	1.07
Interactions:			
A x B	6	7.21	1.67
A x E	8	3.05	<1
B x E	12	3.73	<1
A x B x E	23	4.90	1.13
Error	571	4.33	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-ND

Significantly different means between eras:^d

$$^a F(.05) 4,571 = 2.39 > 1.07$$

$$F(.05) 6,571 = 2.11 > 1.67$$

$$F(.05) 23,571 = 1.55 > 1.13$$

$$*F(.01) 3,571 = 3.82 < 5.14, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 88. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 65

Source of variation	df	MS	F ^a
Colleges (A)	2	14.01	4.10*
Donors (B)	3	1.62	<1
Eras (E)	4	2.75	<1
Interactions:			
A x B	6	4.43	1.30
A x E	8	2.79	<1
B x E	12	5.29	1.55
A x B x E	23	2.63	<1
Error	571	3.42	
Significantly different means between colleges: ^b D-IS			
Significantly different means between donors: ^c			
Significantly different means between eras: ^d			

$${}^a F(.05)_{6,571} = 2.11 > 1.30$$

$$F(.05)_{12,571} = 1.77 > 1.55.$$

$${}^*F(.05)_{2,571} = 3.01 < 4.10, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

tributed to a college should be invested in stocks; non-consecutive donors and non-donors expressed uncertainty with the statement.

A significant difference among colleges was noted on item 65. Drake differed significantly from Iowa State. Drake agreed that monies contributed to a college should be invested in bonds, while Cornell and Iowa State were in weak agreement.

Group 9: items 67 through 71 Included in group 9 were the following statements:

Alumni prefer the following forms of giving:

- 67. Life Insurances
- 68. Cash Contributions
- 69. Deferred Gifts (trusts, wills)

Alumni are led by tax incentives to:

- 70. Increase the size of gifts already planned
- 71. Bequeath to colleges and universities

Means and standard deviations for donors on items 67 through 71 are presented in Table 89. Donors agreed that alumni prefer cash contributions as a form of giving. Weak agreement was shown for deferred gifts as a preferred form of giving. Donors also expressed weak agreement that alumni are led by tax incentives to increase the size of gifts already planned and to bequeath to colleges.

Table 89. Means and standard deviations of responses on items 67 through 71 for donors

Item no.	Donors	
	Mean	S.D.
67	4.81	1.85
68	7.59	1.60
69	6.39	1.85
70	6.67	1.93
71	6.72	1.86

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for group 9 are presented in Table 90. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability for group 9 was .60.

Table 90. Intercorrelations for items related to preferred forms of giving and tax incentives

Item no.	67	68	69	70	71
67					
68	-04				
69	26	16			
70	16	16	34		
71	18	07	48	55	

Analyses of variance Summary of significant differences for main effects on items 67 through 71 are presented in Table 91. Five significant or highly differences were found.

Table 92 shows the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Six significant differences between donor classifications and one significant difference between eras of graduation were noted.

Tables 93, 94, 95, and 96 present the results of factorial analyses of variance on items 67, 68, 70, and 71, respectively.

Table 91. Summary of significant differences for main effects on items 67 through 71

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
67			S*
68		HS**	
69			
70		HS**	HS**
71		HS**	

*Significant at .05 level.

**Significant at .01 level.

Table 92. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 67 through 71

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
67	4.80			
68	7.49		C-ND	
69	6.40			
70	6.57		M-NC M-ND	E1-E4
71	6.62		M-C M-NC M-ND	

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 93. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 67

Source of variation	df	MS	F ^a
Colleges (A)	2	2.01	<1
Donors (B)	3	0.79	<1
Eras (E)	4	10.32	3.10*
Interactions:			
A x B	6	1.17	<1
A x E	8	4.10	1.23
B x E	12	3.25	<1
A x B x E	23	3.34	1.00
Error	571	3.33	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d

$${}^a F(.05) 8,571 = 1.96 > 1.23$$

$$F(.05) 23,571 = 1.55 > 1.00.$$

$${}^*F(.05) 4,571 = 2.39 < 3.10, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Although no significant differences were found between eras of graduation on item 67, a significant difference was noted among eras in response to alumni preferring life insurances as a form of giving. All eras expressed uncertainty in their mean responses.

Item 68 showed a highly significant difference among donor classifications. Consecutive donors had a significantly different mean response from

Table 94. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 68

Source of variation	df	MS	F ^a
Colleges (A)	2	3.06	1.13
Donors (B)	3	11.90	4.39*
Eras (E)	4	0.76	<1
Interactions:			
A x B	6	2.47	<1
A x E	8	2.34	<1
B x E	12	1.31	<1
A x B x E	23	2.05	<1
Error	571	2.71	

Significantly different means between colleges:^b

Significantly different means between donors:^c C-ND

Significantly different means between eras:^d

^aF(.05) 2,571 = 3.01 > 1.13.

*F(.01) 3,571 = 3.82 < 4.39, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor, C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

non-donors. Yet, all donor groups agreed that alumni prefer cash contributions as a form of giving.

Highly significant differences among both donor groups and eras were noted on item 70. Major donors and non-donors differed significantly. Major donors agreed that "Alumni are led by tax incentives to increase the size of gifts already planned." Weak agreement with the item was indicated by all other donor classifications. The order of agreement by donor clas-

Table 95. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 70

Source of variation	df	MS	F ^a
Colleges (A)	2	1.38	<1
Donors (B)	3	25.26	7.22*
Eras (E)	4	12.37	3.47**
Interactions:			
A x B	6	1.33	<1
A x E	8	2.04	<1
B x E	12	0.16	<1
A x B x E	23	4.35	1.22
Error	571	3.56	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-NC
M-ND

Significantly different means between eras:^d E1-E4

^aF(.05) 23,571 = 1.55 > 1.22.

*F(.01) 3,571 = 3.82 < 7.22, p<.01.

**F(.01) 4,571 = 3.35 < 3.47, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

sification was major, consecutive, non-consecutive, and non-donors. The Pre-1930 and the 1950-59 eras differed significantly. Yet, all eras indicated weak agreement with the statement.

Item 71 had a highly significant difference among donor classifications. Major donors differed significantly from all other donor groups.

Table 96. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 71

Source of variation	df	MS	F ^a
Colleges (A)	2	3.52	1.04
Donors (B)	3	26.13	7.69*
Eras (E)	4	5.63	1.66
Interactions:			
A x B	6	3.89	1.14
A x E	8	0.92	<1
B x E	12	1.38	<1
A x B x E	23	2.17	<1
Error	571	3.40	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-C
M-NC
M-ND

Significantly different means between eras:^d

^aF(.05) 2,571 = 3.01 > 1.04
F(.05) 4,571 = 2.39 > 1.66
F(.05) 6,571 = 2.11 > 1.14.

*F(.01) 3,571 = 3.82 < 7.69, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor
ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Major donors agreed that alumni are led by tax incentives to bequeath to colleges; weak agreement with the item was expressed by all other donor groups.

Group 10: items 72 through 78 Group 10 included the following items:

The fund raising process should involve the following in identifying potential sources of gifts:

72. Students
73. Faculty
74. Alumni Office
75. President
76. Parents of Students
77. Board of Trustees (Regents)
78. Alumni and Friends of the Institution

Means and standard deviations for donors on items 72 through 78 are given in Table 97. Donors agree that the fund raising process should involve the following in identifying potential sources of gifts: alumni and friends of the college, the alumni office, the Board of Trustees (Regents), and the president. Weak agreement that faculty and parents of students be involved in identifying potential sources of gifts in the fund raising process was indicated by donors. The mean responses on item 72, 5.39, indicated that donors were uncertain about the importance of involving students in the identification of potential sources of gifts in the fund raising process. This finding indicated a lack of agreement between the thinking of donors and the writings of experts in fund raising (30, 68, 91).

When the mean responses for donors were ranked from high to low, the rankings were:

1. Alumni and friends of the institution
2. Alumni office
3. Board of Trustees (Regents)

Table 97. Means and standard deviations of responses on items 72 through 78 for donors

Item no.	Donors	
	Mean	S.D.
72	5.39	2.68
73	6.12	2.38
74	8.12	1.34
75	7.68	1.92
76	6.39	2.30
77	7.95	1.65
78	8.21	1.27

4. President
5. Parents of students
6. Faculty
7. Students

Alumni and friends of the college and the alumni office were ranked in the first two positions. The low rankings of the faculty and the students did not agree with the writings of Eldridge (30), Pollard (68), and Wireman (92). However, no tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for items in group 10 are shown in Table 98. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability was .80.

Table 98. Intercorrelations for items related to fund raising process and identification of potential donors

Item no.	72	73	74	75	76	77	78
72							
73	74						
74	21	24					
75	29	38	45				
76	57	51	31	33			
77	15	20	36	51	29		
78	16	21	61	28	38	42	

Analyses of variance Summary of significant differences for main effects on items 72 through 78 is given in Table 99. Three significant differences and one highly significant difference were found.

Table 99. Summary of significant differences for main effects on items 72 through 78

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
72			
73			
74			
75			
76			S*
77	S*	HS**	
78		S*	

*Significant at .05 level.

**Significant at .01 level.

Table 100 presents the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. One significant difference between colleges and two significant differences between donor classifications were noted.

Table 100. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 72 through 78

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
72	5.43			
73	6.12			
74	8.07			
75	7.65			
76	6.37			
77	7.95	CO-IS	M-C	
78	8.15		M-ND	

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Tables 101, 102, and 103 present the results of factorial analyses of variance on items 76, 77, and 78, respectively.

Although a significant difference among eras was noted on item 76, no significant differences were found between eras. Major, consecutive, and non-consecutive donors weakly agreed that parents of students should be involved in identifying potential sources of gifts in the fund raising

Table 101. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 76

Source of variation	df	MS	F ^a
Colleges (A)	2	0.00	<1
Donors (B)	3	9.37	1.75
Eras (E)	4	14.45	2.89*
Interactions:			
A x B	6	5.89	1.10
A x E	8	2.59	<1
B x E	12	5.34	1.00
A x B x E	23	4.92	<1
Error	571	5.34	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d

$$^a F(.05) 3,571 = 2.62 > 1.75$$

$$F(.05) 6,571 = 2.11 > 1.10$$

$$F(.05) 12,571 = 1.77 > 1.00.$$

$$*F(.05) 4,571 = 2.39 < 2.89, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

process. Non-donors expressed uncertainty. High standard deviations indicated wide variation in responses.

A significant difference among colleges and a highly significant difference among donor groups were found on item 77. Although all colleges agreed that the Board of Trustees (Regents) should be involved in identifying potential sources of gifts in the fund raising process, Cornell and

Table 102. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 77

Source of variation	df	MS	F ^a
Colleges (A)	2	9.92	3.62*
Donors (B)	3	10.61	3.87**
Eras (E)	4	5.92	2.16
Interactions:			
A x B	6	5.47	2.00
A x E	8	1.37	<1
B x E	12	2.05	<1
A x B x E	23	3.64	1.33
Error	571	2.74	

Significantly different means between colleges:^b CO-IS

Significantly different means between donors:^c M-C

Significantly different means between eras:^d

$${}^a F(.05) 4,571 = 2.39 > 2.16$$

$$F(.05) 6,571 = 2.11 > 2.00$$

$$F(.05) 23,571 = 1.55 > 1.33.$$

$${}^* F(.05) 2,571 = 3.01 < 3.62, p < .05.$$

$${}^{**} F(.01) 3,571 = 3.82 < 3.87, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Iowa State differed significantly in mean responses. Mean responses for Cornell, Drake, and Iowa State were 8.26, 8.02, and 8.16, respectively.

Major and consecutive donors differed significantly. However, no significant differences were found between donor groups.

Table 103. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 78

Source of variation	df	MS	F ^a
Colleges (A)	2	2.97	1.58
Donors (B)	3	6.17	3.28*
Eras (E)	4	2.84	1.51
Interactions:			
A x B	6	0.55	<1
A x E	8	1.84	<1
B x E	12	0.28	<1
A x B x E	23	2.74	1.46
Error	571	1.88	
Significantly different means between colleges: ^b			
Significantly different means between donors: ^c M-ND			
Significantly different means between eras: ^d			

^aF(.05) 2,571 = 3.01 > 1.58
F(.05) 4,571 = 2.39 > 1.51
F(.05) 23,571 = 1.55 > 1.46.

*F(.05) 3,571 = 2.62 < 3.28, p < .05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

On item 78, a significant difference among donor classifications was noted. Major donors and non-donors differed significantly that alumni and friends of the colleges should be involved in identifying potential sources of gifts in the fund raising process. However, all donor classifications agreed with the statement.

Group 11: items 80 through 86 Statements included in group 11

were:

Alumni are discouraged from giving to their Alma Mater because of:

- 80. Problematic Business Conditions
- 81. An Uncertain Stock Market
- 82. Contributions to the Church and Other Charitable Organizations
- 83. Campus Unrest
- 84. Lack of Interest
- 85. Lack of Finances
- 86. Lack of Contact

Means and standard deviations for donors on items 80 through 86 are given in Table 104. Lack of finances, campus unrest, lack of interest, and problematic business conditions were weakly agreed on by donors as reasons why alumni are discouraged from giving to their alma mater. Donors expressed uncertainty in mean responses to lack of contact, contributions to the church and other charitable organizations, and an uncertain stock market as reasons why alumni are discouraged from giving to their alma mater.

Table 104. Means and standard deviations of responses on items 80 through 86 for donors

Item no.	Donors	
	Mean	S. D.
80	6.25	2.12
81	5.45	2.21
82	5.50	2.38
83	6.79	2.33
84	6.67	2.14
85	6.96	2.05
86	5.99	2.54

When the mean responses for donors were ranked from high to low, the rankings were:

1. Lack of finances
2. Campus unrest
3. Lack of interest
4. Problematic business conditions
5. Lack of contact
6. Contributions to the church and other charitable organizations
7. An uncertain stock market

Ranking at the top were lack of finances and campus unrest. Although not directly comparable, the high ranking for campus unrest does not concur with the findings of Spaeth and Greeley (83) which investigated the attitudes of alumni of the sixties who were not necessarily donors. However, in the present study no significant differences by donor classification or era of graduation were found on item 83, campus unrest. Yet, no tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for items in group 11 are presented in Table 105. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability was .57.

Analyses of variance Summary of significant differences for main effects on items in group 11 is presented in Table 106. Five significant differences were noted.

Table 107 gives the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of gradu-

Table 105. Intercorrelations for items related to why alumni are discouraged from giving

Item no.	80	81	82	83	84	85	86
80							
81	62						
82	28	28					
83	14	15	07				
84	04	06	-03	18			
85	29	12	15	06	13		
86	03	12	06	10	33	11	

Table 106. Summary of significant differences for main effects on items 80 through 86

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
80			
81			S*
82		S*	S*
83			
84		HS**	
85			
86		HS**	

*Significant at .05 level.

**Significant at .01 level.

ation. Five significant differences between colleges and one significant difference between eras were found.

Results of factorial analyses of variance on items 81, 82, 84, and 86 are shown in Tables 108, 109, 110, and 111, respectively.

Table 107. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 80 through 86

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
80	6.27			
81	5.40			
82	5.65		M-ND	E1-E5
83	6.80			
84	6.64		M-NC	
85	7.07			
86	5.94		M-C M-NC M-ND	

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Although a significant difference among eras was noted on item 81, no significant differences between eras were found. All eras expressed uncertainty in mean responses about whether "Alumni are discouraged from giving to their alma mater because of an uncertain stock market." High standard deviations indicated wide variation in responses.

Significant differences among both donor groups and eras were noted on item 82. Major donors differed significantly from non-donors in mean responses. Only non-donors agreed weakly that "Alumni are discouraged from giving to their alma mater because of contributions to the church and other charitable organizations." All other donor groups expressed uncertainty. The Pre-1930 and the 1960-68 eras differed significantly. Only the Pre-

Table 108. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 81

Source of variation	df	MS	F ^a
Colleges (A)	2	11.81	2.43
Donors (B)	3	5.53	1.16
Eras (E)	4	13.91	2.92*
Interactions:			
A x B	6	4.94	1.04
A x E	8	4.38	<1
B x E	12	2.65	<1
A x B x E	23	5.13	1.08
Error	571	4.76	

Significantly different means between colleges:^b

Significantly different means between donors:^c

Significantly different means between eras:^d

^aF(.05) 2,571 = 3.01 > 2.43
 F(.05) 3,571 = 2.62 > 1.16
 F(.05) 6,571 = 2.11 > 1.04
 F(.05) 23,571 = 1.55 > 1.08.

*F(.05) 4,571 = 2.39 < 2.92, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

1930 era expressed weak agreement with the item; all other eras indicated uncertainty in their mean responses. High standard deviations were noted for all donor groups and all eras.

Highly significant differences among donor groups were found on items 84 and 86. Major donors differed significantly from non-consecutive

Table 109. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 82

Source of variation	df	MS	F ^a
Colleges (A)	2	4.39	<1
Donors (B)	3	19.52	3.64*
Eras (E)	4	15.21	2.83**
Interactions:			
A x B	6	0.96	<1
A x E	8	3.79	<1
B x E	12	5.89	1.10
A x B x E	23	6.11	1.14
Error	571	5.37	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-ND

Significantly different means between eras:^d E1-E5

$${}^a F(.05)_{12,571} = 1.77 > 1.10$$

$$F(.05)_{23,571} = 1.55 > 1.14.$$

$${}^*F(.05)_{3,571} = 2.62 < 3.64, p < .05.$$

$${}^{**}F(.05)_{4,571} = 2.39 < 2.83, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

donors to lack of interest being a reason why alumni are discouraged from giving to their alma mater, item 84. Agreement with the item was expressed by major donors while the other donor classifications showed weak agreement.

Table 110. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 84

Source of variation	df	MS	F ^a
Colleges (A)	2	5.17	1.16
Donors (B)	3	23.36	5.25*
Eras (E)	4	6.94	1.56
Interactions:			
A x B	6	2.24	<1
A x E	8	10.91	2.45**
B x E	12	7.74	1.74
A x B x E	23	4.65	1.04
Error	571	4.45	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-NC

Significantly different means between eras:^d

$$\begin{aligned} &^a F(.05) 2,571 = 3.01 > 1.16 \\ &F(.05) 4,571 = 2.39 > 1.56 \\ &F(.05) 12,571 = 1.77 > 1.74 \\ &F(.05) 23,571 = 1.55 > 1.04. \end{aligned}$$

$$*F(.01) 3,571 = 3.82 < 5.25, p < .01.$$

$$**F(.05) 8,571 = 1.96 < 2.45, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 111. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 86

Source of variation	df	MS	F ^a
Colleges (A)	2	3.25	<1
Donors (B)	3	73.59	12.27*
Eras (E)	4	7.07	1.18
Interactions:			
A x B	6	7.86	1.31
A x E	8	12.49	2.08**
B x E	12	9.92	1.65
A x B x E	23	6.88	1.15
Error	571	6.00	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-C
M-NC
M-ND

Significantly different means between eras:^d

$$\begin{aligned} &^a F(.05) 4,571 = 2.39 > 1.18 \\ &F(.05) 6,571 = 2.11 > 1.31 \\ &F(.05) 12,571 = 1.77 > 1.65 \\ &F(.05) 23,571 = 1.55 > 1.15. \end{aligned}$$

$$*F(.01) 3,571 = 3.82 < 12.27, p < .01.$$

$$**F(.01) 8,571 = 1.96 < 2.08, p < .05.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Major donors differed from all other donor groups that lack of contact was a reason why alumni are discouraged from giving to their alma mater, item 86. Major donors agreed with the item; all other donor groups indicated uncertainty. High standard deviations indicated wide variation in responses.

Group 12: items 87 through 92 Items included in group 12 were:

Alumni give to their alma mater because of:

- 87. Loyalty
- 88. Tax Considerations
- 89. An Altruistic Impulse
- 90. Confidence in its Strength
- 91. Past Accomplishments of Gifts
- 92. Belief in its Work

Means and standard deviations for donors on items in this group are given in Table 112. Donors agreed that loyalty and belief in the work of their alma mater were reasons why alumni give to their alma mater. These findings closely agree with the findings of Spaeth and Greeley (83) who limited their study to alumni of the sixties who were not necessarily donors.

Confidence in the strength of their alma mater, tax considerations, and past accomplishments of gifts were given weak agreement as reasons why alumni give to their alma mater. Donors expressed uncertainty that alumni give to their alma mater because of an altruistic impulse.

When mean responses for donors on items 87 through 92 were ranked from high to low, the rankings were:

Table 112. Means and standard deviations of responses on items 87 through 92 for donors

Item no.	Donors	
	Mean	S. D.
87	8.09	1.37
88	6.44	2.01
89	5.93	2.07
90	6.75	1.87
91	6.44	1.94
92	8.06	1.31

1. Loyalty
2. Belief in its work
3. Confidence in its strength
4. Tax considerations
5. Past accomplishments of gifts
6. An altruistic impulse

Loyalty and belief in the work of the college were ranked in the first two positions. However, no tests of significance were performed on differences in mean responses across items.

Intercorrelations and reliability coefficient Pearson product moment correlation coefficients for items in group 12 are shown in Table 113. A correlation coefficient of .08 was significantly different from zero at the .05 level with 628 degrees of freedom. The coefficient of reliability for this group was .64.

Table 113. Intercorrelations for items related to why alumni give

Item no.	87	88	89	90	91	92
87						
88	13					
89	16	14				
90	26	06	24			
91	23	10	21	46		
92	43	01	23	42	34	

Analyses of variance Summary of significant differences for main effects on items 87 through 92 is given in Table 114. Eleven significant or highly significant differences were found.

Table 114. Summary of significant differences for main effects on items 87 through 92

Item no.	Hypothesis		
	No significant difference by college	No significant difference by donor	No significant difference by era
87		S*	HS**
88		HS**	
89		HS**	S*
90	HS**		HS**
91		HS**	HS**
92		HS**	HS**

*Significant at .05 level.

**Significant at .01 level.

Table 115 presents the summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation. Ten significant differences between means were noted.

Table 115. Summary of overall mean scores and significantly different means between colleges, donor classifications, and eras of graduation on items 87 through 92

Item no.	Overall mean scores	Significantly different means between colleges ^a	Significantly different means between donors ^b	Significantly different means between eras ^c
87	8.02		M-ND	E1-E5
88	6.51			
89	5.77		C-ND	E1-E3
90	6.69	CO-D		E1-E3
91	6.34		C-ND	E1-E5
92	7.97		C-ND	E1-E5

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Results of factorial analyses of variance on items 87, 88, 89, 90, 91, and 92 are shown in Tables 116, 117, 118, 119, 120, and 121, respectively.

A significant difference among donor groups and a highly significant difference among eras were noted on item 87. Major donors differed significantly from non-donors, and the Pre-1930 era differed significantly from

Table 116. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 87

Source of variation	df	MS	F ^a
Colleges (A)	2	1.76	<1
Donors (B)	3	7.32	3.64*
Eras (E)	4	7.43	3.70**
Interactions:			
A x B	6	1.61	<1
A x E	8	2.02	1.00
B x E	12	1.53	<1
A x B x E	23	1.23	<1
Error	571	2.01	

Significantly different means between colleges:^b

Significantly different means between donors:^c M-ND

Significantly different means between eras:^d E1-E5

^aF(.05) 8,571 = 1.96 > 1.00.

*F(.05) 3,571 = 2.62 < 3.64, p<.05.

**F(.01) 4,571 = 3.35 < 3.70, p<.05.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

the 1960-68 era. However, all donor groups and all eras agreed that loyalty was a reason why alumni give to their alma mater.

Although no significant differences were found between donor groups on item 88, a highly significant difference among donor groups was found. All donor groups weakly agreed that "Alumni give to their alma mater because of tax considerations."

Table 117. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 88

Source of variation	df	MS	F
Colleges (A)	2	2.41	<1
Donors (B)	3	16.01	4.06*
Eras (E)	4	0.87	<1
Interactions:			
A x B	6	2.79	<1
A x E	8	2.32	<1
B x E	12	3.47	<1
A x B x E	23	2.09	<1
Error	571	3.94	

Significantly different means between colleges:^a

Significantly different means between donors:^b

Significantly different means between eras:^c

* $F(.01)_{3,571} = 3.82 < 4.06$, $p < .01$.

^aCO, Cornell; D, Drake; IS, Iowa State.

^bM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^cE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

A highly significant difference among donor groups and a significant difference among eras were found on item 89. However, these significant differences were not interpretable without consideration of the highly significant interaction of donor classifications with eras (Figure 8). Consecutive donors and non-donors differed significantly on whether alumni give to their alma mater because of an altruistic impulse. Consecutive donors were in weak agreement with the statement; all other donor groups indicated uncertainty. The Pre-1930 and the 1940-49 eras differed signifi-

Table 118. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 89

Source of variation	df	MS	F ^a
Colleges (A)	2	8.75	2.03
Donors (B)	3	21.33	4.94*
Eras (E)	4	13.90	3.22**
Interactions:			
A x B	6	6.59	1.53
A x E	8	4.70	1.09
B x E	12	10.43	2.41***
A x B x E	23	1.25	<1
Error	571	4.32	

Significantly different means between colleges:^b

Significantly different means between donors:^c C-ND

Significantly different means between eras:^d E1-E3

$${}^a F(.05) 2,571 = 3.01 > 2.03$$

$$F(.05) 6,571 = 2.11 > 1.53$$

$$F(.05) 8,571 = 1.96 > 1.09.$$

$${}^* F(.01) 3,571 = 3.82 < 4.94, p < .01.$$

$${}^{**} F(.05) 4,571 = 2.39 < 3.22, p < .05.$$

$${}^{***} F(.01) 12,571 = 2.22 < 2.41, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

Table 119. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 90

Source of variation	df	MS	F ^a
Colleges (A)	2	20.18	5.42**
Donors (B)	3	7.28	1.96
Eras (E)	4	13.05	3.51**
Interactions:			
A x B	6	1.59	<1
A x E	8	4.69	1.26
B x E	12	5.33	1.43
A x B x E	23	1.79	<1
Error	571	3.72	

Significantly different means between colleges: ^b CO-D

Significantly different means between donors: ^c

Significantly different means between eras: ^d E1-E3

^aF(.05) 3,571 = 2.62 > 1.96
 F(.05) 8,571 = 1.96 > 1.26
 F(.05) 12,571 = 1.77 > 1.43.

*F(.01) 2,571 = 4.65 < 5.42, p<.01.

**F(.01) 4,571 = 3.35 < 3.51, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

cantly. Only the Pre-1930 era showed weak agreement with the item; all other eras indicated uncertainty. It was of interest to note the high mean response for major donors from the 1960-68 era.

Highly significant differences among both colleges and eras were found on item 90. Cornell and Drake differed significantly on whether alumni

Table 120. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 91

Source of variation	df	MS	F ^a
Colleges (A)	2	4.72	1.23
Donors (B)	3	18.83	4.89*
Eras (E)	4	13.15	3.42**
Interactions:			
A x B	6	0.72	<1
A x E	8	2.07	<1
B x E	12	3.78	<1
A x B x E	2	2.63	<1
Error	57	3.85	

Significantly different means between colleges:^b

Significantly different means between donors:^c C-ND

Significantly different means between eras:^d E1-E5

^aF(.05) 2,571 = 3.01 > 1.23.

*F(.01) 3,571 = 3.82 < 4.89, p<.01.

**F(.01) 4,571 = 3.35 < 3.42, p<.01.

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

give to their alma mater because of confidence in its strength. Cornell agreed with the item while Drake and Iowa State showed weak agreement. The Pre-1930 era differed significantly from the 1940-49 era. The Pre-1930 era agreed with the statement; all other eras indicated weak agreement.

Highly significant differences among both donor groups and eras were noted on item 91. Consecutive donors differed significantly from non-

Table 121. Analysis of variance and significantly different means between colleges, donor classifications, and eras of graduation on item 92

Source of variation	df	MS	F ^a
Colleges (A)	2	4.89	2.53
Donors (B)	3	9.69	5.02*
Eras (E)	4	7.96	4.12**
Interactions:			
A x B	6	1.77	<1
A x E	8	1.99	1.03
B x E	12	2.37	1.23
A x B x E	23	2.64	1.37
Error	571	1.93	

Significantly different means between colleges:^b

Significantly different means between donors:^c C-ND

Significantly different means between eras:^d E1-E5

$$\begin{aligned}
 {}^a F(.05) 2,571 &= 3.01 > 2.53 \\
 F(.05) 8,571 &= 1.96 > 1.03 \\
 F(.05) 12,571 &= 1.77 > 1.23 \\
 F(.05) 23,571 &= 1.55 > 1.37.
 \end{aligned}$$

$$*F(.01) 3,571 = 3.82 < 5.02, p < .01.$$

$$**F(.01) 4,571 = 3.35 < 4.12, p < .01.$$

^bCO, Cornell; D, Drake; IS, Iowa State.

^cM, major donor; C, consecutive donor; NC, non-consecutive donor; ND, non-donor.

^dE1, Pre-1930; E2, 1930-39; E3, 1940-49; E4, 1950-59; E5, 1960-68.

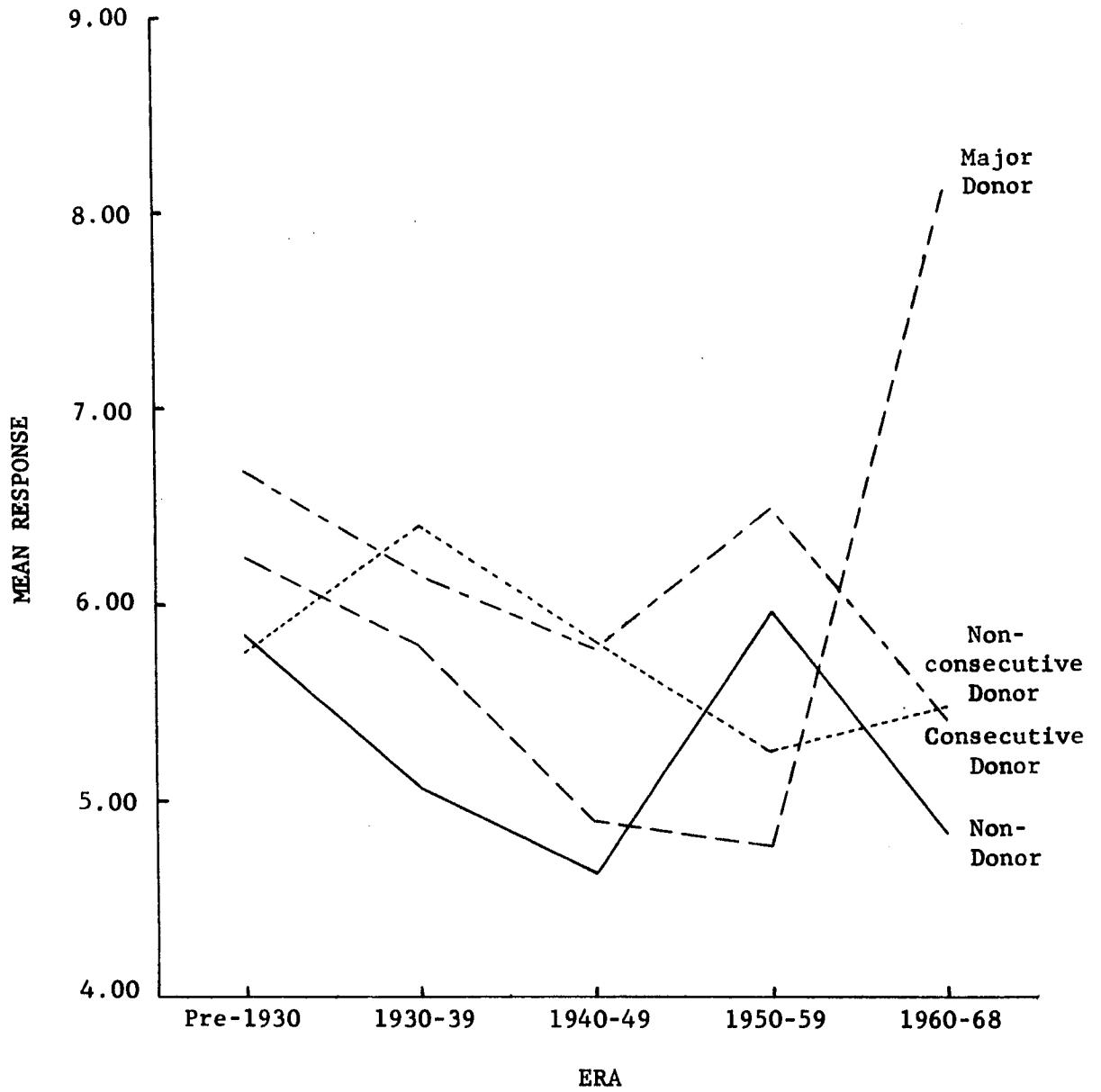


Figure 8. Interaction of donor classifications with eras on item 89

donors. Non-donors expressed uncertainty that alumni give to their alma mater because of past accomplishments of gifts; all other donor groups indicated weak agreement with the item. The Pre-1930 and the 1960-68 eras differed significantly. The 1960-68 era expressed uncertainty; all other eras indicated weak agreement with the statement.

On item 92, "Alumni give to their alma mater because of belief in its work," highly significant differences among both donor groups and eras were found. Consecutive donors and non-donors differed significantly, as did the Pre-1930 and the 1960-68 eras. However, all donor classifications and all eras agreed with the statement.

SUMMARY AND CONCLUSIONS

Summary of the Purpose, Method, and Findings

The purpose of this study was an investigation of the attitudes of donors at selected institutions of higher education. The investigation was carried out in one phase using a survey instrument.

The study was limited to Cornell College, Drake University, and Iowa State University. A stratified systematic sample was obtained from the three selected institutions of higher education. Stratification was by donor classification: major, consecutive, non-consecutive, and non-donor, and by era of graduation: Pre-1930, 1930-39, 1940-49, 1950-59, and 1960-68.

Data needed to determine attitudes and test the hypotheses formulated were obtained from responses of 630 alumni to the survey instrument. Data were analyzed by various statistical techniques to determine attitudes of donors and to analyze attitudes of donors by type of college, donor classification, and era of graduation.

Relationships between variables were estimated by calculating Pearson product moment correlation coefficients and factor analyses of items 1 through 92. Factor analyses by the principal components technique and varimax rotation were performed on the items to determine common factors. Thirteen factors were extracted by the principal components technique and varimax rotation for items 1 through 42. Factor analyses of items 43 through 92 by the principal components technique and varimax rotation yielded 16 factors. Because of the large number of factors extracted, it was decided to analyze the data by groupings as indicated by Pearson prod-

uct moment correlation coefficients, factor analyses, and organization of the instrument.

The items were analyzed as 12 groups with eight statements analyzed separately from the groups. A coefficient of reliability was calculated for each of the groups except group 5 which included the items for which responses were recorded in percentages rather than a nine-point rating scale. Factor analyses by the principal components technique and varimax rotation on both items 1 through 8 and items 27 through 42 were performed to determine common factors for these two groups of items.

A factorial analysis of variance using three factors (colleges, donor classifications, and eras of graduation) was performed on each item to analyze the variation of the data by type of college, donor classification, and era of graduation, and the interaction effects of these factors. Scheffé's test was used for testing hypotheses regarding differences between means when compared on a paired basis.

Thirty-one significant differences and 59 highly significant differences were found for main effects. The numbers of significant differences found among colleges, donor classifications, and eras of graduation were 32, 28, and 30, respectively. The numbers of significant differences noted between colleges, donor classifications, and eras of graduation were 45, 36, and 35, respectively. Eight significant interaction effects which had a corresponding significant main effect were found.

The highest number of significant differences between colleges, 20, was between Cornell and Iowa State. Drake differed significantly from Iowa State on 14 statements, and Cornell and Drake differed significantly on 11 statements.

Major donors and non-donors differed significantly on 15 items. Major donors differed significantly from consecutive donors and non-consecutive donors on five and seven items, respectively. Only one significant difference was found between consecutive donors and non-consecutive donors. Consecutive donors and non-donors differed significantly on eight statements, and no significant differences were found between non-consecutive donors and non-donors.

The highest number of significant differences between eras was between the Pre-1930 and the 1960-68 eras. These two eras differed significantly on 14 statements. The Pre-1930 era did not differ from the 1930-39 era on any statements; the Pre-1930 era differed significantly from the 1940-49 and the 1950-59 eras on nine and seven items, respectively. The 1930-39 era differed significantly from the 1940-49 era on only one item and from the 1950-59 era on only one item. The 1940-49 and the 1960-68 eras differed significantly on two statements. No significant differences were noted between the 1940-49 era and either the 1950-59 or the 1960-68 eras. One significant difference was found between the 1950-59 and the 1960-68 eras.

Significant differences among colleges were noted on the following items which are numbered as in the instrument:

3. Colleges and universities should be responsive to students' goals.
4. Colleges and universities should be centers of independent thinking.
8. Private colleges and universities should be retained in the American system of higher education.

9. Private colleges and universities should receive public assistance equivalent to public institutions of higher education.
10. Colleges and universities are not really underfinanced.
11. One of the major problems in financing higher education is the inefficient use of existing resources.

The following should be effective forces in shaping or changing the financial planning of colleges and universities:

15. Taxpayers
18. State Legislature
20. Agencies supplying funds for contract grants
21. Sources of large private grants or endowments

Increased Federal Funding for higher education should come from the following alternatives:

23. Aid to Students (scholarships, fellowships and loans)
28. The Alumni Office should provide opportunities for alumni reunions and area meetings.
32. The Alumni Office should have matching gift programs with business and industry.
33. The Alumni Office should ask for money the college or university needs.

The Alumni Office should provide information on what is happening regarding the following:

42. Travel Opportunities
43. In fund raising, a volunteer should have a better chance of getting money than a professional fund raiser.

The fund raising process should be an important concern of each of the following:

- 46. Faculty
- 52. Professional Fund Raiser

Monies contributed to a college or university should be invested BY:

- 53. Committee of Trustees
- 55. Small Investment House

Alumni prefer their gifts to be used for:

- 58. Current Operations
- 59. Capital Needs
- 61. Organized Research
- 62. Student Aid
- 63. Endowments

Monies contributed to a college or university should be invested IN:

- 65. Bonds

The fund raising process should involve the following in identifying potential sources of gifts:

- 77. Board of Trustees (Regents)

Alumni give to their Alma Mater because of:

- 90. Confidence in its Strength

The present approximate percentages of total income to public higher education by sources are presented below:

- 93. State - 39%
- 97. Alumni and Friends - 4%

98. Foundations - 3%

99. Business Corporations - 2%

Significant differences among donor classifications were noted on the following items which are numbered as in the instrument:

The following should be effective forces in shaping or changing the financial planning of colleges and universities:

- 20. Agencies supply funds for contract grants
- 27. The Alumni Office should have consistent communication with its alumni.
- 28. The Alumni Office should provide opportunities for alumni reunions and area meetings.
- 32. The Alumni Office should have matching gift programs with business and industry.
- 33. The Alumni Office should ask for money the college or university needs.

The fund raising process should be an important concern of each of the following:

- 47. Alumni Office
- 48. President
- 49. Parents of Students
- 51. Alumni and Friends of the Institution

Monies contributed to a college or university should be invested BY:

- 55. Small Investment House

Alumni prefer their gifts to be used for:

- 57. Unrestricted Projects
- 58. Current Operations
- 61. Organized Research

Monies contributed to a college or university should be invested IN:

- 64. Stocks

Alumni prefer the following forms of giving:

- 68. Cash Contributions

Alumni are led by tax incentives to:

- 70. Increase the size of gifts already planned
- 71. Bequeath to colleges and universities

The fund raising process should involve the following in identifying potential sources of gifts:

- 77. Board of Trustees (Regents)
- 78. Alumni and Friends of the Institution

Alumni are discouraged from giving to their Alma Mater because of:

- 82. Contributions to the Church and Other Charitable Organizations
- 84. Lack of Interest
- 86. Lack of Contact

Alumni give to their Alma Mater because of:

- 87. Loyalty
- 88. Tax Considerations
- 89. An Altruistic Impulse
- 91. Past Accomplishments of Gifts
- 92. Belief in its Work

The present approximate percentages of total income to public higher education by sources are presented below:

97. Alumni and Friends - 4%

Significant differences among eras of graduation were noted on the following items which are numbered as in the instrument:

3. Colleges and universities should be responsive to students' goals.

The following should be effective forces in shaping or changing the financial planning of colleges and universities:

12. Students

13. Faculty

17. Board of Trustees (Regents)

18. State Legislature

27. The Alumni Office should have consistent communication with its alumni.

28. The Alumni Office should provide opportunities for alumni reunions and area meetings.

30. The Alumni Office should propose gifts for specific purposes.

34. The Alumni Office should ask for money it thinks it can get.

The Alumni Office should provide information on what is happening regarding the following:

37. Cultural Events

42. Travel Opportunities

43. In fund raising, a volunteer should have a better chance of getting money than a professional fund raiser.

44. Academic excellence should attract financial support to a college or university.

The fund raising process should be an important concern of each of the following:

49. Parents of Students
51. Alumni and Friends of the Institution

Monies contributed to a college or university should be invested BY:

53. Committee of Trustees
55. Small Investment House

Alumni prefer their gifts to be used for:

57. Unrestricted Projects
63. Endowments

Alumni prefer the following forms of giving:

67. Life Insurance

Alumni are led by tax incentives to:

70. Increase the size of gifts already planned

The fund raising process should involve the following in identifying potential sources of gifts:

76. Parents of Students

Alumni are discouraged from giving to their Alma Mater because of:

81. An Uncertain Stock Market
82. Contributions to the Church and Other Charitable Organizations

Alumni give to their Alma Mater because of:

87. Loyalty
89. An Altruistic Impulse
90.. Confidence in its Strength

91. Past Accomplishments of Gifts

92. Belief in its Work

The present approximate percentages of total income to public higher education by sources are presented below:

99. Business Corporations - 2%

Conclusions

Before drawing conclusions from this study, the following limitations should be considered:

1. This study was specific to three colleges, four donor classifications, and five eras of graduation. Because of this limitation, conclusions cannot be generalized beyond the colleges, donor classifications, or eras of graduation involved in this particular study.
2. Care must be observed in making inferences from the non-donor sample to the population of non-donors because of two factors:
 - a. The percentage of non-donors among the alumni sampled was much greater than the percentage of donors in the population. Yet the same number of non-donors was selected for the sample as for both the consecutive and non-consecutive donor classifications.
 - b. Of the four donor classifications, the percentage of non-donor respondents was the lowest.

Within these limitations, the following conclusions are presented.

There was evidence that:

Donors believed clarity, internal consistency, and relevance to today today's society were important aspects of the philosophy and objectives of colleges. Specifically, donors believed that colleges should be responsive to students' goals, be centers of independent thinking, and should evolve with society. Substantial agreement among colleges, donor classifications, and eras of graduation existed on items pertaining to the philosophy and objectives of colleges.

Colleges should have consistent communication with their alumni. Older donors felt more strongly than other age groups about consistent communication. Donors were most interested in finding out information about the plans of the colleges and changes in the philosophy and objectives of the college. Interest was also shown in obtaining information on continuing education programs, curricular developments, cultural events, and athletics.

In regard to the functioning of the alumni office, donors believed that the alumni office should: (1) propose gifts for specific purposes, (2) show the uses to be made of gifts received, (3) inform alumni of the possible financial benefits to donors from giving, (4) have matching gift programs with business and industry, (5) ask for money the college needs, and (6) have an ongoing evaluation of its program. In general, non-donors did not feel as strongly as donors about the need for matching gift programs with business and industry, colleges asking for money they need, or colleges having consistent communication with their alumni.

Donors did not agree about the inefficient use of existing resources. Yet, experts (6, 19, 20, 37, 44, 79, 89) claimed that colleges do not make use of existing resources.

Donors believed that the president and the Board of Trustees (Regents) should be effective forces in shaping or changing the financial planning of colleges. Alumni and faculty were also considered to be important. According to donors, sources of large private grants or endowments, agencies supplying funds for contract grants, students, and the Federal Government should not be effective forces in shaping or changing the financial planning of colleges. Differences by type of college were noted as to the role of taxpayers, state legislature, and sources of large private grants or endowments.

Donors thought that increased federal funding for higher education should be in the form of aid to students. As to alternate forms increased federal funding for higher education should take, substantial agreement among colleges, donor classifications, and eras of graduation existed.

The Federal Government, alumni and friends of the college, foundations, and business corporations were the sources that donors thought should be contributing more to public higher education than they did in 1971. Donors believed that the state, students, and the local tax district should be contributing less to public higher education. The percentage contributed to public higher education by alumni and friends, suggested by major donors, was greater than that suggested by other donor groups.

All colleges agreed that alumni and friends of the college and foundations should be contributing more to public higher education than they did in 1971. However, the private colleges, Cornell and Drake, suggested significantly higher percentages than Iowa State, a public college.

Donors believed that alumni and friends of the college, the alumni office, the Board of Trustees (Regents), and the president should be

involved in identifying potential sources of gifts in the fund raising process. Donors also thought that the fund raising process should be an important concern of each individual or group named above. The Pre-1930 era was the only era to agree that the fund raising process should be an important concern of parents of students. All colleges, donor classifications, and eras of graduation were in substantial agreement on who should be involved in identifying potential sources of gifts in the fund raising process.

Donors did not think that faculty and students were important in the fund raising process. However, experts (30, 68, 92) emphasized that the involvement of faculty and students in the fund raising process and in the identification of potential donors was necessary.

Donors preferred their gifts to be used for specific projects. The specific projects preferred by donors were student aid, endowments, and capital needs. Colleges differed markedly as to the use of gifts received.

Cash contributions were the preferred form of giving. Most donors preferred that monies contributed to a college be invested in bonds. However, some tend to think that stocks and real estate would be satisfactory investments.

Donors believed that alumni were discouraged from giving to their alma mater because of lack of finances, campus unrest, lack of interest, and problematic business conditions. Among the motives for contributing to their alma mater, donors thought loyalty and belief in its work to be the most important. Substantial agreement existed among colleges as to why alumni give to their alma mater. In regard to incentives for giving, major donors believed that alumni are led by tax incentives to increase the size of gifts already planned and to bequeath to colleges. The Pre-1930 era

felt the most strongly in regard to alumni giving from motives of loyalty, belief in the work of their alma mater, and confidence in the strength of their alma mater.

Recommendations for Further Study

A review of the literature and the results of this study suggest a need for:

1. A similar study or studies which would incorporate the following changes:
 - a. Revision of the instrument so that it would be more amenable to factor analyses
 - b. Validation of the instrument
 - c. Larger selection of colleges - by type of college
- by geographic location
 - d. Larger sample
 - e. Study of the attitudes of donors within colleges or divisions within the colleges studied.
2. An investigation of the attitudes of donors within a particular institution of higher education.
3. An investigation of differences in mean responses across items for each group which had items with the same covering statement, using the multiple analysis of variance technique for repeated measurements (91).

Attitudes of donors from a national sample are relatively unexplored. There is a need for more research into the development of valid, reliable instruments for evaluating the attitudes of donors. Colleges then can better utilize all the constituents of the college community in the pursuit of excellence in higher education.

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Dr. Milt Brown, as advisor, for his encouragement, patience, and ability to help focus my ideas and especially for his uniqueness in being himself;

Dr. Ray Bryan, as major professor, for his willingness to help, his kindness and understanding;

Dr. Trevor Howe, Dr. George Kizer, and Dr. Richard Warren, as members of my committee, for their time, useful criticism, and suggestions;

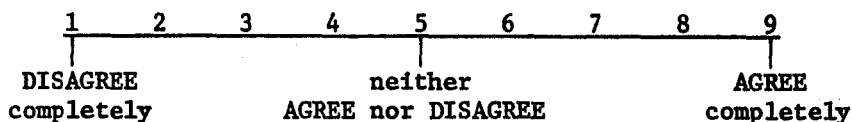
Mr. Robert Majors, Director of Development Office, Cornell College; Mr. Orin Dahl, Vice-President of Institutional Development, Drake University; Mr. Don Gustofson, Director of Alumni Services, Iowa State University;

And my friends, without their support and distractions I might not have been able to be myself.

APPENDIX A

This instrument is designed to give you an opportunity to react to topical areas which are important to higher education. These areas pertain to the philosophy and objectives of colleges and universities, the role of the Alumni office in the overall functioning of the college or university, and issues concerned with financing and fund raising. You are asked to respond as follows: 195

Read the statements and respond to the statements in terms of your agreement. Your response to each statement should be a number from 1 to 9. If you agree completely with the statement or aspect, put 9 in the space provided. If you disagree completely, put 1. If you neither agree nor disagree, put 5. Use the intervening numbers to indicate the extent of your agreement. The distinctions you make on the number scale should be as fine as you feel you can make.



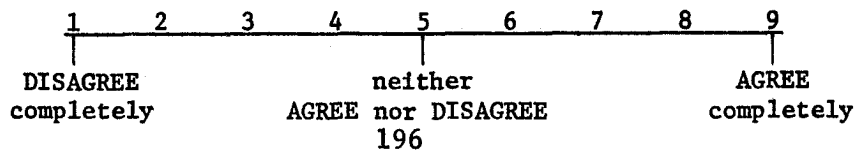
PLEASE RESPOND TO EVERY STATEMENT AND EACH ASPECT

Item Extent of
No. agreement

1. _____ Colleges and universities should have a philosophy and objectives relevant to today's society.
2. _____ Colleges and universities should have clarity and internal consistency in their philosophy and objectives.
3. _____ Colleges and universities should be responsive to students' goals.
4. _____ Colleges and universities should be centers of independent thinking.
5. _____ Colleges and universities should evolve with society.
6. _____ Colleges and universities should have extracurricular activities related to the objectives of the school.
7. _____ Colleges and universities should be mediums for social change.
8. _____ Private colleges and universities should be retained in the American system of higher education.
9. _____ Private colleges and universities should receive public assistance equivalent to public institutions of higher education.
10. _____ Colleges and universities are not really underfinanced.
11. _____ One of the major problems in financing higher education is the inefficient use of existing resources.

The following should be effective forces in shaping or changing the financial planning of colleges and universities:

12. _____ Students
13. _____ Faculty
14. _____ Alumni
15. _____ Taxpayers
16. _____ Administrators
17. _____ Board of Trustees (Regents)
18. _____ State Legislature
19. _____ Federal Government
20. _____ Agencies supplying funds for contract grants



Item Extent of
No. agreement

Increased Federal Funding for higher education should come from the following alternatives:

- 22. _____ Categorical Aid (aid for specific purposes)
- 23. _____ Aid to Students (scholarships, fellowships and loans)
- 24. _____ Institutional Grants
- 25. _____ Tax Relief
- 26. _____ Revenue Sharing and Aid to States

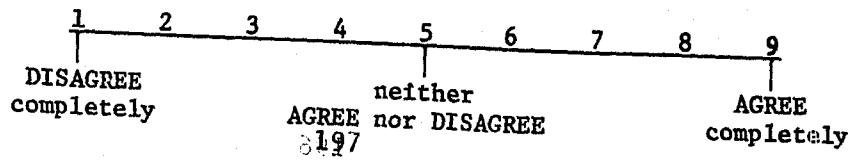
- 27. _____ The Alumni Office should have consistent communication with its alumni.
- 28. _____ The Alumni Office should provide opportunities for alumni reunions and area meetings.
- 29. _____ The Alumni Office should show the uses to be made of gifts received in fund raising programs.
- 30. _____ The Alumni Office should propose gifts for specific purposes.
- 31. _____ The Alumni Office should inform alumni of the possible financial benefits to donors from giving.
- 32. _____ The Alumni Office should have matching gift programs with business and industry.
- 33. _____ The Alumni Office should ask for money the college or university needs.
- 34. _____ The Alumni Office should ask for money it thinks it can get.
- 35. _____ The Alumni Office should have an ongoing evaluation of its program.

The Alumni Office should provide information on what is happening regarding the following:

- 36. _____ Athletics
- 37. _____ Cultural Events
- 38. _____ Continuing Education Programs
- 39. _____ Curricular Developments
- 40. _____ The Plans of the College or University
- 41. _____ Changes in the Philosophy and Objectives of the Institution
- 42. _____ Travel Opportunities

- 43. _____ In fund raising, a volunteer should have a better chance of getting money than a professional fund raiser.
- 44. _____ Academic excellence should attract financial support to a college or university.

PLEASE RESPOND TO EVERY STATEMENT AND EACH ASPECT



Item No. Extent of agreement

The fund raising process should be an important concern of each of the following:

- 45. _____ Students
- 46. _____ Faculty
- 47. _____ Alumni Office
- 48. _____ President
- 49. _____ Parents of Students
- 50. _____ Board of Trustees (Regents)
- 51. _____ Alumni and Friends of the Institution
- 52. _____ Professional Fund Raiser

Monies contributed to a college or university should be invested BY:

- 53. _____ Committee of Trustees
- 54. _____ Large Bank or Investment House
- 55. _____ Small Investment House

Alumni prefer their gifts to be used for:

- 56. _____ Specific Projects
- 57. _____ Unrestricted Projects
- 58. _____ Current Operations
- 59. _____ Capital Needs
- 60. _____ Athletics
- 61. _____ Organized Research
- 62. _____ Student Aid
- 63. _____ Endowments

Monies contributed to a college or university should be invested IN:

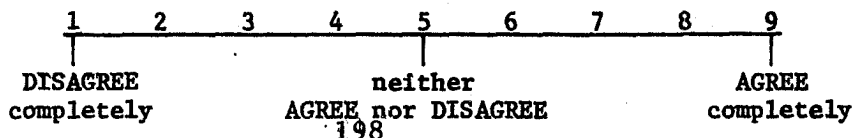
- 64. _____ Stocks
- 65. _____ Bonds
- 66. _____ Real Estate

Alumni prefer the following forms of giving:

- 67. _____ Life Insurances
- 68. _____ Cash Contributions
- 69. _____ Deferred Gifts (trusts, wills)

Alumni are led by tax incentives to:

- 70. _____ Increase the size of gifts already planned
- 71. _____ Bequeath to colleges and universities



Item Extent of
No. agreement

The fund raising process should involve the following in identifying potential sources of gifts:

- 72. _____ Students
- 73. _____ Faculty
- 74. _____ Alumni Office
- 75. _____ President
- 76. _____ Parents of Students
- 77. _____ Board of Trustees (Regents)
- 78. _____ Alumni and Friends of the Institution

Alumni are discouraged from giving to their Alma Mater because of:

- 80. _____ Problematic Business Conditions
- 81. _____ An Uncertain Stock Market
- 82. _____ Contributions to the Church and Other Charitable Organizations
- 83. _____ Campus Unrest
- 84. _____ Lack of Interest
- 85. _____ Lack of Finances
- 86. _____ Lack of Contact

Alumni give to their Alma Mater because of:

- 87. _____ Loyalty
- 88. _____ Tax Considerations
- 89. _____ An Altruistic Impulse
- 90. _____ Confidence in its Strength
- 91. _____ Past Accomplishments of Gifts
- 92. _____ Belief in its Work

The present approximate percentages of total income to public higher education by sources are presented below. Please write in the percentages which in your opinion the identified sources should be contributing to public higher education.

	<u>Presently</u>	<u>Should Be</u>
93. State	39%	_____
94. Federal Government	20%	_____
95. Students	20%	_____
96. Local Tax District	4%	_____
97. Alumni and Friends	4%	_____
98. Foundations	3%	_____
99. Business Corporations	2%	_____
100. Other (Community Groups, Endowment Earnings, etc.)	8%	_____
	<u>100%</u>	

COMMENTS:

APPENDIX B

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

IOWA STATE
UNIVERSITY

Telephone: 515-294-4143

May 29, 1972

Higher education in the seventies is faced with many challenging issues. These issues call for continuous dialogue within the whole of the college or university community. You as an alumnus of Cornell are part of this college or university community and will be interested in its meeting the challenges of the latter part of the twentieth century.

A graduate student in the doctoral program at Iowa State is attempting to determine the attitudes of alumni toward certain topical areas important in higher education. Your responses to the enclosed instrument will provide him with the information needed at this time.

The project is being carried out in cooperation with Cornell College, Drake University and Iowa State University. You have been selected as one of three-hundred alumni from Cornell. Your response is important for the completion of the study and it will make a significant contribution to your Alma Mater. Pretesting of the instrument showed that it will take about ten minutes to complete.

Please complete and return the enclosed instrument at your earliest possible convenience as we hope to be ready for analysis on June 12th. A stamped, self-addressed envelope is provided for this purpose. Although it is necessary to identify each respondent by a code number for follow-up purposes, the information you provide will be held in strict confidence.

If you wish to receive a summary report of the completed analysis you may have it upon request.

Thank you for your cooperation.

Charles R. MacIsaac
Graduate Student

Sincerely,


Milton D. Brown
Associate Professor

CM/MB:bc
Enclosure

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

IOWA STATE
UNIVERSITY

Telephone: 515-294-4143

May 29, 1972

Higher education in the seventies is faced with many challenging issues. These issues call for continuous dialogue within the whole of the college or university community. You as an alumnus of Drake are part of this college or university community and will be interested in its meeting the challenges of the latter part of the twentieth century.

A graduate student in the doctoral program at Iowa State is attempting to determine the attitudes of alumni toward certain topical areas important in higher education. Your responses to the enclosed instrument will provide him with the information needed at this time.

The project is being carried out in cooperation with Cornell College, Drake University and Iowa State University. You have been selected as one of three-hundred alumni from Drake. Your response is important for the completion of the study and it will make a significant contribution to your Alma Mater. Pretesting of the instrument showed that it will take about ten minutes to complete.

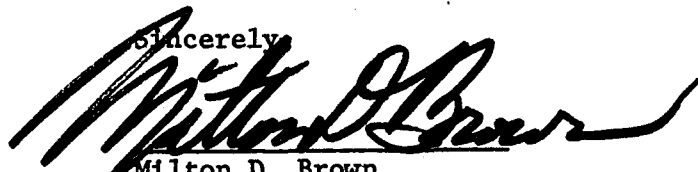
Please complete and return the enclosed instrument at your earliest possible convenience as we hope to be ready for analysis on June 12th. A stamped, self-addressed envelope is provided for this purpose. Although it is necessary to identify each respondent by a code number for follow-up purposes, the information you provide will be held in strict confidence.

If you wish to receive a summary report of the completed analysis you may have it upon request.

Thank you for your cooperation.

Charles R. MacIsaac
Graduate Student

CM/MB:bc
Enclosure

Sincerely,

Milton D. Brown
Associate Professor

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

IOWA STATE
UNIVERSITY

Telephone: 515-294-4143

May 29, 1972

Higher education in the seventies is faced with many challenging issues. These issues call for continuous dialogue within the whole of the college or university community. You as an alumnus of Iowa State are part of this college or university community and will be interested in its meeting the challenges of the latter part of the twentieth century.

A graduate student in the doctoral program at Iowa State is attempting to determine the attitudes of alumni toward certain topical areas important in higher education. Your responses to the enclosed instrument will provide him with the information needed at this time.

The project is being carried out in cooperation with Cornell College, Drake University and Iowa State University. You have been selected as one of three-hundred alumni from Iowa State. Your response is important for the completion of the study and it will make a significant contribution to your Alma Mater. Pretesting of the instrument showed that it will take about ten minutes to complete.

Please complete and return the enclosed instrument at your earliest possible convenience as we hope to be ready for analysis on June 12th. A stamped, self-addressed envelope is provided for this purpose. Although it is necessary to identify each respondent by a code number for follow-up purposes, the information you provide will be held in strict confidence.

If you wish to receive a summary report of the completed analysis you may have it upon request.

Thank you for your cooperation.

Sincerely,



Milton D. Brown
Associate Professor

Charles R. MacIsaac
Graduate Student

CM/MB:bc
Enclosure

IOWA STATE
UNIVERSITY

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

Telephone: 515-294-4143

Several weeks ago you were sent a survey instrument concerning the attitudes of alumni toward certain topical areas important in higher education. If your response is already in the mail, please disregard the remainder of this letter.

In order to carry out the statistical analysis your response as one of the three-hundred alumni selected from your Alma Mater and representative of your era of graduation is important and necessary for the completion of the study.

Could you please find time in the next few days to complete the instrument? We realize that this may be a busy time for you but your cooperation will be greatly appreciated.

Sincerely,



Milton D. Brown
Associate Professor

Charles R. MacIsaac
Graduate Student

IOWA STATE
UNIVERSITY

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

Telephone: 515-294-4143

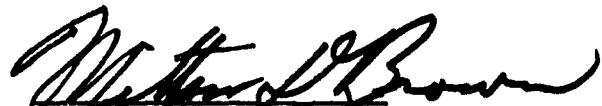
June 28, 1972

Recently a questionnaire concerning the attitudes of alumni on topical areas important in higher education was sent to you. Response has been good and we are pleased that so many have found time in their busy schedules to complete and return the questionnaire. No comparable studies of alumni attitudes in these areas have been completed.

In case the questionnaire did not reach you or you have misplaced it we are sending another copy so that you can express your opinions and have them represented in the study. If you have already mailed your questionnaire, we are grateful. If not, we would appreciate if you would find time within the next week to complete and return the questionnaire.

Thank you for your cooperation.

Sincerely,



Milton D. Brown
Associate Professor

Charles R. MacIsaac
Graduate Student

APPENDIX C

Table 122. Intercorrelations for items 1 through 92

Item no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
1																																			
2	.22																																		
3	.41	.12																																	
4	.34	.01	.38																																
5	.48	.11	.42	.36																															
6	.21	.29	.22	.05	.24																														
7	.35	-.01	.31	.41	.36	.14																													
8	.06	.11	.08	.07	.07	.16	.05																												
9	-.02	.07	.06	.07	.01	.00	.06	.07																											
10	-.13	.05	-.11	-.19	-.14	.01	-.17	.00	-.02																										
11	-.12	.04	-.06	-.07	-.08	-.01	-.06	-.03	-.06	.39																									
12	.27	-.01	.30	.24	.25	.07	.33	-.06	.11	-.06	-.02																								
13	.15	-.03	.16	.15	.14	.08	.24	.02	.00	-.04	-.01	.54																							
14	.06	.08	.09	.02	.08	.17	.04	.07	.10	-.01	-.01	.20	.27																						
15	.02	.19	.04	-.04	.04	.12	-.02	.04	.11	.08	.06	.08	.02	.29																					
16	.14	.10	.15	.11	.14	.12	.05	.06	-.08	-.03	-.06	-.01	.21	.18	.07																				
17	.11	.15	.06	.01	.06	.15	-.05	.06	-.07	.05	-.09	-.13	-.07	.19	.21	.40																			
18	.08	.12	.10	-.02	.05	.07	-.02	-.06	.05	.04	.01	.03	-.04	.12	.46	.13	.29																		
19	.12	.10	.17	.11	.13	.05	.12	-.10	.17	-.05	-.06	.18	.07	.11	.30	.03	.10	.57																	
20	.08	.15	.12	.00	.09	.10	.13	.05	.12	-.02	.00	.14	.08	.22	.24	.09	.12	.26	.49																
21	.03	.10	.10	-.04	.02	.17	.06	.04	.10	.03	.02	.10	.06	.29	.21	.05	.13	.23	.43	.76															
22	.14	.16	.18	.10	.14	.15	.16	.12	.07	-.04	-.04	.13	.17	.11	.13	.12	.08	.10	.17	.25	.17														
23	.22	.03	.20	.18	.17	.09	.20	.01	.06	-.11	.02	.20	.18	.14	-.04	.11	-.04	.03	.14	.08	.07	.26													
24	.09	.09	.14	.15	.16	.07	.20	.03	.20	-.13	-.08	.21	.11	.05	.08	.10	.03	.12	.24	.20	.18	.33	.34												
25	.09	.15	.01	-.02	.04	.04	.02	.01	.09	-.01	-.02	.09	.06	.07	.13	.01	-.11	.06	.09	.10	.11	.08	.12	.12											
26	.12	.10	.14	.07	.09	.07	.14	.00	.10	-.08	-.03	.16	.10	.00	.18	-.02	-.03	.24	.28	.16	.10	.10	.16	.26											
27	.12	.19	.09	.08	.09	.13	.06	.13	.04	-.06	-.04	.03	-.02	.26	.07	.04	.10	.03	.02	.04	.10	.06	.07	.27	.11										
28	.07	.15	.07	.00	.11	.18	.05	.09	.02	-.07	-.07	.03	.00	.25	.07	.04	.15	.08	.08	.15	.19	.06	.02	.06	.02	.09									
29	.11	.15	.09	-.01	.09	.18	.01	.08	.02	-.02	.00	.06	.01	.16	.09	.02	.10	.05	.01	.13	.10	.03	-.04	.05	.01	.09	.36								
30	.12	.23	.03	-.01	.11	.18	.00	.07	.02	-.02	-.04	.01	-.06	.21	.06	.01	.18	.09	.05	.16	.15	.18	.08	.12	.04	.04	.23	.31							
31	.14	.13	.10	.04	.16	.20	.07	.14	.01	-.08	-.08	.02	.06	.12	.04	.13	.17	.03	.03	.13	.15	.13	.10	.10	.04	.08	.35	.35							
32	.10	.05	.00	.11	.07	.07	.06	.07	.07	-.11	-.02	.07	.02	.16	.05	.01	.04	-.04	.02	.10	.11	.02	.11	.01	.07	.05	.24	.24							
33	.14	-.04	.10	.15	.11	.07	.12	.09	.04	-.17	-.11	.09	.09	.21	-.01	.09	.05	-.05	.01	.04	.09	.00	.20	.07	.09	.04	.21	.12							
34	.15	.01	.00	.00	.01	.07	.12	.04	.09	-.07	-.04	.03	.01	.10	.06	.10	.06	.09	.14	.13	.16	.07	.07	.13	-.02	.09	.12	.17							
35	.16	.05	.08	.08	.13	.17	.11	.14	-.02	-.03	-.07	.08	.08	.20	.05	.16	.12	.00	-.04	.14	.16	.14	.12	.10	.11	.06	.26	.24							
36	.12	.20	.10	.00	.11	.21	.07	.10	-.01	-.03	-.07	.05	-.02	.22	.20	.15	.20	.16	.09	.13	.15	.14	.06	.11	.05	.11	.41	.38							
37	.13	.14	.10	.08	.15	.21	.12	.11	.01	-.07	-.06	.02	.23	.17	.12	.12	.11	.06	.03	.06	.06	.11	.10	.00	.12	.37	.35								
38	.16	.19	.12	.14	.21	.13	.13	.03	-.03	-.05	-.06	.13	.05	.24	.18	.11	.10	.13	.11	.07	.08	.10	.09	.15	.06	.12	.32	.28							
39	.12	.13	.08	.12	.15	.09	.15	.03	-.05	-.03	.00	.10	.06	.19	.13	.07	.01	.04	.05	.04	.07	.07	.04	.12	.04	.00	.28	.19							
40	.11	.11	.07	.07	.18	.12	.09	.10	.03	-.02	-.05	.08	.06	.28	.16	.04	.10	.07	.09	.06	.09	.07	.03	.08	.04	.08	.29	.27							
41	.16	.15	.04	.10	.19	.18	.02	.08	-.02	-.02	-.04	.36	.01	.22	.16	.05	.05	.05	.01	.04	.05	.05	.05	.06	.05	.26	.19								
42	.08	.12	.16	.08	.09	.13	.13	.07	.06	-.06	-.03	.15	.10	.12	.09	.07	.03	.07	.16	.21	.21	.13	.08	.17	.11	.18	.21								
43	-.01	.04	-.04	.01	.00	.09	.10	.07	.08	.08	.06	.06	.03	.07	.07	-.01	.02	.03	-.01	.00	.04	.03	-.02	.04	.04	.00	.06	.05							
44	.03	.14	.06	.11	.06	.14	.10	.14	.01	-.02	-.01	.04	.06	.19	.07	.10	.11	-.01	.00	.09	.10	.14	.02	.13	.03	-.02	.23	.20							
45	.07	.09	.16	.02	.08	.15	.13	.10	.20	-.04	.00	.27	.23	.22	.23	.06	-.01	.13	.16	.16	.13	.11	.04	.14	.03	.12	.13								
46	.07	.08	.09	-.02	.04	.10	.09	.08	.13	.00	.02	.17	.26	.21	.19	.07	.01	.14	.12	.11	.10	.11	.06	.12	.04	.12	.14								
47	.06	.06	.02	.02	.07	.11	.06	.10	-.01	-.11	-.04	.03	.07	.25	.07	.06	.04	.03	.02	.04	.05	.07	.05	.09	.02	.03	.32								
48	.04	-.01	.01	-.02	.02	.09	.09	.08	.06	-.02	-.10	.04	.10	.21	.19	.19	.24	.08	.05	.08	.09	.06	-.03	.06	.03	.15									
49	.00	.08	.01	-.03	.02	.14	.06	.10	.11	-.06	.03	.11	.16	.25	.23	.05	.08	.10	.05	.10	.07	.06	-.02	.10	.04	.08									
50	.11	.07	.09	.04	.10	.18	.00	.09	.03	-.02	-.07	.03	.01	.19	.15	.14	.20	.09	.09	.08	.08	.13	.07	.09	-.02	.03									
51	.04	.06	.01	.04	.05	.15	-.02	.17	.04	-.12	-.04	.02	.00	.23	.02	.09	.07	-.03	-.06	.01	.04	.09	.08	.08	.01	-.01									
52	.01	.07	.07	.05	.05	.05	.05	.09	.07	-.16	-.08	.07	.04	.11	.10	.07	.08	.10	.16	.11	.12	.04	-.03	.13	.00	.09									
53	.03	.09	.03	-.02	.04	.04	.07	.02	.02	-.02	-.14	.04	.03	.04	.02	.01	.12	.09	.10	.04	.06	.08	.02	.11	-.03	.06									
54	.02	.04	.04	.17	.06	.04	.08	.07	.05	.02	.06	.00	.02	.06	.06	.04	.05	.04	.12	.04	.04	.09	.06	.07	.09	.00									
55	-.04	-.03	.01	.07	.01	-.02	.04	-.02	.04	-.02	.04	.02	.05	-.02	.07	.05	.01	-.06	-.03	.04	.06	.05	.04	.09	.04	.06									
56	.04	.11	.16	.03	.13	.12	.07	.12	.01	-.07	-.05	.09	.01	.08	.09	-.03	.02	.08	.06	.06	.06	.22	.08	.11	.03	.06									

40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73

56	26	09	14	10	76	34	25	30	29	26	11	00	00	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
55	11	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
54	08	13	13	17	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
53	05	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
52	02	13	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
51	09	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
50	06	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
49	03	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
48	00	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
47	07	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
46	04	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
45	01	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
44	08	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
43	05	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
42	02	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
41	09	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24
40	06	15	13	14	76	34	25	30	29	26	11	00	-36	17	-02	-24	22	37	12	13	31	32	17	35	23	07	-04	16	34	55	13	74	24

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APPENDIX D

Table 123. Results of principal components factor analysis, items 1 through 42 on 13 factors

Item no.	Factor						
	I	II	III	IV	V	VI	VII
1	-.361	.305	.352	.013	.281	-.014	-.106
2	-.291	.023	-.120	-.041	.205	-.059	-.265
3	-.321	.376	.274	-.006	.204	-.020	-.143
4	-.237	.300	.424	-.023	.112	.078	-.002
5	-.375	.284	.357	-.030	.234	-.011	-.089
6	-.349	.064	.009	.085	.209	-.153	-.155
7	-.283	.361	.367	-.006	-.016	.053	-.051
8	-.163	-.049	.040	.136	.081	-.060	-.051
9	-.093	.166	-.078	.033	-.145	.130	-.047
10	.131	-.116	-.232	-.135	-.004	-.352	-.210
11	.118	-.051	-.149	-.133	-.127	-.410	-.355
12	-.270	.441	.292	-.080	-.278	-.210	-.067
13	-.188	.361	.277	-.016	-.228	-.429	.097
14	-.427	.030	-.122	.044	-.074	-.305	.141
15	-.292	.127	-.373	-.237	.097	-.086	-.005
16	-.228	.106	.011	.040	.369	-.219	.227
17	-.247	-.023	-.257	.083	.540	-.145	.214
18	-.261	.280	-.497	-.283	.279	.118	.047
19	-.305	.491	-.393	-.196	-.031	.219	.051
20	-.360	.441	-.495	.115	-.174	-.055	.057
21	-.368	.344	-.531	.147	-.223	-.110	.083
22	-.283	.283	-.027	.051	.014	-.026	-.037
23	-.244	.298	.182	.079	-.084	.045	.024
24	-.306	.350	.015	-.005	-.132	.220	-.001
25	-.149	.130	-.046	-.003	-.155	.061	-.107
26	-.242	.262	-.071	-.077	-.096	.210	-.135
27	-.557	-.306	-.007	.258	-.024	.094	-.342
28	-.531	-.237	-.127	.284	-.013	.076	-.276
29	-.461	-.246	-.063	.215	-.032	-.072	-.104
30	.435	-.162	-.127	.313	-.021	-.015	.039
31	-.514	-.173	.003	.343	.028	-.002	.043
32	-.322	-.101	.034	.301	-.116	.017	.078
33	-.365	-.056	.178	.301	-.109	.036	.322
34	-.259	.022	-.089	.179	-.054	.112	.118
35	-.402	-.070	.055	.254	-.004	-.123	.108
36	-.603	-.236	-.095	-.096	.096	.091	-.074
37	-.650	-.319	.047	-.239	.042	.145	-.025
38	-.655	-.255	.101	-.396	-.058	.034	.061
39	-.564	-.293	.142	-.404	-.154	-.035	.096
40	-.630	-.329	.077	-.270	-.141	-.079	.177
41	-.521	-.284	.108	-.283	-.057	-.061	.108
42	-.433	.015	-.042	-.077	-.125	.104	-.122

Factor						h ²
VIII	IX	X	XI	XII	XIII	
.183	.000	-.062	.001	.102	-.091	.402
.066	.065	.144	.209	.104	-.102	.238
.098	-.070	-.040	-.043	-.028	-.007	.356
.121	-.047	-.060	-.147	.045	.151	.339
.223	-.032	-.036	-.017	-.019	-.018	.390
.059	-.018	.123	.087	.011	-.192	.250
.054	-.115	-.002	-.140	-.027	.021	.352
.010	-.038	.135	.067	.087	-.053	.111
-.018	.081	.007	.043	.053	-.004	.140
.035	.092	.091	-.122	-.003	.023	.229
.079	.171	.159	-.411	.040	.105	.207
-.121	.034	-.229	.024	-.137	-.072	.460
-.343	-.010	-.149	-.109	-.114	-.067	.430
-.151	-.009	-.130	.064	.135	.042	.366
-.059	.182	-.117	.046	.100	-.081	.348
-.238	-.047	.111	.007	.038	.091	.313
-.093	-.015	.005	.001	-.049	.124	.351
-.054	.259	-.243	-.110	-.054	.031	.493
.077	.048	-.181	-.092	-.036	.052	.541
.204	-.281	.073	.024	.008	-.010	.651
.190	-.340	.070	-.022	.109	-.000	.631
-.072	.056	.295	.137	-.094	.116	.253
-.133	.168	.222	-.083	.086	.122	.272
-.144	.157	.336	.094	-.109	.228	.307
-.047	.209	.060	.186	.265	-.121	.178
-.084	.222	-.005	.036	.017	-.133	.243
-.167	-.057	-.232	.053	.210	.292	.532
-.123	-.139	-.221	.033	-.068	.130	.531
.163	.135	-.118	.067	-.260	-.045	.394
.148	.200	.070	.006	-.288	-.009	.390
.047	.106	.047	-.056	-.105	-.087	.414
.088	.136	-.078	-.110	.080	-.053	.271
.005	.159	-.027	-.223	.224	-.073	.308
-.094	.024	.045	-.213	-.019	-.078	.181
.049	.090	.058	.036	.071	.024	.284
-.238	-.140	.093	-.091	-.008	-.149	.537
-.253	-.165	.109	-.212	-.018	-.198	.642
.027	-.041	.033	.020	-.033	.067	.660
.117	-.070	.070	.019	-.018	.140	.599
.204	.079	-.033	.094	-.020	.051	.627
.186	.080	.001	.111	.122	.009	.508
-.129	-.157	.088	-.037	-.082	-.102	.300

Table 124. Results of varimax rotation of principal components factor analysis, items 1 through 42 on 13 factors

Item no.	Factor					
	I	II	III	IV	V	VI
1	.068	.638	-.020	.036	.048	.064
2	.107	.095	.050	.104	-.072	.066
3	.003	.591	.057	.045	.102	.065
4	.080	.596	-.035	-.072	.029	.020
5	.133	.639	.007	.100	.038	.058
6	.055	.215	.084	.192	.045	.138
7	.038	.550	.072	-.031	.143	-.062
8	.031	.054	.037	.066	-.026	.086
9	-.034	.012	.093	-.007	.032	-.154
10	.002	-.184	.016	.009	.012	.045
11	-.026	-.048	.003	-.026	-.004	-.077
12	.047	.368	.058	.035	.611	-.176
13	.009	.172	.022	-.031	.775	.078
14	.233	-.030	.204	.047	.341	.226
15	.161	-.065	.127	-.001	.089	.119
16	.029	.110	.005	-.043	.119	.565
17	.019	.015	.065	.150	-.106	.653
18	.033	.032	.105	.048	-.061	.211
19	.026	.172	.390	-.004	.002	-.044
20	-.013	.066	.802	.107	.055	.022
21	.026	-.010	.850	.055	.049	.039
22	.026	.131	.148	.112	.084	.128
23	.002	.228	-.010	-.055	.109	.018
24	.061	.125	.088	.053	.033	-.011
25	.042	-.038	.016	-.090	.087	-.203
26	-.007	.103	.004	.033	.075	-.207
27	.222	.055	-.013	.165	-.020	.013
28	.123	.026	.114	.357	.023	.036
29	.225	.025	.028	.592	.039	-.018
30	.138	-.025	.081	.613	-.045	.068
31	.142	.076	.045	.465	-.012	.103
32	.085	.054	.049	.248	.013	-.056
33	.135	.115	.000	.089	.050	.042
34	-.021	.007	.106	.129	-.015	.044
35	.174	.079	.077	.238	.070	.141
36	.328	.016	.036	.124	-.016	.160
37	.474	.074	-.057	.060	-.019	.101
38	.736	.131	-.006	.094	.028	.050
39	.780	.098	.029	.061	.023	.007
40	.778	.048	.030	.237	.055	.012
41	.682	.078	-.022	.090	.002	.004
42	.196	.085	.159	.093	.084	-.067

Factor						
VII	VIII	IX	X	XI	XII	XIII
.009	.068	.004	.082	.239	-.003	-.079
.090	.134	.074	-.104	.466	.060	.066
.033	.071	.092	-.025	.108	.059	-.027
.044	-.027	.122	.098	-.105	-.031	-.063
-.010	.032	.043	.014	.133	.004	-.060
.010	.018	.005	.018	.387	.140	.048
-.001	-.043	.164	.074	-.061	.111	-.053
.057	-.118	.038	.084	.225	.055	-.005
.045	.133	.174	.064	.042	.000	-.057
-.032	.033	-.093	-.133	.079	-.043	.481
-.008	.001	-.002	-.014	-.021	-.012	.773
.003	.104	.130	.008	-.056	.023	.004
-.034	-.037	.125	.033	-.013	.014	-.002
.189	.122	.008	.222	.119	.017	.033
.021	.516	.006	.004	.192	.046	.091
-.006	.026	.102	.082	.098	.067	-.032
.061	.199	-.040	.026	.082	.029	-.034
.008	.799	.045	-.053	-.043	.054	.041
.000	.628	.179	-.016	-.121	.048	-.065
.003	.222	.153	.033	.086	.052	-.006
.061	.159	.088	.118	.090	.068	.041
-.013	.033	.444	-.046	.156	.038	-.002
.001	.015	.447	.228	.032	.034	.030
.007	.109	.676	.004	.003	.071	-.088
.048	.161	.186	.137	.322	-.045	-.040
.007	.345	.248	.054	.142	.130	-.063
.808	.003	.039	.189	.146	.148	-.016
.617	.035	-.022	.081	.076	.259	-.059
.192	.041	-.056	.107	.105	.067	.014
.062	.030	.125	.211	.060	.060	.000
.134	-.030	.062	.348	.138	.179	-.050
.131	-.003	-.006	.427	.044	.018	-.029
.024	-.039	.043	.667	-.016	.045	-.105
.020	.080	.101	.304	-.060	.236	-.037
.113	-.072	.093	.323	.163	-.018	-.026
.201	.105	.035	.103	.180	.573	-.030
.131	.063	.007	.145	.086	.705	-.023
.110	.095	.076	.018	.030	.281	-.025
.074	-.029	.066	.011	-.032	.173	.032
.056	.058	-.012	.146	.053	.058	-.028
.046	.053	-.033	.130	.162	.031	-.016
.118	.057	.146	.001	.077	.409	-.034

Table 125. Results of principal components factor analysis, items 43 through 92 on 16 factors

Item no.	Factor							
	I	II	III	IV	V	VI	VII	VIII
43	-.185	.071	-.057	.280	-.013	-.087	.294	-.218
44	-.304	-.129	.104	.184	.094	-.047	-.032	-.059
45	-.510	.530	-.179	.072	-.028	-.209	-.102	.073
46	-.526	.575	-.146	.049	-.065	-.228	-.125	-.007
47	-.536	-.001	.154	.178	-.113	-.229	-.058	-.297
48	-.434	.211	.174	-.130	.056	-.004	-.365	-.001
49	-.566	.382	-.095	.056	-.003	-.171	-.048	-.108
50	-.377	.061	.280	-.206	.062	-.045	-.341	-.189
51	-.545	-.117	.178	.192	-.151	-.187	-.079	-.274
52	-.212	-.045	.060	-.250	.060	.108	-.368	.281
53	-.135	-.142	.177	.419	.148	.138	.045	.241
54	-.179	-.154	-.176	-.405	-.019	-.165	-.034	-.051
55	-.057	-.101	-.055	-.275	.156	-.105	.149	-.020
56	-.312	-.182	-.097	.078	-.184	.079	.001	.191
57	-.123	-.110	.091	-.178	.273	-.221	.056	-.081
58	-.155	-.075	.046	-.237	.307	-.295	-.063	-.007
59	-.276	-.180	-.015	-.151	.021	-.181	-.022	-.065
60	-.270	-.068	-.076	-.124	-.037	.048	-.127	.149
61	-.239	-.299	-.115	-.023	.183	-.150	.115	.173
62	-.177	-.286	-.034	-.151	.130	-.142	.214	.081
63	-.319	-.383	-.072	-.122	.022	-.145	.097	.052
64	-.202	-.203	-.132	-.261	-.111	-.125	.025	-.038
65	-.253	-.159	-.081	-.163	-.151	-.195	.079	-.010
66	-.196	-.144	-.130	-.142	-.050	-.101	.085	.072
67	-.234	-.041	-.244	-.155	.014	.065	.009	.165
68	-.265	-.273	.160	.060	-.075	-.170	.141	.060
69	-.358	-.282	-.246	-.070	-.292	-.040	.027	.097
70	-.396	-.247	-.247	.065	-.338	.059	-.063	.028
71	-.443	-.197	-.308	.090	-.421	.097	-.081	-.008
72	-.520	.505	-.098	-.073	.051	.087	.347	.187
73	-.559	.474	-.039	-.074	.011	.092	.245	.089
74	-.490	-.167	.431	-.020	-.119	.214	.250	-.102
75	-.475	.080	.315	-.329	.068	.334	.035	.122
76	-.605	.265	.047	-.089	.029	.083	.299	.053
77	-.401	-.040	.390	-.340	.045	.213	-.037	-.088
78	-.554	-.224	.411	.086	-.159	.149	.139	-.100
80	-.288	-.146	-.390	.048	.402	.273	-.028	-.308
81	-.318	-.118	-.426	.016	.339	.237	.020	-.384
82	-.189	-.016	-.203	.055	.217	.097	.004	-.045
83	-.201	-.039	-.069	.137	-.039	.174	-.129	-.120
84	-.117	.038	-.059	-.069	-.028	.327	-.096	-.003
85	-.156	-.144	-.118	-.019	.151	.233	-.066	.042

Factor								h ²
IX	X	XI	XII	XIII	XIV	XV	XVI	
-.324	-.009	-.208	.091	-.103	-.035	.039	.004	.299
.057	-.022	-.145	-.018	-.002	.104	-.012	.127	.246
.022	.083	.056	.060	-.077	-.121	.063	.051	.692
-.028	.073	-.003	.104	-.089	-.192	.011	.051	.694
.109	-.035	.244	-.009	-.028	-.143	-.131	-.098	.526
-.105	.045	-.226	.000	-.101	-.144	.018	-.073	.483
.078	.083	.052	.080	.091	.183	.213	-.105	.603
.027	.180	-.130	-.011	.009	.108	.139	.065	.459
.081	-.118	.187	.068	.114	-.018	-.035	-.051	.522
.261	-.110	.326	-.073	.184	-.021	.002	.084	.312
-.173	.478	.069	.018	.305	-.157	.066	-.020	.308
.106	-.217	-.117	-.012	-.058	.062	-.040	.014	.302
-.035	-.137	.096	-.041	.030	-.105	-.056	-.124	.181
.217	.071	-.095	.253	-.089	-.004	-.119	-.130	.299
-.298	-.133	.182	-.213	.152	-.167	.142	.104	.258
-.292	.159	.196	.123	-.026	.196	-.241	.125	.264
-.229	.172	.081	.096	-.010	.172	-.145	-.092	.265
.029	.095	.028	.050	-.023	-.136	-.071	-.123	.219
.075	.107	.043	.129	-.126	.003	.050	.158	.272
.089	.008	.068	.154	-.245	-.036	.207	.009	.260
.021	.073	.017	-.013	-.131	-.046	.058	-.145	.306
.044	-.137	-.259	.087	.263	-.103	.078	-.041	.249
-.010	.074	-.328	.024	.302	-.068	-.165	.081	.281
.070	.018	-.077	.114	.177	-.071	.058	.048	.176
-.149	.035	.145	-.030	-.087	-.109	.011	-.075	.244
.086	-.047	-.058	.063	.037	-.093	.042	.153	.267
-.050	.192	.030	-.141	-.025	.038	-.076	.017	.398
-.103	.017	.057	-.116	-.025	-.001	.111	.030	.404
-.196	.017	.065	-.277	-.080	.134	.036	.113	.472
.087	-.091	.025	-.091	.019	.033	-.112	.138	.693
-.002	-.055	-.010	-.101	-.012	-.008	-.124	.073	.675
.063	-.001	.173	-.026	-.068	-.149	-.086	.026	.570
-.175	.039	-.207	-.103	-.089	-.144	-.065	-.119	.585
.115	.005	.018	.003	.184	.271	.130	-.087	.621
-.032	.150	-.098	-.027	-.062	.170	.076	.000	.524
.084	-.036	.107	.075	.012	.071	.002	.009	.597
.180	.137	-.025	-.039	.018	-.101	-.050	.100	.494
.093	-.005	.007	-.090	.041	-.050	-.047	-.132	.495
.142	.140	.021	.025	-.013	.052	-.021	.027	.186
-.108	-.081	-.123	.078	.046	.073	-.167	.111	.189
-.294	-.316	.166	.323	.074	-.011	.030	.074	.262
.050	.059	-.013	.195	-.079	-.012	.057	.181	.208

Table 125. (Continued)

Item no.	Factor							
	I	II	III	IV	V	VI	VII	VIII
86	-.227	-.005	-.167	.014	-.050	.175	-.014	.047
87	-.446	-.142	.120	.177	.010	.016	-.179	.047
88	-.303	-.088	-.267	-.006	-.183	.147	-.092	-.020
89	-.263	-.088	-.073	.085	.252	.040	.035	.044
90	-.389	-.153	.000	.274	.276	-.214	-.067	.255
91	-.402	-.071	-.060	.289	.188	-.021	-.151	.272
92	-.374	-.198	.202	.309	.218	-.040	-.040	.096

Factor								h ²
IX	X	XI	XII	XIII	XIV	XV	XVI	
-.252	-.155	.055	.224	.075	.015	.053	-.084	.225
.008	-.175	-.133	-.037	-.075	-.097	.014	.146	.362
-.029	.013	.016	-.044	.004	.038	.096	-.018	.239
-.130	-.132	-.032	-.049	.033	.038	.158	-.090	.223
-.015	-.131	-.113	-.200	-.010	.089	-.035	-.070	.399
-.008	-.177	-.032	.029	.044	.125	-.155	-.144	.348
.009	-.221	-.114	-.034	-.092	.022	.044	.007	.389

Table 126. Results of varimax rotation of principal components factor analysis, items 43 through 92 on 16 factors

Item no.	Factor							
	I	II	III	IV	V	VI	VII	VIII
43	.096	.092	.055	.029	-.021	.107	.109	.065
44	.030	.174	.042	.111	.114	.016	.319	.018
45	.357	.076	.112	.046	-.003	.723	.078	.017
46	.326	.119	.079	.030	.044	.789	.040	-.015
47	.056	.682	.122	.078	.029	.292	.143	-.029
48	-.034	.038	.021	.009	.480	.464	.203	-.041
49	.314	.193	.111	.121	.091	.512	.107	-.007
50	-.093	.146	.013	.072	.517	.282	.064	-.046
51	.013	.673	.148	.035	.038	.178	.211	-.015
52	.061	.078	.066	.027	.096	.066	.092	-.020
53	-.029	.047	.037	.061	.051	-.024	.169	.830
54	.015	-.019	.106	.058	.074	.006	.029	-.459
55	.064	.031	-.066	.054	-.002	-.081	-.017	-.159
56	.037	.135	.174	.051	.033	.045	.134	.040
57	-.003	.078	-.020	-.007	.048	.005	.098	.013
58	.023	-.003	-.078	.029	.063	.066	.049	-.022
59	-.032	.114	.164	.022	.120	.029	.040	-.004
60	.004	.035	.158	.066	.133	.150	.049	.050
61	.033	.009	.085	.133	-.043	-.001	.171	.049
62	-.009	.060	.026	.047	.039	-.033	.050	-.094
63	-.068	.136	.234	.079	.098	-.040	.146	-.043
64	-.046	.029	.089	.023	.065	.009	.027	-.152
65	.066	.049	.124	.002	.069	.019	.041	.003
66	.060	.027	.088	.044	-.018	.035	.000	.014
67	.104	-.088	.267	.088	.031	.110	.006	.014
68	.025	.272	.059	-.096	.036	-.045	.180	.056
69	.063	.079	.567	.042	.029	-.006	.023	.033
70	-.005	.142	.615	.038	.017	.058	.093	.016
71	.086	.112	.796	.039	.031	.036	.110	-.049
72	.815	.031	.042	.080	.092	.253	.089	-.040
73	.690	.091	.084	.076	.198	.299	.089	-.038
74	.237	.584	.095	-.006	.392	-.143	.037	.119
75	.251	.021	.050	-.004	.718	.046	.117	.044
76	.614	.175	.077	.090	.251	.110	.121	.034
77	.112	.141	.037	.028	.689	-.040	.006	-.028
78	.166	.594	.141	-.033	.354	-.128	.176	.099
80	.026	.030	.082	.799	.031	.026	.071	.016
81	.043	.087	.131	.744	.008	-.001	.090	-.104
82	.099	-.018	.036	.371	-.009	.060	.071	.053
83	.004	.081	.124	.158	.066	.006	.149	-.019
84	.037	.033	.033	.009	.046	-.004	-.023	-.045
85	-.018	-.059	.047	.269	.102	.000	.047	.053

Factor							
IX	X	XI	XII	XIII	XIV	XV	XVI
.103	-.605	.021	.026	.019	.058	-.036	-.008
-.051	-.068	.053	.076	.042	-.025	-.205	-.017
.019	.002	.015	-.010	.028	-.022	.001	.035
.047	-.071	-.041	.031	.039	-.026	.014	-.028
-.068	-.018	-.020	.003	.101	.020	.086	.013
.051	.042	-.101	.061	.036	-.010	.061	-.058
.028	-.023	-.007	.054	.082	-.021	-.100	.419
-.076	.127	-.027	.084	.148	.064	-.220	.131
.059	.008	-.016	.119	.087	.020	-.051	.115
.096	.724	.028	.029	.007	.055	.026	-.009
-.018	-.016	.034	.012	.047	.002	.003	.008
-.007	.103	.135	.291	.101	.035	.074	.006
.020	.041	.117	.128	.104	.193	.294	.010
.068	.049	.188	.165	-.016	-.483	.089	-.018
.037	.023	.099	.090	.146	.628	.115	-.018
.032	.048	.130	.000	.691	.177	-.002	-.058
.034	-.064	.082	.103	.480	-.004	.087	.086
.055	.163	.079	.107	.058	-.134	.217	-.050
-.033	.042	.479	.113	.170	-.023	-.028	-.066
-.006	-.031	.573	.055	.046	.023	.090	.057
-.085	-.018	.361	.164	.124	-.010	.222	.063
.078	.008	.059	.563	-.053	.038	.067	.078
-.087	-.077	-.047	.602	.130	-.039	-.017	-.087
.041	.055	.173	.368	.019	-.009	.018	.035
.144	.075	.151	.002	.087	.050	.266	-.037
-.049	-.026	.272	.251	-.020	.017	-.091	-.093
-.083	.023	.122	.196	.152	-.102	.078	-.044
.105	-.004	.085	.116	-.040	-.026	.001	.017
.072	-.048	-.038	.023	.027	.003	-.080	-.024
.052	-.001	.016	.029	-.034	-.002	.040	-.040
.062	-.056	-.056	.020	-.003	.006	.074	-.051
.049	-.004	.170	-.017	-.051	-.001	.087	-.137
.121	.002	-.001	.070	-.013	.010	.261	-.131
.069	.008	.070	.134	.027	-.036	-.028	.385
.016	.071	.083	.028	.135	.008	-.074	.103
.107	.003	.151	.045	.001	-.098	-.087	.054
.021	.001	.068	.052	-.010	.033	-.010	-.068
.078	-.081	-.040	.050	-.005	.073	.165	.094
-.025	.040	.092	-.016	.059	-.079	-.027	.043
.212	-.085	-.183	.056	.059	-.110	-.149	-.124
.672	.053	-.043	-.039	.008	.045	-.011	-.046
.205	.084	.227	.008	.001	-.099	-.123	-.102

Table 126. (Continued)

Item no.	Factor							
	I	II	III	IV	V	VI	VII	VIII
86	.061	.005	.156	.039	.007	.059	.072	.029
87	-.010	.226	.154	.040	.188	.145	.426	-.017
88	.033	.032	.414	.157	.049	.086	.029	-.031
89	.061	-.023	.057	.155	.065	.008	.324	.034
90	.086	.029	.093	.045	-.016	.075	.676	.051
91	.114	.065	.074	.080	-.048	.091	.598	.067
92	.005	.212	-.013	.034	.119	.001	.595	.033

Factor							
IX	X	XI	XII	XIII	XIV	XV	XVI
.457	-.060	.000	.059	.035	-.032	.088	.082
.089	.027	.070	.077	-.095	.003	-.113	-.172
.139	.033	.009	.076	-.052	-.064	.003	.080
.145	-.066	.099	.015	-.009	.159	.081	.148
-.122	.018	.081	.042	.093	.056	.063	.036
.136	.098	-.032	.011	.115	-.165	.092	.046
.042	-.056	.144	-.028	-.055	.021	-.053	-.024

APPENDIX E

Table 127. Analysis of variance on item 1

Source of variation	df	MS	F ^a
Colleges (A)	2	2.94	1.02
Donors (B)	3	3.00	1.05
Eras (E)	4	0.72	<1
Interactions:			
A x B	6	2.76	<1
A x E	8	1.85	<1
B x E	12	1.88	<1
A x B x E	23	3.58	1.25
Error	571	2.87	

$${}^a F(.05)_{2,571} = 3.01 > 1.02$$

$$F(.05)_{3,571} = 2.62 > 1.05$$

$$F(.05)_{23,571} = 1.55 > 1.25.$$

Table 128. Analysis of variance on item 2

Source of variation	df	MS	F ^a
Colleges (A)	2	0.22	<1
Donors (B)	3	3.04	1.09
Eras (E)	4	5.19	1.86
Interactions:			
A x B	6	4.54	1.63
A x E	8	1.15	<1
B x E	12	2.74	<1
A x B x E	23	2.21	<1
Error	571	2.79	

$${}^a F(.05)_{3,571} = 2.62 > 1.09$$

$$F(.05)_{4,571} = 2.39 > 1.86$$

$$F(.05)_{6,571} = 2.11 > 1.63.$$

Table 129. Analysis of variance on item 5

Source of variation	df	MS	F ^a
Colleges (A)	2	8.65	2.51
Donors (B)	3	2.13	<1
Eras (E)	4	5.43	1.58
Interactions:			
A x B	6	2.84	<1
A x E	8	1.24	<1
B x E	12	2.93	<1
A x B x E	23	5.04	1.47
Error	571	3.44	

$${}^a F(.05)_{2,571} = 3.01 > 2.51$$

$$F(.05)_{4,571} = 2.39 > 1.58$$

$$F(.05)_{23,571} = 1.55 > 1.47.$$

Table 130. Analysis of variance on item 6

Source of variation	df	MS	F ^a
Colleges (A)	2	1.90	<1
Donors (B)	3	4.40	1.33
Eras (E)	4	1.34	<1
Interactions:			
A x B	6	1.20	<1
A x E	8	0.92	<1
B x E	12	3.85	1.17
A x B x E	23	3.66	1.11
Error	571	3.30	

$${}^a F(.05)_{3,571} = 2.62 > .133$$

$$F(.05)_{12,571} = 1.77 > 1.17$$

$$F(.05)_{23,571} = 1.55 > 1.11.$$

Table 131. Analysis of variance on item 7

Source of variation	df	MS	F ^a
Colleges (A)	2	15.40	2.46
Donors (B)	3	3.80	<1
Eras (E)	4	3.15	<1
Interactions:			
A x B	6	7.49	1.20
A x E	8	7.35	1.17
B x E	12	2.77	<1
A x B x E	23	7.75	1.24
Error	571	6.26	

$${}^a F(.05)_{2,571} = 3.01 > 2.46$$

$$F(.05)_{6,571} = 2.11 > 1.20$$

$$F(.05)_{8,571} = 1.96 > 1.17$$

$$F(.05)_{23,571} = 1.55 > 1.24.$$

Table 132. Analysis of variance on item 14

Source of variation	df	MS	F ^a
Colleges (A)	2	3.09	<1
Donors (B)	3	1.52	<1
Eras (E)	4	4.65	1.19
Interactions:			
A x B	6	6.56	1.68
A x E	8	6.38	1.64
B x E	12	2.05	<1
A x B x E	23	5.77	1.48
Error	571	3.90	

$${}^a F(.05)_{4,571} = 2.39 > 1.19$$

$$F(.05)_{6,571} = 2.11 > 1.68$$

$$F(.05)_{8,571} = 1.96 > 1.64$$

$$F(.05)_{23,571} = 1.55 > 1.48.$$

Table 133. Analysis of variance on item 16

Source of variance	df	MS	F ^a
Colleges (A)	2	3.84	1.81
Donors (B)	3	0.41	<1
Eras (E)	4	0.85	<1
Interactions:			
A x B	6	2.84	1.34
A x E	8	1.27	<1
B x E	12	2.57	1.21
A x B x E	23	2.08	<1
Error	571	2.12	

$${}^a F(.05)_{2,571} = 3.01 > 1.81$$

$$F(.05)_{6,571} = 2.11 > 1.34$$

$$F(.05)_{12,571} = 1.77 > 1.21.$$

Table 134. Analysis of variance on item 19

Source of variance	df	MS	F ^a
Colleges (A)	2	0.45	<1
Donors (B)	3	5.57	<1
Eras (E)	4	9.19	1.31
Interactions:			
A x B	6	2.41	<1
A x E	8	7.34	1.05
B x E	12	9.09	1.30
A x B x E	23	7.43	1.06
Error	571	7.00	

$${}^a F(.05)_{4,571} = 2.39 > 1.31$$

$$F(.05)_{8,571} = 1.96 > 1.05$$

$$F(.05)_{12,571} = 1.77 > 1.30$$

$$F(.05)_{23,571} = 1.55 > 1.06.$$

Table 135. Analysis of variance on item 22

Source of variation	df	MS	F
Colleges (A)	2	0.12	<1
Donors (B)	3	2.28	<1
Eras (E)	4	3.06	<1
Interactions:			
A x B	6	1.92	<1
A x E	8	1.85	<1
B x E	12	3.69	<1
A x B x E	23	5.40	<1
Error	571	5.73	

Table 136. Analysis of variance on item 24

Source of variation	df	MS	F ^a
Colleges (A)	2	6.72	1.53
Donors (B)	3	2.47	<1
Eras (E)	4	7.06	1.60
Interactions:			
A x B	6	5.76	1.31
A x E	8	3.65	<1
B x E	12	4.73	1.08
A x B x E	23	6.97	1.58*
Error	571	4.40	

^aF(.05) 2,571 = 3.01 > 1.53
 F(.05) 4,571 = 2.39 > 1.60
 F(.05) 6,571 = 2.11 > 1.31
 F(.05) 12,571 = 1.77 > 1.08.

*F(.05) 23,571 = 1.55 < 1.58, p<.05.

Table 137. Analysis of variance on item 25

Source of variation	df	MS	F ^a
Colleges (A)	2	8.53	1.35
Donors (B)	3	9.74	1.54
Eras (E)	4	7.96	1.26
Interactions:			
A x B	6	5.50	<1
A x E	8	6.22	<1
B x E	12	4.89	<1
A x B x E	23	5.65	<1
Error	571	6.32	

$${}^a F(.05)_{2,571} = 3.01 > 1.35$$

$$F(.05)_{3,571} = 2.62 > 1.54$$

$$F(.05)_{4,571} = 2.39 > 1.26.$$

Table 138. Analysis of variance on item 26

Source of variation	df	MS	F ^a
Colleges (A)	2	1.83	<1
Donors (B)	3	6.10	<1
Eras (E)	4	5.25	<1
Interactions:			
A x B	6	5.50	<1
A x E	8	3.83	<1
B x E	12	9.95	1.41
A x B x E	2	4.89	<1
Error	57	7.08	

$${}^a F(.05)_{12,571} = 1.77 > 1.41.$$

Table 139. Analysis of variance on item 29

Source of variation	df	MS	F ^a
Colleges (A)	2	1.16	<1
Donors (B)	3	2.54	1.14
Eras (E)	4	3.86	1.74
Interactions:			
A x B	6	2.33	1.05
A x E	8	1.43	<1
B x E	12	2.27	1.02
A x B x E	23	1.83	<1
Error	571	2.22	

$${}^a F(.05)_{3,571} = 2.62 > 1.14$$

$$F(.05)_{4,571} = 2.39 > 1.74$$

$$F(.05)_{6,571} = 2.11 > 1.05$$

$$F(.05)_{12,571} = 1.77 > 1.02.$$

Table 140. Analysis of variance on item 31

Colleges (A)	2	2.90	1.12
Donors (B)	3	3.98	1.54
Eras (E)	4	0.70	<1
Interactions:			
A x B	6	3.22	1.25
A x E	8	3.32	1.29
B x E	12	3.36	1.30
A x B x E	23	1.93	<1
Error	571	2.58	

$${}^a F(.05)_{2,571} = 3.01 > 1.12$$

$$F(.05)_{3,571} = 2.62 > 1.54$$

$$F(.05)_{6,571} = 2.11 > 1.25$$

$$F(.05)_{8,571} = 1.96 > 1.29$$

$$F(.05)_{12,571} = 1.77 > 1.30.$$

Table 141. Analysis of variance on item 35

Source of variation	df	MS	F ^a
Colleges (A)	2	1.82	<1
Donors (B)	3	2.46	1.31
Eras (E)	4	1.15	<1
Interactions:			
A x B	6	1.55	<1
A x E	8	1.49	<1
B x E	12	1.33	<1
A x B x E	23	1.42	<1
Error	571	1.88	

$${}^aF(.05)_{3,571} = 2.62 > 1.31.$$

Table 142. Analysis of variance on item 36

Source of variation	df	MS	F ^a
Colleges (A)	2	3.18	<1
Donors (B)	3	3.55	<1
Eras (E)	4	6.46	1.40
Interactions:			
A x B	6	6.22	1.35
A x E	8	8.25	1.79
B x E	12	7.47	1.62
A x B x E	23	3.85	<1
Error	571	4.60	

$${}^aF(.05)_{4,571} = 2.39 > 1.40$$

$$F(.05)_{6,571} = 2.11 > 1.35$$

$$F(.05)_{8,571} = 1.96 > 1.79$$

$$F(.05)_{12,571} = 1.77 > 1.62.$$

Table 143. Analysis of variance on item 38

Source of variation	df	MS	F ^a
Colleges (A)	2	4.98	2.02
Donors (B)	3	0.95	<1
Eras (E)	4	2.28	<1
Interactions:			
A x B	6	2.32	<1
A x E	8	3.07	1.25
B x E	12	2.69	1.09
A x B x E	23	2.41	<1
Error	571	2.46	

^aF(.05) 2,571 = 3.01 > 2.02
 F(.05) 8,571 = 1.96 > 1.25
 F(.05) 12,571 = 1.77 > 1.09.

Table 144. Analysis of variance on item 39

Source of variation	df	MS	F ^a
Colleges (A)	2	2.92	1.01
Donors (B)	3	1.79	<1
Eras (E)	4	4.60	1.60
Interactions:			
A x B	6	2.58	<1
A x E	8	2.88	1.00
B x E	12	1.55	<1
A x B x E	23	2.87	<1
Error	571	2.88	

^aF(.05) 2,571 = 3.01 > 1.01
 F(.05) 4,571 = 2.39 > 1.60
 F(.05) 8,571 = 1.96 > 1.00.

Table 145. Analysis of variance on item 40

Source of variation	df	MS	F ^a
Colleges (A)	2	0.33	<1
Donors (B)	3	0.68	<1
Eras (E)	4	1.39	<1
Interactions:			
A x B	6	0.68	<1
A x E	8	1.82	<1
B x E	12	1.28	<1
A x B x E	23	2.26	1.22
Error	571	1.85	

$${}^aF(.05)_{23,571} = 1.55 > 1.22.$$

Table 146. Analysis of variance on item 41

Source of variation	df	MS	F ^a
Colleges (A)	2	4.46	2.15
Donors (B)	3	2.00	<1
Eras (E)	4	3.14	1.52
Interactions:			
A x B	6	1.11	<1
A x E	8	3.45	1.67
B x E	12	1.53	<1
A x B x E	23	2.55	1.23
Error	571	2.07	

$${}^aF(.05)_{2,571} = 3.01 > 2.15$$

$$F(.05)_{4,571} = 2.39 > 1.52$$

$$F(.05)_{8,571} = 1.96 > 1.67$$

$$F(.05)_{23,571} = 1.55 > 1.23.$$

Table 147. Analysis of variance on item 45

Source of variation	df	MS	F ^a
Colleges (A)	2	21.30	2.72
Donors (B)	3	12.08	1.54
Eras (E)	4	10.52	1.34
Interactions:			
A x B	6	8.78	1.12
A x E	8	8.15	1.04
B x E	12	9.31	1.19
A x B x E	23	9.59	1.22
Error	571	7.83	

$$\begin{aligned}
 {}^aF(.05) 2,571 &= 3.01 > 2.72 \\
 F(.05) 3,571 &= 2.62 > 1.54 \\
 F(.05) 4,571 &= 2.39 > 1.34 \\
 F(.05) 6,571 &= 2.11 > 1.12 \\
 F(.05) 8,571 &= 1.96 > 1.04 \\
 F(.05) 12,571 &= 1.77 > 1.19 \\
 F(.05) 23,571 &= 1.55 > 1.22.
 \end{aligned}$$

Table 148. Analysis of variance on item 50

Source of variation	df	MS	F ^a
Colleges (A)	2	0.37	<1
Donors (B)	3	2.80	1.85
Eras (E)	4	3.12	2.07
Interactions:			
A x B	6	1.58	1.05
A x E	8	1.67	1.11
B x E	12	1.39	<1
A x B x E	23	0.96	<1
Error	571	1.51	

$$\begin{aligned}
 {}^aF(.05) 3,571 &= 2.62 > 1.85 \\
 F(.05) 4,571 &= 2.39 > 2.07 \\
 F(.05) 6,571 &= 2.11 > 1.05 \\
 F(.05) 8,571 &= 1.96 > 1.11.
 \end{aligned}$$

Table 149. Analysis of variance on item 54

Source of variation	df	MS	F ^a
Colleges (A)	2	11.76	1.98
Donors (B)	3	5.02	<1
Eras (E)	4	10.76	1.81
Interactions:			
A x B	6	3.10	<1
A x E	8	7.24	1.22
B x E	12	5.02	<1
A x B x E	23	5.81	<1
Error	571	5.94	

$${}^aF(.05)_{2,571} = 3.01 > 1.98$$

$$F(.05)_{4,571} = 2.39 > 1.81$$

$$F(.05)_{8,571} = 1.96 > 1.22.$$

Table 150. Analysis of variance on item 56

Source of variation	df	MS	F ^a
Colleges (A)	2	2.28	<1
Donors (B)	3	1.53	<1
Eras (E)	4	1.79	<1
Interactions:			
A x B	6	5.78	1.41
A x E	8	3.99	<1
B x E	12	1.43	<1
A x B x E	23	2.35	<1
Error	571	4.10	

$${}^aF(.05)_{6,571} = 2.11 > 1.41.$$

Table 151. Analysis of variance on item 60

Source of variation	df	MS	F ^a
Colleges (A)	2	7.77	1.37
Donors (B)	3	8.11	1.43
Eras (E)	4	2.52	<1
Interactions:			
A x B	6	6.46	1.14
A x E	8	7.18	1.27
B x E	12	9.24	1.63
A x B x E	23	4.29	<1
Error	571	5.67	

$${}^aF(.05) 2,571 = 3.01 > 1.37$$

$$F(.05) 3,571 = 2.62 > 1.43$$

$$F(.05) 6,571 = 2.11 > 1.1$$

$$F(.05) 8,571 = 1.96 > 1.27$$

$$F(.05) 12,571 = 1.77 > 1.63.$$

Table 152. Analysis of variance on item 66

Source of variation	df	MS	F ^a
Colleges (A)	2	1.41	<1
Donors (B)	3	7.44	1.55
Eras (E)	4	8.36	1.74
Interactions:			
A x B	6	2.85	<1
A x E	8	3.34	<1
B x E	12	4.26	<1
A x B x E	23	4.78	<1
Error	571	4.80	

$${}^aF(.05) 3,571 = 2.62 > 1.55$$

$$F(.05) 4,571 = 2.39 > 1.74.$$

Table 153. Analysis of variance on item 69

Source of variation	df	MS	F ^a
Colleges (A)	2	0.14	<1
Donors (B)	3	2.18	<1
Eras (E)	4	7.31	2.19
Interactions:			
A x B	6	2.20	<1
A x E	8	1.53	<1
B x E	12	3.82	1.14
A x B x E	23	3.22	<1
Error	571	3.34	

^aF(.05) 4,571 = 2.39 > 2.19
 F(.05) 12,571 = 1.77 > 1.14.

Table 154. Analysis of variance on item 72

Source of variation	df	MS	F ^a
Colleges (A)	2	3.87	<1
Donors (B)	3	3.53	<1
Eras (E)	4	7.32	1.02
Interactions:			
A x B	6	7.87	1.09
A x E	8	6.06	<1
B x E	12	3.80	<1
A x B x E	23	7.60	1.05
Error	571	7.21	

^aF(.05) 4,571 = 2.39 > 1.02
 F(.05) 6,571 = 2.11 > 1.09
 F(.05) 23,571 = 1.55 > 1.05.

Table 155. Analysis of variance on item 73

Source of variation	df	MS	F ^a
Colleges (A)	2	12.86	2.20
Donors (B)	3	3.67	<1
Eras (E)	4	4.03	<1
Interactions:			
A x B	6	10.91	1.87
A x E	8	4.83	<1
B x E	12	4.87	<1
A x B x E	23	3.00	<1
Error	571	5.84	

$${}^a F(.05)_{2,571} = 3.01 > 2.20$$

$$F(.05)_{6,571} = 2.11 > 1.87.$$

Table 156. Analysis of variance on item 74

Source of variation	df	MS	F ^a
Colleges (A)	2	0.70	<1
Donors (B)	3	4.36	2.07
Eras (E)	4	2.70	1.28
Interactions:			
A x B	6	0.85	<1
A x E	8	0.69	<1
B x E	12	0.69	<1
A x B x E	23	1.93	<1
Error	571	2.11	

$${}^a F(.05)_{3,571} = 2.62 > 2.07$$

$$F(.05)_{4,571} = 2.39 > 1.28.$$

Table 157. Analysis of variance on item 75

Source of variation	df	MS	F ^a
Colleges (A)	2	1.41	<1
Donors (B)	3	8.56	2.22
Eras (E)	4	4.55	1.18
Interactions:			
A x B	6	3.55	<1
A x E	8	1.41	<1
B x E	12	2.10	<1
A x B x E	23	5.66	1.47
Error	571	3.85	

$${}^a F(.05)_{3,571} = 2.62 > 2.22$$

$$F(.05)_{4,571} = 2.39 > 1.18$$

$$F(.05)_{23,571} = 1.55 > 1.47.$$

Table 158. Analysis of variance on item 80

Source of variation	df	MS	F ^a
Colleges (A)	2	2.22	<1
Donors (B)	3	0.84	<1
Eras (E)	4	6.44	1.41
Interactions:			
A x B	6	5.71	1.25
A x E	8	1.55	<1
B x E	12	2.56	<1
A x B x E	23	5.06	1.11
Error	571	4.57	

$${}^a F(.05)_{4,571} = 2.39 > 1.41$$

$$F(.05)_{6,571} = 2.11 > 1.25$$

$$F(.05)_{23,571} = 1.55 > 1.11.$$

Table 159. Analysis of variance on item 83

Source of variation	df	MS	F ^a
Colleges (A)	2	0.03	<1
Donors (B)	3	11.91	2.26
Eras (E)	4	3.92	<1
Interactions:			
A x B	6	1.60	<1
A x E	8	7.25	1.37
B x E	12	6.28	1.19
A x B x E	23	3.48	<1
Error	571	5.28	

^aF(.05) 3,571 = 2.62 > 2.26
 F(.05) 8,571 = 1.96 > 1.37
 F(.05) 12,571 = 1.77 > 1.19

Table 160. Analysis of variance on item 85

Source of variation	df	MS	F ^a
Colleges (A)	2	0.07	<1
Donors (B)	3	8.34	2.07
Eras (E)	4	2.23	<1
Interactions:			
A x B	6	3.23	<1
A x E	8	6.42	1.60
B x E	12	6.59	1.64
A x B x E	23	3.71	<1
Error	571	4.02	

^aF(.05) 3,571 = 2.62 > 2.07
 F(.05) 8,571 = 1.96 > 1.60
 F(.05) 12,571 = 1.77 > 1.64.

Table 161. Analysis of variance on item 94

Source of variation	df	MS	F ^a
Colleges (A)	2	31.37	<1
Donors (B)	3	105.21	1.32
Eras (E)	4	98.68	1.24
Interactions:			
A x B	6	28.50	<1
A x E	8	78.56	<1
B x E	12	100.10	1.26
A x B x E	23	66.46	<1
Error	490	79.61	

^aF(.05) 3,571 = 2.62 > 1.32
 F(.05) 4,571 = 2.39 > 1.24
 F(.05) 12,571 = 1.78 > 1.26.

Table 162. Analysis of variance on item 95

Source of variation	df	MS	F ^a
Colleges (A)	2	173.33	2.94
Donors (B)	3	118.38	2.01
Eras (E)	4	75.52	1.28
Interactions:			
A x B	6	51.42	<1
A x E	8	63.77	1.08
B x E	12	115.81	1.96*
A x B x E	23	84.80	1.43
Error	490	58.97	

^aF(.05) 2,571 = 3.02 > 2.94
 F(.05) 3,571 = 2.62 > 2.01
 F(.05) 4,571 = 2.39 > 1.28
 F(.05) 8,571 = 1.96 > 1.08
 F(.05) 23,571 = 1.55 > 1.43.

*F(.05) 12,571 = 1.78 < 1.96, p < .05.

Table 163. Analysis of variance on item 96

Source of variation	df	MS	F
Colleges (A)	2	2.64	<1
Donors (B)	3	0.25	<1
Eras (E)	4	4.41	<1
Interactions:			
A x B	6	3.89	<1
A x E	8	3.24	<1
B x E	12	4.27	<1
A x B x E	23	4.91	<1
Error	490		

Table 164. Analysis of variance on item 100

Source of variation	df	MS	F ^a
Colleges (A)	2	2.56	<1
Donors (B)	3	6.62	<1
Eras (E)	4	18.19	2.14
Interactions:			
A x B	6	10.59	1.24
A x E	8	8.99	1.06
B x E	12	19.97	2.35*
A x B x E	23	5.79	<1
Error	490	8.51	

^aF(.05) 4,571 = 2.39 > 2.14

F(.05) 6,571 = 2.12 > 1.24

F(.05) 8,571 = 1.96 > 1.06.

*F(.01) 12,571 = 2.23 < 2.35, p < .01.

APPENDIX F

Table 165. Means and standard deviations of responses on items 1 through 8 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	7.85	1.62	7.63	1.76	7.67	1.68
2	7.94	1.82	8.00	1.62	8.00	1.57
3	7.35	1.85	7.10	1.82	6.77	1.85
4	7.53	1.85	7.02	2.14	7.00	2.18
5	7.37	1.80	7.04	1.82	7.00	1.95
6	7.55	1.75	7.36	1.94	7.40	1.74
7	5.80	2.47	5.58	2.52	5.27	2.50
8	8.68	1.09	8.82	0.66	8.43	1.28

Table 166. Means and standard deviations of responses on items 1 through 8 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	7.49	2.00	7.83	1.40	7.71	1.63	7.75	1.81
2	7.78	1.65	8.07	1.60	7.92	1.82	8.10	1.55
3	6.77	1.99	7.09	1.60	7.13	1.87	7.20	2.01
4	7.30	1.98	7.45	1.85	6.92	2.20	7.05	2.24
5	6.99	2.04	7.27	1.63	7.08	1.85	7.15	2.02
6	7.32	1.71	7.58	1.72	7.26	1.94	7.56	1.80
7	5.50	2.55	5.68	2.39	5.60	2.52	5.32	2.61
8	8.73	1.01	8.70	0.84	8.55	1.29	8.57	1.06

Table 167. Means and standard deviations of responses on items 1 through 8 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	7.61	1.82	7.69	1.49	7.78	1.59	7.78	1.71	7.75	1.83
2	8.00	1.63	8.26	1.36	7.95	1.79	7.97	1.67	7.67	1.84
3	6.61	1.96	7.04	1.77	7.20	2.00	7.13	1.74	7.45	1.64
4	7.30	1.92	7.18	2.16	7.20	1.91	6.78	2.31	7.41	2.09
5	6.86	2.04	7.13	1.78	7.11	1.92	7.22	1.88	7.43	1.61
6	7.59	1.61	7.37	1.91	7.44	1.85	7.41	1.87	7.34	1.83
7	5.74	2.44	5.57	2.53	5.32	2.49	5.48	2.63	5.57	2.46
8	8.66	1.04	8.49	1.33	8.71	1.03	8.75	0.72	8.57	1.09

Table 168. Means and standard deviations of responses on items 9 through 11 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
9	4.57	2.73	4.64	2.88	3.75	2.58
10	3.95	2.26	4.32	2.33	4.54	2.43
11	5.41	2.21	6.00	2.11	5.52	2.29

Table 169. Means and standard deviations of responses on items 9 through 11 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
9	4.79	2.89	4.20	2.62	4.10	2.65	4.25	2.90
10	3.99	2.49	4.11	2.44	4.41	2.23	4.58	2.27
11	5.50	2.31	5.49	2.20	5.77	2.20	5.79	2.19

Table 170. Means and standard deviations of responses on items 9 through 11 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
9	4.68	2.85	4.39	2.88	4.28	2.65	4.01	2.85	4.01	2.47
10	4.64	2.48	4.33	2.37	4.17	2.31	3.97	2.26	4.21	2.32
11	5.75	2.20	5.62	2.33	5.74	2.21	5.56	2.30	5.48	2.06

Table 171. Means and standard deviations of responses on items 12 through 21 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
12	4.75	2.67	4.77	2.69	4.33	2.62
13	6.09	2.36	6.37	2.27	6.41	2.28
14	6.59	1.92	6.36	1.99	6.52	2.08
15	5.70	2.45	5.41	2.59	6.44	2.32
16	7.90	1.53	7.79	1.54	8.06	1.29
17	7.93	1.58	7.96	1.67	8.10	1.45
18	5.37	2.76	5.80	2.70	6.77	2.23
19	4.45	2.62	4.39	2.75	4.48	2.58
20	5.28	2.52	5.08	2.72	4.48	2.47
21	6.01	2.49	5.71	2.74	4.76	2.53

Table 172. Means and standard deviations of responses on items 12 through 21 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
12	4.35	2.82	4.50	2.63	4.75	2.59	4.78	2.67
13	5.86	2.53	6.20	2.26	6.48	2.19	6.53	2.27
14	6.64	2.07	6.47	1.92	6.49	2.05	6.38	1.97
15	5.59	2.73	5.90	2.40	5.93	2.46	6.00	2.41
16	7.98	1.58	7.96	1.32	7.87	1.46	7.89	1.52
17	8.24	1.36	7.98	1.49	7.99	1.56	7.84	1.78
18	5.83	2.64	6.10	2.60	5.97	2.65	6.08	2.63
19	4.14	2.70	4.61	2.60	4.50	2.73	4.40	2.56
20	4.28	2.68	4.97	2.61	5.13	2.52	5.17	2.50
21	5.04	2.66	5.41	2.59	5.71	2.69	5.58	2.60

Table 173. Means and standard deviations of responses on items 12 through 21 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
12	4.61	2.71	4.17	2.37	4.41	2.80	4.70	2.68	5.21	2.66
13	6.13	2.32	5.99	2.33	6.09	2.31	6.46	2.36	6.90	2.09
14	6.72	1.99	6.35	2.03	6.35	2.01	6.34	2.08	6.65	1.86
15	5.99	2.59	5.91	2.50	5.85	2.37	6.12	2.43	5.45	2.50
16	7.81	1.60	7.93	1.35	7.92	1.49	8.03	1.49	7.97	1.30
17	8.12	1.42	8.07	1.49	8.23	1.32	7.96	1.67	7.55	1.86
18	6.20	2.47	6.32	2.57	5.87	2.85	6.28	2.52	5.27	2.61
19	4.83	2.69	4.28	2.64	4.26	2.68	4.56	2.67	4.21	2.52
20	5.24	2.61	4.88	2.51	4.68	2.65	4.62	2.56	5.19	2.58
21	5.81	2.64	5.48	2.51	5.45	2.75	5.13	2.62	5.37	2.66

Table 174. Means and standard deviations of responses on items 22 through 26 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
22	6.21	2.32	6.26	2.41	6.24	2.35
23	7.45	2.02	7.18	2.17	6.87	2.21
24	6.70	2.15	6.53	2.18	6.34	2.06
25	6.23	2.49	5.82	2.48	6.04	2.54
26	5.60	2.48	5.73	2.66	5.78	2.76

Table 175. Means and standard deviations of responses on items 22 through 26 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
22	6.33	2.39	6.11	2.44	6.21	2.39	6.37	2.18
23	6.76	2.29	7.16	2.12	7.27	2.03	7.33	2.19
24	6.40	2.38	6.48	2.03	6.47	2.11	6.71	2.05
25	5.62	2.67	6.03	2.33	6.25	2.47	6.10	2.64
26	5.38	2.62	5.72	2.63	5.76	2.65	5.89	2.66

Table 176. Means and standard deviations of responses on items 22 through 26 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
22	6.39	2.19	6.16	2.54	6.19	2.43	6.39	2.23	6.03	2.39
23	7.05	2.14	7.00	2.32	7.35	2.03	7.16	2.03	7.25	2.22
24	6.81	1.99	6.19	2.28	6.40	2.25	6.58	1.92	6.57	2.15
25	5.74	2.43	5.93	2.53	6.13	2.64	6.03	2.49	6.42	2.44
26	5.82	2.65	5.77	2.53	5.36	2.71	5.88	2.65	5.70	2.65

Table 177. Means and standard deviations of responses on items 27 through 42 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
27	8.15	1.64	7.96	1.76	7.88	1.63
28	7.73	1.79	7.29	1.93	7.42	1.96
29	8.15	1.41	8.02	1.63	8.14	1.42
30	7.37	1.85	7.13	2.14	7.12	1.93
31	7.87	1.64	7.83	1.80	8.05	1.39
32	7.55	1.89	6.92	2.26	7.24	2.13
33	7.52	1.93	6.84	2.35	6.39	2.40
34	5.69	2.62	5.68	2.61	5.16	2.71
35	8.41	1.30	8.30	1.37	8.23	1.39
36	7.16	2.10	6.95	2.25	7.17	2.15
37	7.70	1.72	7.46	1.89	7.78	1.50
38	8.04	1.65	7.88	1.74	8.18	1.31
39	7.99	1.66	7.76	1.78	7.80	1.64
40	8.29	1.39	8.27	1.55	8.35	1.12
41	8.37	1.34	8.08	1.70	8.27	1.28
42	6.31	2.41	5.63	2.63	5.84	2.67

Table 178. Means and standard deviations of responses on items 27 through 42 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
27	8.35	1.41	8.16	1.54	7.79	1.81	7.59	1.80
28	7.89	1.63	7.59	1.84	7.32	2.08	7.19	1.92
29	8.14	1.44	8.16	1.42	7.93	1.69	8.21	1.34
30	7.31	1.96	7.44	1.89	7.16	2.00	6.88	2.04
31	8.11	1.54	8.02	1.50	7.74	1.80	7.87	1.53
32	7.48	2.11	7.55	1.88	7.10	2.26	6.82	2.14
33	7.15	2.30	7.36	1.99	6.72	2.33	6.32	2.45
34	5.95	2.66	5.37	2.80	5.46	2.52	5.32	2.62
35	8.26	1.52	8.48	1.09	8.22	1.43	8.25	1.43
36	7.32	2.10	7.06	2.01	7.13	2.31	6.93	2.23
37	7.85	1.61	7.69	1.53	7.57	1.84	7.54	1.81
38	8.08	1.63	8.08	1.43	7.93	1.72	8.08	1.51
39	7.86	1.79	7.93	1.57	7.89	1.64	7.69	1.83
40	8.36	1.30	8.36	1.30	8.24	1.44	8.27	1.37
41	8.14	1.46	8.36	1.32	8.27	1.41	8.12	1.63
42	5.80	2.58	5.88	2.48	5.99	2.61	5.96	2.71

Table 179. Means and standard deviations of responses on items 27 through 42 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
27	8.39	1.31	8.25	1.39	7.71	1.87	7.73	1.84	7.59	1.85
28	8.15	1.45	7.89	1.72	7.12	1.98	6.99	2.09	7.06	2.02
29	8.15	1.51	8.32	1.30	7.98	1.53	8.18	1.45	7.87	1.61
30	7.49	1.86	7.12	2.08	7.25	1.93	7.41	1.89	6.68	2.06
31	7.94	1.59	7.98	1.54	7.80	1.64	7.92	1.72	7.97	1.57
32	7.25	2.14	7.01	2.26	7.31	2.00	7.43	2.12	7.20	2.03
33	7.11	2.27	6.56	2.45	7.00	2.21	6.87	2.36	6.89	2.14
34	6.15	2.57	5.63	2.57	4.80	2.73	5.65	2.73	5.15	2.50
35	8.17	1.61	8.42	1.26	8.36	1.20	8.32	1.41	8.31	1.22
36	7.40	2.07	7.15	2.17	6.81	2.29	7.09	2.16	6.99	2.14
37	7.99	1.58	7.69	1.72	7.32	1.81	7.64	1.72	7.58	1.65
38	8.26	1.41	7.98	1.73	7.95	1.61	8.02	1.53	7.96	1.57
39	7.95	1.70	7.60	1.85	7.88	1.59	8.10	1.43	7.72	1.83
40	8.25	1.43	8.17	1.57	8.36	1.24	8.30	1.44	8.45	0.99
41	8.27	1.38	7.98	1.81	8.25	1.35	8.34	1.52	8.39	1.05
42	6.58	2.40	5.83	2.62	5.57	2.50	5.65	2.77	5.82	2.56

Table 180. Means and standard deviations of responses on items 43, 44, 53, 54, and 55 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
43	4.97	2.45	5.64	2.55	5.14	2.55
44	8.13	1.33	7.98	1.46	8.10	1.29
53	6.10	2.44	6.23	2.87	6.80	2.53
54	6.53	2.17	6.44	2.58	6.09	2.53
55	4.84	1.98	4.05	2.38	3.97	2.09

Table 181. Means and standard deviations of responses on items 43, 44, 53, 54, and 55 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
43	5.50	2.60	5.47	2.42	5.04	2.48	4.99	2.64
44	8.15	1.17	8.20	1.22	7.91	1.55	8.03	1.41
53	6.37	2.76	6.73	2.39	6.10	2.76	6.35	2.64
54	6.33	2.52	6.52	2.26	6.12	2.54	6.40	2.48
55	3.83	2.26	4.56	2.16	4.26	2.10	4.29	2.21

Table 182. Means and standard deviations of responses on items 43, 44, 53, 54, and 55 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
43	5.90	2.45	5.31	2.55	5.10	2.56	4.89	2.52	4.85	2.45
44	8.43	1.03	8.17	1.17	8.01	1.25	7.74	1.85	7.91	1.37
53	7.04	2.57	6.54	2.73	5.91	2.65	6.35	2.71	6.00	2.34
54	6.44	2.42	6.02	2.53	6.52	2.32	6.03	2.80	6.69	2.03
55	3.99	2.20	4.38	2.26	4.14	2.12	4.08	2.30	4.88	1.94

Table 183. Means and standard deviations of responses on items 45 through 52 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
45	5.25	2.93	5.90	2.74	5.55	2.80
46	5.94	2.78	6.69	2.58	6.56	2.49
47	8.14	1.40	8.19	1.40	8.04	1.48
48	8.18	1.46	8.46	1.54	8.30	1.59
49	6.40	2.27	6.79	2.30	6.66	2.23
50	8.51	1.05	8.43	1.38	8.48	1.23
51	8.18	1.31	8.19	1.39	7.98	1.49
52	6.74	2.58	6.13	2.91	5.91	2.87

Table 184. Means and standard deviations of responses on items 45 through 52 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
45	5.69	2.90	5.56	2.80	5.22	2.86	5.88	2.77
46	6.79	2.51	6.27	2.61	6.11	2.70	6.61	2.64
47	8.37	1.07	8.29	1.22	7.97	1.56	7.89	1.69
48	8.69	1.15	8.27	1.37	8.26	1.61	8.12	1.85
49	6.96	2.03	6.74	2.10	6.25	2.52	6.64	2.30
50	8.71	0.95	8.40	1.26	8.40	1.42	8.47	1.12
51	8.53	0.80	8.27	1.16	7.79	1.80	7.97	1.40
52	6.56	2.72	6.04	2.92	6.15	2.85	6.40	2.70

Table 185. Means and standard deviations of responses on items 45 through 52 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
45	5.78	2.81	5.65	2.89	5.50	2.86	5.76	2.92	5.05	2.65
46	6.68	2.48	6.29	2.75	6.52	2.61	6.61	2.57	5.81	2.70
47	8.33	1.14	8.09	1.43	7.91	1.77	8.28	1.28	7.98	1.43
48	8.42	1.57	8.28	1.45	8.17	1.75	8.39	1.44	8.29	1.44
49	7.09	1.85	6.43	2.29	6.67	2.40	6.80	2.30	5.98	2.40
50	8.69	1.08	8.39	1.25	8.52	1.28	8.44	1.11	8.27	1.40
51	8.37	1.08	8.13	1.38	8.02	1.51	8.25	1.26	7.73	1.69
52	6.10	2.87	6.24	2.75	6.20	3.04	6.37	2.86	6.39	2.51

Table 186. Means and standard deviations of responses on items 56 through 63 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
56	7.17	1.99	7.38	2.00	7.30	1.99
57	5.30	2.55	4.74	2.43	5.07	2.30
58	5.66	2.26	5.04	2.50	4.39	2.52
59	6.18	2.04	6.43	2.21	5.80	2.24
60	4.63	2.31	4.57	2.49	4.92	2.37
61	6.08	2.20	5.73	2.22	6.27	2.01
62	7.28	1.75	6.30	2.03	6.91	1.99
63	6.67	1.95	6.05	2.05	6.03	2.06

Table 187. Means and standard deviations of responses on items 56 through 63 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
56	7.43	1.93	7.21	1.94	7.22	2.06	7.33	2.03
57	5.05	2.42	5.43	2.42	5.10	2.38	4.47	2.43
58	4.56	2.47	5.15	2.50	4.87	2.45	5.37	2.47
59	6.45	2.16	6.18	2.06	5.84	2.19	6.14	2.31
60	5.05	2.38	4.60	2.39	4.79	2.38	4.49	2.40
61	5.61	2.35	5.98	2.16	6.05	2.11	6.44	1.95
62	6.49	2.05	7.02	1.86	6.94	1.88	6.77	2.11
63	6.30	2.05	6.41	1.87	6.16	2.14	6.08	2.11

Table 188. Means and standard deviations of responses on items 56 through 63 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
56	7.35	2.01	7.18	2.01	7.20	1.94	7.22	2.16	7.47	1.85
57	5.52	2.58	5.18	2.22	4.62	2.26	4.60	2.42	5.18	2.54
58	5.06	2.49	4.78	2.49	4.74	2.44	5.01	2.50	5.50	2.47
59	6.34	2.31	5.88	2.26	5.94	2.15	6.38	1.87	6.07	2.23
60	4.71	2.29	4.57	2.26	4.60	2.39	4.91	2.45	4.81	2.60
61	6.18	2.07	5.87	2.24	6.02	2.10	5.95	2.15	6.14	2.22
62	6.88	1.90	6.76	1.93	6.96	1.91	6.54	2.21	7.02	1.89
63	6.79	1.93	6.40	1.95	6.22	2.06	5.80	2.09	5.82	2.05

Table 189. Means and standard deviations of responses on items 64 through 66 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
64	6.10	1.95	6.10	2.24	5.93	2.12
65	6.70	1.77	7.12	1.85	6.65	1.92
66	6.19	2.00	6.27	2.42	6.11	2.13

Table 190. Means and standard deviations of responses on items 64 through 66 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
64	6.57	2.05	6.16	2.09	5.94	2.16	5.60	2.02
65	6.72	2.08	6.75	1.87	6.94	1.83	6.81	1.70
66	5.84	2.29	6.33	2.04	6.13	2.31	6.34	2.11

Table 191. Means and standard deviations of responses on items 64 through 66 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
64	6.06	2.14	5.83	2.20	6.33	2.01	6.05	2.12	5.92	2.03
65	6.95	1.92	6.89	1.81	6.66	1.98	6.64	1.94	6.91	1.60
66	5.99	2.27	5.99	2.21	6.09	2.35	6.34	2.02	6.60	1.97

Table 192. Means and standard deviations of responses on items 67 through 71 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
67	4.76	1.71	4.73	2.11	4.91	1.66
68	7.55	1.60	7.56	1.53	7.34	1.79
69	6.37	1.68	6.43	2.01	6.40	1.78
70	6.48	1.70	6.65	2.15	6.58	1.87
71	6.49	1.76	6.61	1.88	6.76	1.89

Table 193. Means and standard deviations of responses on items 67 through 71 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
67	4.87	2.12	4.86	1.73	4.72	1.79	4.79	1.77
68	7.34	1.64	7.76	1.55	7.58	1.60	7.14	1.74
69	6.58	2.04	6.35	1.78	6.30	1.79	6.45	1.73
70	7.22	1.87	6.63	1.76	6.33	2.08	6.25	1.79
71	7.31	1.77	6.60	1.76	6.46	1.93	6.28	1.78

Table 194. Means and standard deviations of responses on items 67 through 71 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
67	5.21	1.90	4.90	1.65	4.67	1.91	4.59	1.84	4.54	1.75
68	7.53	1.69	7.54	1.56	7.52	1.67	7.35	1.80	7.49	1.45
69	6.75	1.91	6.36	1.74	6.25	1.88	6.15	1.82	6.46	1.70
70	6.97	1.92	6.68	1.87	6.46	1.75	6.13	2.18	6.51	1.72
71	6.88	1.91	6.75	1.83	6.47	1.80	6.36	1.91	6.58	1.74

Table 195. Means and standard deviations of responses on items 72 through 78 by college.

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
72	5.29	2.67	5.57	2.63	5.44	2.71
73	5.83	2.50	6.26	2.33	6.26	2.36
74	8.06	1.32	8.01	1.62	8.12	1.36
75	7.67	1.86	7.73	1.99	7.57	2.04
76	6.37	2.27	6.36	2.38	6.37	2.30
77	8.18	1.24	7.94	1.78	7.75	1.92
78	8.26	1.23	8.02	1.58	8.16	1.31

Table 196. Means and standard deviations of responses on items 72 through 78 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
72	5.31	2.64	5.55	2.73	5.29	2.68	5.56	2.62
73	6.35	2.35	6.12	2.30	5.96	2.49	6.13	2.45
74	8.31	1.17	8.12	1.29	7.99	1.48	7.89	1.70
75	8.04	1.80	7.66	1.84	7.46	2.06	7.58	2.12
76	6.78	2.03	6.36	2.26	6.17	2.49	6.29	2.36
77	8.31	1.25	7.66	1.82	8.02	1.66	7.94	1.80
78	8.44	0.98	8.21	1.22	8.07	1.45	7.93	1.69

Table 197. Means and standard deviations of responses on items 72 through 78 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
72	5.58	2.59	5.04	2.63	5.51	2.60	5.65	2.91	5.37	2.63
73	6.21	2.41	5.88	2.40	6.09	2.42	6.37	2.42	6.06	2.35
74	8.07	1.42	7.91	1.51	7.97	1.52	8.30	1.36	8.11	1.32
75	7.79	2.00	7.50	1.80	7.41	2.12	7.83	1.89	7.75	1.99
76	6.70	2.01	6.25	2.22	6.35	2.45	6.63	2.39	5.83	2.47
77	8.27	1.25	7.99	1.60	7.74	1.84	7.88	1.70	7.80	2.01
78	8.33	1.09	8.12	1.38	8.07	1.45	8.24	1.42	7.95	1.56

Table 198. Means and standard deviations of responses on items 80 through 86 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
80	6.32	2.11	6.15	2.05	6.34	2.20
81	5.36	2.23	5.66	2.20	5.20	2.14
82	5.67	2.29	5.49	2.51	5.78	2.22
83	6.79	2.26	6.80	2.33	6.81	2.28
84	6.52	2.17	6.82	2.13	6.58	2.19
85	7.09	1.97	7.07	2.08	7.06	2.01
86	5.83	2.56	6.08	2.61	5.91	2.51

Table 199. Means and standard deviations of responses on items 80 through 86 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
80	6.26	2.31	6.30	2.04	6.18	2.09	6.36	2.14
81	5.38	2.44	5.63	2.09	5.31	2.18	5.22	2.13
82	5.24	2.53	5.59	2.22	5.58	2.44	6.15	2.12
83	6.95	2.19	7.02	2.27	6.44	2.44	6.84	2.14
84	7.21	1.79	6.74	2.05	6.25	2.37	6.53	2.25
85	6.97	1.85	6.93	2.02	7.01	2.23	7.43	1.86
86	7.06	2.14	5.95	2.60	5.33	2.51	5.75	2.59

Table 200. Means and standard deviations of responses on items 80 through 86 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
80	6.53	2.07	6.45	1.89	6.02	2.27	6.20	2.19	6.10	2.20
81	5.75	2.21	5.70	2.21	5.26	2.25	5.05	2.13	5.11	2.09
82	6.09	2.34	5.74	2.20	5.54	2.46	5.63	2.44	5.13	2.17
83	7.02	2.13	6.85	2.42	6.81	2.25	6.68	2.44	6.56	2.21
84	6.35	2.10	6.50	2.16	6.76	2.00	6.74	2.42	6.93	2.16
85	7.18	1.77	6.97	1.85	7.12	2.09	6.89	2.34	7.20	2.08
86	6.08	2.48	6.10	2.41	5.67	2.68	5.67	2.67	6.14	2.54

Table 201. Means and standard deviations of responses on items 87 through 92 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
87	8.12	1.40	7.94	1.52	8.00	1.37
88	6.43	1.98	6.65	2.22	6.55	1.70
89	5.95	2.13	5.54	2.04	5.81	2.18
90	7.04	1.77	6.43	2.08	6.60	1.95
91	6.25	1.78	6.24	2.13	6.50	1.98
92	7.99	1.40	7.80	1.56	8.10	1.32

Table 202. Means and standard deviations of responses on items 87 through 92 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
87	8.30	1.20	8.11	1.34	7.94	1.49	7.76	1.58
88	6.85	1.80	6.28	1.90	6.34	2.22	6.88	1.78
89	5.87	2.30	6.11	1.81	5.77	2.15	5.24	2.23
90	6.61	1.87	6.96	1.77	6.62	1.96	6.48	2.18
91	6.63	2.03	6.65	1.79	6.10	1.98	5.99	2.05
92	7.98	1.37	8.24	1.03	7.92	1.50	7.65	1.74

Table 203. Means and standard deviations of responses on items 87 through 92 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
87	8.38	1.13	8.02	1.28	7.93	1.55	7.91	1.65	7.74	1.46
88	6.59	1.82	6.54	1.76	6.40	2.11	6.57	2.10	6.61	2.08
89	6.19	2.05	5.89	1.94	5.40	2.22	5.79	2.14	5.48	2.21
90	7.15	1.79	6.81	1.94	6.40	2.10	6.46	1.98	6.53	1.86
91	6.78	1.85	6.46	1.98	6.12	1.94	6.25	2.09	5.97	1.95
92	8.30	1.24	8.11	1.24	7.84	1.48	7.78	1.65	7.72	1.50

Table 204. Means and standard deviations of responses on items 93 through 100 by college

Item no.	College					
	Cornell		Drake		Iowa State	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
93	35.19	10.42	33.89	11.87	39.05	8.40
94	21.37	10.11	20.61	10.82	20.28	8.75
95	18.67	8.45	20.45	9.04	18.97	7.80
96	3.48	2.51	3.07	2.89	3.06	2.53
97	6.61	4.09	6.69	5.19	5.11	2.99
98	4.92	3.35	4.66	3.59	3.74	2.70
99	4.44	3.62	5.26	5.69	3.63	3.29
100	6.60	3.59	6.48	3.65	6.59	3.35

Table 205. Means and standard deviations of responses on items 93 through 100 by donor classification

Item no.	Donor classification							
	Major		Consecutive		Non-consecutive		Non-donor	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
93	35.50	9.61	35.52	9.35	36.78	11.86	37.02	10.71
94	20.00	9.67	21.21	10.46	20.05	9.37	21.46	9.81
95	20.38	8.47	19.52	8.59	19.25	8.37	18.45	8.26
96	2.89	2.66	3.30	2.87	3.17	2.41	3.33	2.59
97	7.72	5.39	5.75	3.26	5.97	4.49	5.31	3.44
98	4.37	3.42	4.28	3.26	4.27	2.55	4.71	3.79
99	4.29	4.21	4.11	3.19	4.58	4.30	4.64	5.58
100	6.50	3.76	6.56	3.23	6.75	3.77	6.39	3.38

Table 206. Means and standard deviations of responses on items 93 through 100 by era of graduation

Item no.	Era of graduation									
	Pre-1930		1930-39		1940-49		1950-59		1960-68	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
93	37.32	9.74	35.81	9.34	36.82	9.34	35.92	11.41	35.09	12.40
94	20.62	8.24	20.06	9.62	20.05	9.24	21.18	10.31	21.84	11.85
95	20.04	8.15	19.95	8.58	18.98	8.04	20.19	9.36	17.44	7.77
96	3.25	2.91	2.95	2.29	3.33	2.51	3.25	2.48	3.21	3.01
97	6.06	4.39	5.94	4.47	5.86	3.32	6.03	4.35	6.55	4.37
98	4.11	2.54	4.49	3.22	4.66	3.38	3.89	2.71	4.87	4.18
99	3.47	2.64	4.11	3.55	4.84	5.94	4.31	3.76	5.37	4.93
100	6.93	3.13	6.98	3.71	6.68	3.63	6.17	3.39	5.94	3.64