ED 029 567

HE 000 623

By-Bayer. Alan W.; And Others
Users' Manual. ACE Higher Education Data Bank.
American Council on Education. Washington. D.C. Office of Research.
Report No-ACE-RR-Vol-4-No-1-1969
Pub Date 69
Note-88p.
EDRS Price MF-\$0.50 HC-\$4.50

Descriptors-\*Educational Research. Educational Trends. \*Higher Education. Institutional Environment. \*Institutional Research. \*Research Methodology. Student Characteristics. Student Development. \*Student Research

Identifiers - \* American Council on Education Office of Research

The American Council on Education's Office of Research has instituted a bank for research in American higher education. data cross-sectional and longitudinal data bank is available to the general community of interested in student characteristics. administrators scholars and development, comparative institutional effects, educational trends and related research questions. The purpose of this manual is to provide a research and policy guide to those who wish to employ the resources of the data bank for their own research interests and objectives. The manual describes the sampling design of the data files. the types of information available. the computer hardware and the system software capabilities, and policy guidelines for using the data bank. On the basis of findings from 2 earlier studies. comprehensive full-scale studies of entering students attending a representative sample of more than 300 institutions were begun in 1966. Since then, new surveys of entering freshmen at these and additional institutions have been made annually, and periodic follow-ups of previous freshman classes have been undertaken. Supplemental information on these students has been obtained from several other sources. Copies of this manual may be obtained from The Office of Research. American Council on Education. 1785 Massachusetts Avenue. NW. Washington DC 20036. (Author/JS)



# USERS' MANUAL ACE Higher Education Data Bank

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE OFFICE OF EDUCATION

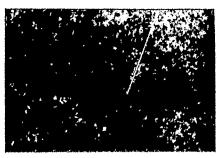
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ALAN E. BAYER
ALEXANDER W. ASTIN
ROBERT F. BORUCH
JOHN A. CREAGER

OFFICE OF RESEARCH

AMERICAN COUNCIL

ON EDUCATION



E 000 (23)

#### American Council on Education

Logan Wilson, President

The American Council on Education, founded in 1918, is a council of educational organizations and institutions. Its purpose is to advance education and educational methods through comprehensive voluntary and cooperative action on the part of American educational associations, organizations, and institutions.

The Council's Office of Research was established in 1965 to assume responsibility for conducting research on questions of general concern to higher education. ACE Research Reports are designed to expedite communication of the Office's research findings to a limited number of educational researchers and other interested persons.

# ACE RESEARCH ADVISORY COMMITTEE

Nicholas Hobbs, *Chairman*Provost of Vanderbilt University
and Director of the Kennedy
Center, Peabody College

Allan M. Cartter Chancellor New York University

John G. Darley Chairman Department of Psychology University of Minnesota

N. L. Gage
Professor of Education and
Psychology
Stanford Center for Research
and Development in Training
Stanford University

Richard C. Gilman President Occidental College

Ralph W. Tyler
Director Emeritus
Center for Advanced Study
in the Behavioral Sciences

Dael Wolfle
Executive Officer
American Association for the
Advancement of Science

Additional copies of this Research Report (Vol. 4, No. 1, 1969) may be obtained from The Office of Research, American Council on Education, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036.



#### **ACKNOWLEDGEMENTS**

The development of a data bank for the study of American college students and academic institutions has been a major goal of ACE's Office of Research for some time. The completion of this manual for users reflects the combined efforts of many people who have prepared a generalized computer program for data accessing, have processed and documented computer tape files for the system, and have given valuable assistance and suggestions for formulating guidelines for making specialized analyses available to the general community of research scholars and administrators concerned with the American system of higher education.

The generalized program for data accessing was adapted from the DATA-TEXT system developed at Harvard University by Arthur S. Couch, David J. Armor, David B. Peizer, and Hugh F. Cline. We are indebted to John M. Shiflett, who prepared a FORTRAN program for sections of the DATA-TEXT system, to Robert J. Panos, Gary Guardia, and Gerald T. Richardson, who reprogrammed this software system for ACE data accessing requirements, and to Penny L. Edgert, who prepared the summary guide to this system for Appendix D; to Gerald T. Richardson, Penny L. Edgert, William F. Mong, and Charles L. Sell, who assumed major roles in processing and documenting data files for the system; and to Janet R. Liechty who assisted in all phases of preparation of the guide. Finally, we should like to express our gratitude and thanks to the presidents, representatives, and students of the cooperating institutions. Without their interest and support this data bank would not have been possible.

AEB AWA RFB JAC

# TABLE OF CONTENTS

	ra	<u>ge</u>
	ACKNOWLEDGEMENTS	
I.	Introduction1	
II.	Sampling Design2	
	A. Representative Sampling2 B. Weighting4	ı
III.	The Files4	ı
	A. Student Files	
IV.	The Data9	)
	A. Student Information Form	<u>2</u> }
v.	ACE Software and Hardware Capability15	<b>,</b>
	A. Software	
VI.	Data Accessing Policy16	5
	A. Procedures for a Request	
VII.	References	L
VIII.	Appendix A: Sampling Design of ACE Surveys23	3
IX.	Appendix B: Freshman Student Information Forms29	)
х.	Appendix C: Follow-up Questionnaires49	)
XI.	Appendix D: Guide to GROSS Data Accessing System.7	L

#### USERS' MANUAL -- ACE HIGHER EDUCATION DATA BANK

Alan E. Bayer Alexander W. Astin Robert F. Boruch John A. Creager

#### American Council on Education

The Office of Research of the American Council on Education has instituted a large-scale data bank for research in higher education. Developed out of the ACE Cooperative Institutional Research Program (CIRP), this cross-sectional and longitudinal data bank is now available to the general community of research scholars and administrators interested in student characteristics, student development, comparative institutional effects, educational trends, and related research questions. The purpose of this manual is to provide a research and policy guide to those who might wish to employ the resources of the ACE data bank for their own research interests and objectives. The following sections describe the sampling design of the data files, the types of information available, the computer hardware and the system software capabilities, and policy guidelines for using the data bank.

On the basis of findings from two earlier studies, comprehensive full-scale studies of entering students attending a representative sample of more than 300 institutions were begun in 1966. Since 1966, new surveys of entering freshmen at these and additional institutions have been made



The study prototype involved approximately 127,000 entering freshmen of 1961 at 248 colleges and universities (Astin, 1965). The pilot study involved 42,000 entering freshmen at 61 institutions in 1965 (Astin and Panos, 1966; Panos and Astin, 1967). The number of institutions originally reported as participating in the pilot study was 62; however two of these institutions merged.

annually, and periodic follow-ups of previous freshman classes have been undertaken. Supplemental information on these students is obtained from other sources, including follow-up data provided by college registrars.

Other institutional data are acquired from college administrative question-naires and other comprehensive periodic reports based on surveys by the U.S. Office of Education, the National Science Foundation, and the American Council on Education.

#### Sampling Design

The data files are of two basic types: student files and institutional files. The former include a data record for each participating student in the Cooperative Institutional Research Program; the latter, based on the institution as the unit of analysis, contain aggregated student body data as well as independently derived administrative and related data. In addition, each of the two basic types of files are divided into those which contain (1) single-year data (i.e., those data collected at one point in time), and (2) longitudinal data (i.e., those data collected at different times).

#### Representative Sampling

The primary sampling unit in the research program is the institution. All institutions of higher education listed by the U.S. Office of Education, including those which are nonaccredited, are defined as part of the population of eligible institutions. The only restrictions on eligibility for participation in the ACE Cooperative Institutional Research Program are that the institution be functioning at the time of the survey, that it admit students without requiring any prior college credits, and that it have the equivalent of an entering freshman class of at least 30 members. Under



these restrictions, the current eligible population consists of approximately 2,300 institutions listed in the U.S. Office of Education's Education

Directory, Part 3.2

A representative sample of 307 institutions was drawn from the population in 1966 (Astin, Panos, and Creager, 1967). Sampling error was controlled through systematic sampling of institutions within the population strata. The stratification dimensions have included institutional type, control, size, selectivity, and affluence. Varying sampling ratios and random selection of institutions within different strata provided increased representativeness of the sampling units. The number of participating institutions was increased to 357 for the 1967 survey (Panos, Astin, and Creager, 1967), and to 435 for the 1968 survey (Creager, Astin, Boruch, and Bayer, 1968), in order to reflect changes in the population. Stratification cells sampling ratios, and the number of participating institutions are shown in Appendix A for each yearly cohort of entering freshmen in the ACE data bank.



<sup>&</sup>lt;sup>2</sup>The eligible population of institutions varies from year to year. In 1968, 2,303 institutions were included in the 'eligible' population. In the first year of the full-scale ACE Cooperative Institutional Research Program (1966) the eligible population consisted of 1,968 of the 2,281 institutions listed in the 1965-66 Education Directory, Part 3. In 1967, 2,187 institutions were eligible for inclusion. See Appendix A for further delineation of the 'eligible' population of institutions.

<sup>&</sup>lt;sup>3</sup>The stratification dimensions have varied from year to year. The 1961 design included only four-year accredited institutions, stratified on the percentage of their baccalaureate recipients who later obtained the Ph.D. degree (Astin, 1965). The 1965, 1966, and 1967 stratification design included institutional type, undergraduate enrollment, and per-student operating budget (Astin and Panos, 1966; Astin, Panos, and Creager, 1967; Panos, Astin, and Creager, 1967). The 1968 design included institutional type, control, academic selectivity of the student body, and per-student expenditure (Creager, Astin, Boruch, and Bayer, 1968). It is planned that the 1968 institutional stratification design will be maintained for future freshmen surveys and that the 1966 and 1967 samples will be restratified to correspond with the subsequent survey designs.

#### Weighting

Sample weights, used to approximate population distributions, are available on all data files. Two basic types of weights are computed:

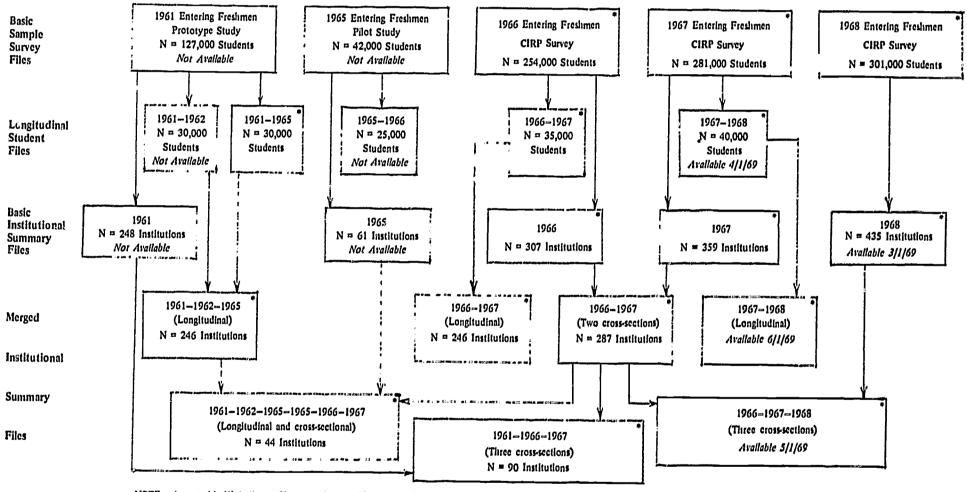
(1) <u>student</u> weights, which are required to estimate student population parameters, and (2) <u>institutional</u> weights, which are required to estimate institutional distributions in the population. These weights are a function of: (1) the institutional sampling ratios employed in each stratification cell; (2) the proportion of sample institutions returning valid data on their entering students; (3) the ratio of the cell sample enrollment to the cell population enrollment (computed separately for each sex); and (4) the proportion of the total first-time, full-time entering freshman class in the sample institution who completed the freshman survey. Further description of these weighting procedures is reported by Creager (1968).

## The Files

All the files are stored on magnetic tapes in the form of either BCD characters or binary words. As resources permit, all BCD files are being converted to binary in order to minimize computer time and processing costs. Twelve separate tape files, described below, have been selected for the data accessing system and are currently available. It is anticipated that four additional files will be available in the system by mid-1969. A flow chart of all ACE files (Figure 1) indicates the basic characteristics of each and its "creation path."

FIGURE 1

Flow Chart of the Relationships of ACE Student and Institutional Files, Including All Files Available Through the ACE Data Accessing System



NOTE: An asterisk (\*) indicates file currently available, or available by mid-1969, for use through the ACE Data Accessing System.

#### Student Files

ERIC

The following three single-year student files are currently available through the ACE data bank for research purposes:<sup>4</sup>

1966 entering freshmen (N = 254,000)

1967 entering freshmen (N = 281,000)

1968 entering freshmen (N = 301,000)

<u>Self-weighted</u> subfiles of 10,000 cases are also available for these files. These subfiles are created by selecting every Nth case, where N is a function of the individual weight. These subfiles are thus designed to approximate a simple random sample of the total population of entering freshmen in the United States. Consequently, analyses of variables from these 10,000 cases approximate population parameters without the need for differential weighting of cases.<sup>5</sup>

Longitudinal files on selected subsamples of students are also available. The follow-up data were obtained from questionnaires mailed to samples of students, including all students from institutions enrolling fewer than 300 freshmen yearly, and to random samples of approximately 300 students

<sup>&</sup>lt;sup>4</sup>The numbers of subjects and institutions reported here differ from the number reported in the annual ACE national norms reports for 1966, 1967, and 1968 entering freshmen. These discrepancies exist because institutions were omitted from the norms group if (a) a low proportion of entering freshmen in the institution completed the survey and the institution did not adhere to stringent criteria for administration of the survey forms, or (b) in the 1966 and 1967 reports, the institution requested to cooperate in the survey but was not part of the original "draw" in the sample strata.

<sup>&</sup>lt;sup>5</sup>Further description of the 10K subfiles and precision estimates for analyses based on the files are presented in Creager (1968). It is recommended that these 10K subfiles be generally used for most analyses in order to minimize machine costs and to circumvent the necessity of repeatedly weighting student response data.

from each institution annually enrolling a greater number of freshmen.

Weights are also available in these files to adjust for these sampling

biases and to compensate for response bias to the follow-up questionnaires.

Longitudinal data are currently available in the following student files:

1961 freshmen - 1965 follow-up  $(N = 30,000)^6$ 

1966 freshmen - 1967 follow-up (N = 35,000)

A one-eighth sample BCD subfile (based on every eighth subject) is also available for the 1966-1967 longitudinal student file.

#### Institutional Files

All institutional files contain extensive information aggregated from the student files. In addition, administrative and related data from other sources are available on these files (see the description in the following section, "The Data," for the types of information contained on each file). The following two single-year institutional files are currently available:

1966 (N = 307 institutions)

1967 (N = 359 institutions)

There is some consistent overlap of institutions in all of the files. However, as the number of points in time for which institutional data are required increases, the number of institutions in common decreases. The longitudinal institutional files currently available are:

1961**-**1962**-**

(N = 246 four-year accredited institutions only; aggregated data for the same students at three different time points. Administrative data and measures from the Inventory of College Activities (Astin, 1968) are also included.)



Sample is from four-year accredited institutions only. The follow-up survey was supported by a grant from the National Science Foundation.

(N = 44 institutions; subsample of)1961-1962above institutions plus freshmen data 1965-1965from 1965, 1966, and 1967 entering classes.) 1966-1967 (N = 90 four-year accredited institu-1961-1966tions; aggregated data from three 1967 separate entering freshman classes.) (N = 287 institutions; entering fresh-1966-1967 men aggregate data from two entering classes plus administrative data.) (N = 246 institutions; aggregate data)1966-1967 from same students at two points in time, plus ICA data (Astin, 1968). Records are reiterated (in proportion to the institutional weights) to correspond with the population distribution of 1,968 institutions so that there are, in fact, 1,968 records instead of 246.)

#### Future Files

By mid-1969, four additional files will be available through the ACE data bank. These include: (1) the 1968 follow-up of 1967 entering freshmen; (2) the 1968 institutional summary; (3) the 1967-1968 institutional longitudinal file; and (4) the 1966-1967-1968 institutional cross-sectional file.

Other files are also planned. In the 1969-70 academic year, a common follow-up instrument will be administered to the former entering freshmen in 1969, 1968, 1967, and 1966. This comprehensive survey will provide one-, two-, three-, and four-year longitudinal data respectively for these undergraduate classes in the ACE sample of institutions. These data will also provide additional student information that will be used to expand institutional files. Tape files will be available in the summer of 1970.

<sup>7</sup>This follow-up of four classes is sponsored by the Carnegie Commission on the Future of Higher Education as part of a collaborative research project.

Other surveys planned for 1969 will involve representative samples of faculty, staff, and graduate students from each of the sample institutions. 8

The survey instruments for each of these groups will differ, but the items on each, and on the student follow-up questionnaire, will overlap considerably. These data will be available late in 1969.

A comprehensive file on the population of American institutions of higher education is in the process of being developed. This file, consolidating the data available from a large number of organizations which collect and report information relating to higher education, will cover curriculum, enrollment, degrees conferred, endowment, support by government agencies, operating budget, administrative practices, faculty characteristics, control, and community demographic characteristics. It is anticipated that this file will be available by March 1, 1969.

#### The Data

The data collected in the ACE Cooperative Institutional Research Program are primarily obtained from students through the annual administration of the Freshman Information Form and subsequent follow-up instruments.

Figure 2 shows the types of information collected through these instruments which are available for each of the CIRP samples (1966, 1967, and 1968).

Some student and institutional data are, however, also obtained from other sources. While response rates are excellent, there is generally a small amount (less than 2 percent) of missing data for any particular item.



Supported by the Carnegie Commission on the Future of Higher Education as part of a collaborative research project.

Figure 2

Check-List of Items Collected in CIRP
Student Information Forms and Follow-up Instruments

Age X X X X X Racial background X X X X X X X Religious background & preference X X X X X X X X X X X X X X X X X X X	Items	tudent	Sample	Enterin 1966	g Colle 1967	ge in: 1968
Recial background	Sex			X*	X	X
Religious background & preference  State of residence, birthplace of student & parents  X X X  X X  Urbanrural background  Family size & ordinal position  Being a twin  Parents' educational level  X X X  Family income  Parents' occupation  Type of secondary school  Rating of high school standards  Rank in high school class  Accomplishments in high school  High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  Chances certain events will occur in future  Attitudes on controversial issues  Activities and behaviors  Attitudes on controversial issues  Concern for financing college  Financial source for first year of college  Financial source for first year of college  Assessment of college environment  Transfer or drop-out status  X** X** X  X** X** X  X**	Age			x	X	X
State of Residence, birthplace of student & parents	Racial background			x	X	X
Urbanrural background  Family size & ordinal position  Being a twin  Parents' educational level  Family income  Parents' occupation  Type of secondary school  Rating of high school standards  Rank in high school class  Accomplishments in high school  High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  Chances certain events will occur in future  Attitudes on controversial issues  Degree aspiration  Concern for financing college  Financial source for first year of college  Financial source for first year of college  Assessment of college environment  Transfer or drop-out status  X X X X X X X X X X X X X X X X X X X	Religious background & preference			X	X	X
Being a twin Parents' educational level  Family income  Parents' educational level  Family income  X  X  X  X  Parents' occupation  Xiviv  X  X  X  Rating of high school  Rating of high school standards  Rank in high school class  Accomplishments in high school  Xiviv  Xiviv	State of residence, birthplace of studen	t & pa	rents	X	X	X
Being a twin  Parents' educational level  Family income  Ax x x x x x x x x x x x x x x x x x x	Urbanrural background			X***	X**	X
Parents' educational level X X X X Parents' occupation X** X X X X X Parents' occupation X** X X X X Type of secondary school X X Rating of high school standards X Rank in high school class X Accomplishments in high school X X X X High school dating practices - X - Degree of high school friendships - X - Average secondary school grade X X X X X Activities and behaviors X X X X X Pre-college study habits X Competencies currently have or would like - X* X X X X X X X X X X X X X X X X X	Family size & ordinal position			X	-	-
Family income <sup>a</sup> Parents' occupation  Type of secondary school  Rating of high school standards  Rank in high school class  Accomplishments in high school  High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Activities and behaviors  Competencies currently have or would like  Chances certain events will occur in future  Chances certain events will occur in future  Attitudes on contreversial issues  Activities on college choice  Other college applications & acceptances  Degree aspiration  Concern for financing college  Financial source for first year of college  Assessment of college environment  Transfer or drop-out status  X**  X  X  X  X  X  X  X  X  X  X  X	Being a twin			X	X	X
Parents' occupation X** X X Type of secondary school X Rating of high school standards X Rank in high school class X Accomplishments in high school X X X X High school dating practices - X X Degree of high school friendships - X X Activities and behaviors X X X X Pre-college study habits X Competencies currently have or would like - X* - X Values (life goals) X X X X Values (life goals) X X X X X Self-rating on selected traits X X X X Influences on controversial issues - X X X Degree aspiration X X X X Concern for financing college Financial source for first year of college Financial source for first year of college Financial source for college psychological climate X X X X X Assessment of college environment X X X X X X X X X X Assessment of college environment X X X X X X X X X X X X X X X X X X X	Parents' educational level			X	X	X
Parents' occupation X** X X Type of secondary school X Rating of high school standards X Rank in high school class X Accomplishments in high school X X X X High school dating practices - X X Degree of high school friendships - X X Average secondary school grade X X X X Activities and behaviors X* X* X Pre-college study habits X Competencies currently have or would like - X* X Chances certain events will occur in future X X X X Values (life goals) X X X X Self-rating on selected traits X X X Influences on controversial issues X X Other college applications & acceptances - X X X Degree aspiration X X X X Field choices X X X X Assessment of college psychological climate X X X X Assessment of college environment X X X X X Transfer or drop-out status X X X X X	Family income a			X	X	X
Rating of high school standards  Rank in high school class  Accomplishments in high school  High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  Chances certain events will occur in future  X X X  X X  X X  X X  X X  X X  X X	Parents' occupation			X***	X	X
Rank in high school class  Accomplishments in high school  High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  X X X  X  X  Y  Y  Y  Y  Y  Y  Y  Y  Y  Y  Y	Type of secondary school			X	-	-
Accomplishments in high school  Accomplishments in high school  High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Activities and behaviors  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  X X X  X  X  Yalues (life goals)  Self-rating on selected traits  Attitudes on controversial issues  Attitudes on controversial issues  Other college applications & acceptances  Degree aspiration  Concern for financing college  Financial source for first year of college  Financial source for first year of college  Assessment of college psychological climate  X* X  X  X  X  X  X  X  X  X  X  X  X  X	Rating of high school standards			-	-	X
High school dating practices  Degree of high school friendships  Average secondary school grade  Activities and behaviors  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  X X X  X  Yalues (life goals)  Self-rating on selected traits  Attitudes on controversial issues  Attitudes on college choice  X X X  Influences on college choice  X X X  Concern for financing college  Financial source for first year of college  X X X  Assessment of college environment  X* X  Transfer or drop-out status	Rank in high school class			-	-	X
Degree of high school friendships  Average secondary school grade  Activities and behaviors X  Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future X  Values (life goals) X  Self-rating on selected traits  Attitudes on controversial issues X  Influences on college choice X  Degree aspiration  Concern for financing college  Financial source for first year of college X  Assessment of college environment  Transfer or drop-out status  X  X  X  X  X  X  X  X  X  X  X  X  X	Accomplishments in high school			X	x	X
Average secondary school grade  Activities and behaviors   Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  X X X X X X X X X X X X X X X X X X X	High school dating practices			-	X	-
Activities and behaviors Secondary formers and behaviors Secondary for an experiment Secondary	Degree of high school friendships			-	X	-
Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  X X X  Values (life goals)  X* X  Self-rating on selected traits  Attitudes on controversial issues  Influences on college choice  X X X  X  Coher college applications & acceptances  Prinancial source for first year of college  X X X  Career choices  X X X  X  Assessment of college psychological climate  X* X  Transfer or drop-out status  X* X  X	Average secondary school grade			x	X	X
Pre-college study habits  Competencies currently have or would like  Chances certain events will occur in future  X X X  Values (life goals)  X* X  Self-rating on selected traits  Attitudes on controversial issues  Influences on college choice  X X X  X  Coher college applications & acceptances  Prinancial source for first year of college  X X X  Career choices  X X X  X  Assessment of college psychological climate  X* X  Transfer or drop-out status  X* X  X	Activities and behaviors b			X*	X*	X
Chances certain events will occur in future XXXXX  Values (life goals) XXXXX  Self-rating on selected traits XXX  Attitudes on controversial issues	Pre-college study habits			-	-	X
Values (life goals) <sup>d</sup> Self-rating on selected traits  Attitudes on controversial issues <sup>b</sup> Influences on college choice <sup>e</sup> X  Other college applications & acceptances  Degree aspiration  X*  X  X  Concern for financing college  Financial source for first year of college <sup>f</sup> X*  X*  X  X  Career choices <sup>h</sup> Assessment of college psychological climate  Assessment of college environment  X*  X  X  X  X  X  X  X  X  X  X  X  X	Competencies currently have or would like	:e		-	X*	-
Self-rating on selected traits  Attitudes on controversial issues  Influences on college choice  X  X  X  X  Other college applications & acceptances  Degree aspiration  X  X  X  X  Concern for financing college  Financial source for first year of college  X  X  X  X  X  X  X  X  X  X  X  X  X	Chances certain events will occur in fut	urec		X	x	X
Attitudes on controversial issues backers and a succession of college choice applications & acceptances as a complex of college applications & acceptances are succession as a complex of college application and the succession are succession as a complex of college application and the succession are succession as a complex of the succession and the succession are succession as a complex of the succession and the succession are succession as a complex of the succession are succession as a complex of the succession and the succession are succession as a complex of the succession are succession. The succession are succession are succession are succession as a complex of the succession are succession.	Values (life goals) <sup>d</sup>			X*	x	X
Influences on college choice XXXXX  Other college applications & acceptances - XXX  Degree aspiration X* XX  Concern for financing college XXXX  Financial source for first year of college XXXX  Field choices XXXX  Career choices XXXXX  Assessment of college psychological climate X* XXXX  Transfer or drop-out status X** XXXX  XXXXXXXXXXXXXXXXXXXXXXXXXXXX	Self-rating on selected traits			X¾	-	-
Influences on college choice XXXXX  Other college applications & acceptances - XXX  Degree aspiration X* XX  Concern for financing college XXXX  Financial source for first year of college XXXX  Field choices XXXX  Career choices XXXXX  Assessment of college psychological climate X* XXXX  Transfer or drop-out status X** XXXX  XXXXXXXXXXXXXXXXXXXXXXXXXXXX	Attitudes on controversial issues			-	X%	X
Degree aspiration X* X X  Concern for financing college X X X  Financial source for first year of college X X X* X  Field choices X X X* X  Career choices X X X* X  Assessment of college psychological climate X*  Transfer or drop-out status X** X* X				X	X	X
Concern for financing college X X X X  Financial source for first year of college X X* X* X  Field choices X X X* X  Career choices X X X* X  Assessment of college psychological climate X*  Transfer or drop-out status X** X* X	Other college applications & acceptances	5		-	X	X
Financial source for first year of college XX	Degree aspiration			X*	x	X
Field choices X X* X* X  Career choices X X* X X  Assessment of college psychological climate X*  Assessment of college environment X*  Transfer or drop-out status X** X	Concern for financing college			X	x	X
Field choices X X* X* X  Career choices X X* X X  Assessment of college psychological climate X*  Assessment of college environment X*  Transfer or drop-out status X** X	Financial source for first year of colle	egef		X*	Х¾	X
Assessment of college psychological climate $X^*$ Assessment of college environment $X^*$ Transfer or drop-out status $X^*$ $X^*$				X	X*	X
Assessment of college environment X*  Transfer or drop-out status X** X	Career choices h			Х¾	X	X
Transfer or drop-out status X** X* X	Assessment of college psychological clim	nate		Х¾	-	-
Transfer of drop out boatds	Assessment of college environment			X¾	-	-
Average first-year college grade X** X** -	Transfer or drop-out status			***	Χ¾	X
	Average first-year college grade			X**	X**	-

#### Figure 2 (continued)

#### Check-List of Items Collected in CIRP Student Information Forms and Follow-up Instruments

Items	Student	Sample	Entering 1966	_	in: 1968
Amount of college completed after one	year		X**	X**	-
If not full-time second year student,	reason f	or stat	tus X**	X**	-
Place of residence at college			$\chi$ ***	X***	-
Distance from college residence to cla	ıss		-	Xxx	-
Presence of college roommate			-	X**	-
Field of study of acquaintances			-	X**	-
Earned income in college			rereX	-	-
Amount of opportunity for specified ac	tivities				
in college <sup>i</sup>			yeye X	$\star\star\star$	-
Accomplishments and experiences in col	.1ege <sup>b</sup>		Х**	Xxxx	-
Evaluation of classroom experiences in		ield <sup>j</sup>	X2,c2,c	'nκκχ	-
Membership in college organizations			767¢X	rest X	-
Frequency of use of college counselors	Ъ		X**	Xxxx	-
College policy in various activities			$\gamma_{e,r}$	-	-
Overall evaluation of college			Xxx	X**	-

<sup>\*</sup>Item also repeated in the same or modified form at time of one-year follow-up. Thus, these data are basically test-retest items.



<sup>\*\*</sup>Item collected at time of one-year follow-up; available only on longitudinal files currently in data accessing system. It is also planned to repeat most of these same items in the 1969 follow-up of the 1968 sample.

<sup>&</sup>lt;sup>a</sup>Includes nine categories each year, and an additional category, "I have no idea," in 1967.

b Major variations in lists for each sample.

 $<sup>^{</sup>m c}$ Includes 15 items in 1967 and 1968; only item on chances for marriage in 1966.

d Seventeen items on importance of achievements common to all three samples; item on "developing a meaningful philosophy of life" only in 1967 and 1968.

<sup>&</sup>lt;sup>e</sup>Thirteen common influencial sources listed in 1967 and 1968; 1966 form is different and lists 7 response categories.

Lists level of support from each of 4 sources in 1967 and 1968; 1966 form lists 9 sources.

EList of 66 major fields; responses indicate first, second, and least appealing choices.

h 1966 form includes first, second, and least appealing choices; 1967 and 1968 form only has the "probable career occupation."

Ten items common to both 1966 and 1967 follow-up surveys; four additional items relating to course offerings included for 1967 sample.

jFourteen items common to both 1966 and 1967 follow-up surveys; seven additional items included for 1967 sample.

## Student Information Form

The Freshman Information Form has two functions: first, to obtain standard data for immediate informational purposes; and, second, to obtain student input data for research purposes. Thus, the form contains relatively standard biographic and demographic items which are repeated with each new entering class (sex, race, religion, state of birth, parents' income and occupation, high school record, and so on), but it also includes items relating to educational and vocational plans, self-ratings, achievements, skills, values, interests, preferences, competencies, aspirations, and behavior. A number of these last items are more research-oriented ones which can be modified periodically to satisfy a wide range of research concerns. controlled variation of the questionnaires in successive years represents a compromise between the requirements of standardization and comparability of obtained information, on the one hand, and, on the other, the desirability of maintaining flexibility to accommodate changing research interests and tactics. Copies of the Freshman Information Forms for each freshman class in the ACE data bank are shown in Appendix B.

# Follow-up Information

Follow-up information on representative samples of the surveyed freshmen are obtained from two sources: (1) directly from the students, and (2) from registrars' report forms. Specifically, the registrar reports the student's SAT and ACT scores (if available), his cumulative grade point average for the freshman year, and on whether he has re-enrolled at the institution for his second year of study.

Student follow-up information consists largely of post-tests on the items administered previously in the Freshman Information Form. Additional



items cover the student's experience at his institution during the freshman year, including his perception of the college environment. Information collected in the follow-up forms can also be used to determine and monitor trends in student attrition, rates of transfer, career choices, and plans for pursuing further training. Copies of the three follow-up forms which have already been administered to former freshmen are shown in Appendix C.9 Institutional Information

The institutional files are based on aggregated data from the entering student questionnaires, the student follow-up items relevant to institutional experiences, and college data derived from independent sources. Thus, each institution is characterized by its demographic and administrative traits, the characteristics of its students, and its environmental milieu. A fairly complete array of the types of institutional environmental variables available on these files is shown in Figure 3.

Additional descriptions of the data collection procedures and item specification can be found in the  $\underline{ACE}$  Research Reports listed on the back of this booklet.

#### Data Specifications

File specifications, including file layout, variable identification, and distributions on each variable, are available for each file in the ACE data bank. <sup>10</sup> The researcher who anticipates using these data should verify that the information he requires is available by checking the items shown in Figures 2 and 3 and in the appropriate questionnaires shown in the appendices. Once the researcher has determined which file he requires,



 $<sup>^9{</sup>m The~1962~follow-up}$  data for the 1961 freshmen and the 1966 follow-up data for the 1965 freshmen were obtained only from the registrars' report form.

 $<sup>^{10}{</sup>m It}$  is anticipated that the documentation of GROSS binary tapes for all files in the ACE data bank will be published by April, 1969.

#### Figure 3

# Environmental Variables Used in the ACE Program of Longitudinal Research

- Administrative Characteristics I
  - Sex (men's, women's, or coed) Α.
  - Type (university, liberal arts college, teachers college, or В. technical institution)
  - Control (private, private-nonsectarian, Protestant, or Catholic) **C**.
  - Geographic region
  - E. Size
  - F. Affluence or wealth
  - G. Selectivity
- Environmental Stimulus Factors\* II
  - The Peer Environment Α.
    - Competitiveness versus cooperativeness 1.
    - Organized dating 2.
    - Independence
    - 4. Cohesiveness
    - Informal dating 5.
    - 6. Femininity
    - Drinking versus religiousness 7.
    - Musical-artistic activities 8.
    - 9. Leisure time
    - 10. Career indecision
    - 11. Regularity of sleeping habits
    - 12. Use of the library
    - 13. Conflict with regulations
    - 14. Student employment
    - 15. Use of automobiles
  - The Classroom Environment В.
    - Involvement in the class 16.
    - Verbal aggressiveness 17.
    - 18. Extroversion of the instructor
    - Familiarity with instructor 19.
    - Organization in the classroom 20.
    - Severity of grading 21.
  - The Administrative Environment C.
    - Severity of administrative policy against drinking 22.
    - Severity of administrative policy against aggression 23.
    - Severity of administrative policy against heterosexual activity 24.
    - Severity of administrative policy against cheating
  - The Geographic Environment and Living Quarters D.
    - Spread of campus 26.
    - Friendliness of the dorm counselor or housemother 27.
- III The College Image\*
  - Academic competitiveness 1.
  - Concern for the individual student 2.
  - School spirit 3.
  - Permissiveness 4.
  - Snobbishness 5.
  - Emphasis on athletics 6.
  - Flexibility of the curriculum 7.
  - Emphasis on social activities 8.

\*From the Inventory of College Activities (ICA) reported by Astin (1968).



he should write to the Office of Research, requesting a copy of the documentation of the file and specifying the particular file type (student or institution) and cohort (year). Such documentation is necessary in order to prepare the "set-up" (control) cards which must be submitted with each request for analyses (see below).

# ACE Software and Hardware Capability

The Office of Research of the American Council on Education has developed a highly generalized computer program "package" for data processing and analyses. This software system is designed to run on some of the most advanced computing machinery now available. Both the software and hardware capabilities will be subject to future modification and up-grading to accommodate more complex requests for analyses and more rapid processing of data files.

#### Software

The ACE computer programmed data accessing system (GROSS) is currently operational for limited research strategies. The present capabilities of this software "package" involve three major operations: (1) recoding and redefinition of variables; (2) n-dimensional cross-tabulations (including frequencies and percentage distributions); and (3) summary statistics and nonparametric statistics based on distributional results. An overview of the capabilities and limitations of GROSS, together with a description of the necessary control card set-up for simple problems, is given in Appendix D. Although an automated data accessing system such as this one requires the potential user to fit his special requests to the available file arrangement and software, it has the advantage of permitting easy and rapid access to the files and of requiring the user to define his requests in very explicit terms.



The researcher intending to use the ACE data bank should provide the appropriate GROSS control cards required for his particular objectives. The complete GROSS manual, which specifies control card set-up, is available on request from the ACE Office of Research. The summary description and instructions provided in Appendix D should, however, be sufficient for most data accessing needs.

Modifications of the GROSS system, including preparation of subprograms and subroutines, is now underway. By late 1969, the ACE data accessing system should be able to accommodate requests for match/merge of ACE files, correlation matrices, stepwise regression analysis, factor analysis, and other related statistical calculations.

## Hardware

All analyses are performed on equipment available through a subcontractual arrangement with Control Data Corporation (Rockville, Maryland, Data Center). All computer analyses are coordinated by ACE, and the hardware used in fulfilling a particular request is determined by ACE staff, commensurate with the objectives of providing expedited turn-around time for completion of work requests and of keeping computer costs at a minimum. The following hardware configurations are utilized: CDC 160A, 3200, 3600, 6600 computers, and related peripheral equipment.

#### Data Accessing Policy

Once the researcher has determined which file in the ACE data accessing system he wishes to use, he should write to the ACE Office of Research for the appropriate file documentation. This information is necessary in order to prepare the materials needed in submitting a data accessing request. This section describes these materials and the ACE procedures for determining



time and cost estimates for completion of the request. Only requests which meet these specifications will be considered; and each request must involve only one tape file and one machine pass. All analyses will be in the form of computer print-out; no punch cards or magnetic tapes are provided as a final output mode.

#### Procedures for a Request

Because the personnel resources of the ACE Office of Research are limited, only those research problems which demand minimal staff involvement can be accepted. REQUESTS FOR ANALYSES SHOULD CONFORM TO THE LIMITATIONS OF THE EXISTING AVAILABLE FILES AND TO THE GROSS SYSTEM. ALL REQUESTS SHOULD BE ACCOMPANIED BY GROSS CONTROL CARDS.

In addition to the GROSS control cards, the user should provide 25 copies of a one-page summary of his research plans. This abstract should contain: (1) name and address of the investigator; (2) an outline of the proposed analyses, including a listing of all variables; (3) an enumeration of the hypotheses (if any); and (4) a statement of the research objectives. These abstracts will be periodically added as an appendix to future issues of this manual in order to reduce duplication of efforts by subsequent users. A copy of any computer print-out which is provided by ACE will be maintained by the data library of the Office of Research. Users should also provide the data library of the Office of Research with four reference copies of any written document which is based, wholly or in part, on data derived from the ACE data bank.

A completed copy of the User Request Form (Figure 4) must also accompany the abstract and GROSS control cards. The request will be checked for consistency and, if no discrepancies are apparent, ACE will proceed with debug-



# Figure 4

# ACE DATA BANK USER REQUEST FORM

		Date	:	
Name of Responsible Investigator:		(please print or type)		
Institutional Affiliation:				
Address:				
(City)	(	State)	(zip)	
Institutional Phone Number:	(area code)	(number)	(ext.)	
Tentative Title of Study:				
Name of ACE Tape File To Be A  (one file only):	nalyzed			
Number of Gross Control Cards S	ubmitted (one r	un only):		
Estimated Number of Separate Ta				
(To be filled out by A			ntrol cards)	
Control Card Information Agrees	with Estimate o	f Number of Tab	les: Yes	No
Estimated Number of Pages of Pri	int-Out:		_	
Cost of Debugging: (Fee) \$10	00			
(Machine Charges)				
(Total Due)				
Estimated Total Cost of Analyses	:		_ <del></del>	
Estimated Completion Date:				

Return this form, with a one page abstract of intended analyses (25 copies) and a set of GROSS control cards to: Director, Data Bank Services, Office of Research, American Council on Education, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036.



ging of the GROSS control cards. Charges for debugging will then be made (see the following section, "Charges," for estimated costs) and ACE will submit to the investigator estimates of the number of pages of print-out, the cost of analyses, and the estimated completion date. Upon receipt of authorization by the investigator to proceed, ACE will complete the analyses.

Without exception, all data analyses will be provided as print-out and only in statistical form. ACE practice is to maintain institutional and student identifying information in completely separate, bonded files. These files are not available for analyses; they are unlocked only to print mailing labels for follow-up studies. Follow-up information is linked with prior information by means of an arbitrary student I.D. number which is coded on the follow-up questionnaire. In the event that data additional to that already available on tape file is desired, researchers are encouraged to provide the Staff of the Office of Research with suggested items which will be considered for inclusion in a future follow-up or freshman survey form. Charges

Upon receipt of the User Request Form, the GROSS control cards, and 25 copies of the abstract, ACE will check for discrepancies and, if there are no inconsistencies, proceed with the GROSS control card debug. A standard setup fee of \$100 is charged to defray administrative and personnel costs for this service. The costs for computer time in debug will be added to this fee. Machine time for each separate debug run is approximately \$30. The number of runs will depend upon the complexity of the request and the care with which the GROSS control cards are prepared. For relatively simple problems one debug run should normally suffice.



The charges for the analyses are based on the amount of machine time used. These charges will be billed on a machine-time cost-reimbursable basis, plus a 25 percent fee added to help defray the costs of improvements in file management, file development, and data accessing capabilities. Costs for machine time are directly related to the type of computer used, the number of calculations requested, the sample size on file (record length and number of records), and the form of the tape file.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Please address all inquiries to:

DIRECTOR, DATA BANK SERVICES
OFFICE OF RESEARCH
AMERICAN COUNCIL ON EDUCATION
1785 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20036



# References

Astin, Alexander W. <u>Who Goes Where to College</u> ? Chicago: Science Research Associates, 1965.
. The College Environment. Washington: American Council on Education, 1968.
; and Panos, Robert J. "A National Research Data Bank for Higher Education," The Educational Record, 47: 5-17; 1966.
; and; and Creager, John A. "National Norms for Entering College FreshmenFall 1966," <u>ACE Research Reports</u> , Vol. 2, No. 1, American Council on Education, 1967.
Creager, John A. "General Purpose Sampling in the Domain of Higher Education," ACE Research Reports, Vol. 3, No. 2, American Council on Education, 1968.
; Astin, Alexander W.; Boruch, Robert F.; and Bayer, Alan E., "National Norms for Entering College FreshmenFall 1968," ACE Research Reports, Vol. 3, No. 1, American Council on Education, 1968.
Panos, Robert J.; and Astin, Alexander W. "A Profile of Entering 1965 College Freshmen," College and University, 42: 160-174; 1967.
; and Creager, John A. "National Norms for Entering College FreshmenFall 1967," <u>ACE Research Reports</u> , Vol. 2, No. 7, American Council on Education, 1967.

# Appendix A

Sampling Design for Institutions in the ACE Cooperative Institutional Research Program

Appendix A-1 1966 Freshman Sampling Design

Appendix A-2 1967 Freshman Sampling Design

Appendix A-3 1968 Freshman Sampling Design

Appendix A-1

1966 Stratification and Sampling Design

Strati	fication Cell			itutions	Cell Weight Data Collec	- <del>-</del>
For Sa	mpling	Popu- lation	Total	Used In Norms	Men	Women
2-Year	Public Colleges					
Enrol	Iment:					
1.	less than 500	111	6	3	25.7	23.5
2.	500-999	99	3	3	36.8	32.5
3.	1000-2499	108	6	5	22.1	21.8
4.	2500-4999	40	4	4	8.8	9.3
5.	5000 or more	35	5	4	7.3	7.0
2-Year	Private Colleges	<u>3</u>				
	lment:					
6,7.		173	6	5	45.4	25.1
8,9.	1000 or more	27	5	5	4.6	6.3
4-year	Colleges					
Expen	ditures:					
10.	Unknown	254	9	9	3.0	3.2
11.	less than \$750	109	23	21	7.5	7.4
12.	\$750-999	234	20	15	16.7	15.4
13.	\$1000-1249	236	23	19	13.8	14.9
14.	\$1250-1499	160	26	23	6.2	8.0
15.	\$1500-1749	78	19	19	3.9	5.5
16.	\$1750-1999	51	24	21	4.0	2.6
17.	\$2000-2249	21	9	5	8.9	5.8
18.	\$2250-2499	20	10	8	8.9	5.8
19.	\$2500 or more	39	21	18	2.0	2.4
Univer	sities			•		
Expen	ditures:					
20.	Unknown	14	3	2	8.1	7.4
21.	less than \$750	10	4	4	2.1	2.4
22.	\$750-999	7	4	3	1.7	2.2
23.	\$1000-1249	18	6	5	2.6	3.5
24.	\$1250-1499	24	11		2.6	2.6
25.	\$1500-1749	11	5	9 5	2.9	2.5
26.	\$1750-1749	24	15	10	2.4	2.2
	•					
	•					
	-				•	
27. 28. 29.	\$2000-2249 \$2250-2499 \$2500 or more	20 13 32	17 5 18	12 4 10	1.7 2.4 3.3	1.3 3.5 3.5

<sup>\*</sup> Ratio between the number of 1965 first-time students enrolled in all colleges and the number of 1965 first-time students enrolled at colleges in the ACE sample.

<sup>\*\*</sup>Per student expenditures for educational and general purposes.

Appendix A-2

1967 Stratification and Sampling Design

<b>-</b>		Number of Institutions Participants				Cell Weights* Applied to  Data Collected From		
Stratification Cell for Sampling		Popu- lation	Total	Used in Norms	Men	Women		
2-Year	Public Colleges							
	1ment:							
		146	5	3	53.4	33.2		
1.	Less than 500	124	5 9	<i>5</i>	27 <b>.</b> 8	39.5		
2.	500 <b>-</b> 999 1000-2499	156	20	13	13.2	12.6		
3.		58	8	6	8.5	8.0		
4,5.	2500 or more	36	O	U	0.5			
2-Year	Private Colleges							
Enro1	lment:							
6.7.	Less than 1000	221	15	14	16.5	12.2		
8,9.		25	5	5	3.7	6.0		
4-Year	Colleges							
Expen	ditures:**							
10.	Unknown	263	10	7	87.4	37.6		
11.	Less than \$750	119	25	20	8.1	9.0		
12.	\$750-999	233	28	19	14.6	13.2		
13.	\$1000-1249	239	28	19	15.3	14.5		
14.	\$1250-1499	156	26	22	6.3	8.7		
15.	\$1500-1749	77	22	19	4.7	5.8		
16.	\$1750-1999	50	23	17	3.7	2.4		
17.	\$2000-2249	22	13	6	10.3	4.0		
18.	\$2250 <b>-</b> 2499	20	13	8	3.7	1.9		
19.	\$2500 or more	39	22	18	2.0	2.5		
Univers	ities							
	ditures: **							
20.	Unknown ***					est == ess ess		
21.	Less than \$750	9	3	3	2.9	2.8		
22.	\$750-999	9	4	3 3 4	2.0	2.9		
23.	\$1000-1249	27	9	4	3.3	4.0		
24.	\$1250-1499	33	11	7	3.7	4.2		
25.	\$1500-1749	12	5	4	3.0	3.2		
26.	\$1750-1999	39	13	7	3.4	3.1		
27.	\$2000-2249	36	20	13	2.8	2.8		
28.	\$2250-2499	31	6	4	4.1	3.8		
29.	\$2500 or more	43	16	6	8.3	8.4		

<sup>\*</sup>Ratio between the number of 1966 first-time students enrolled in all colleges and the number of 1966 first-time students enrolled at colleges in the ACE sample. These weights were further adjusted to correct for nonparticipation of individuals within colleges.

<sup>\*\*</sup> Per-student expenditures for educational and general purposes.

 $<sup>^{***}</sup>$  For the 1967 survey, data for this stratification cell were available for all universities in the population.

Appendix A-3

1968 Stratification and Sampling Design

		Number	of Inst	itutions	Cell Weights	* Applied to
Strat	ification Cell		Part:	icipants	Data Colle	cted From
	Sampling	Popu- <u>lation</u>	Tota1	Used in Norms	Men	Women
Univer						
Select:		0.0	10	10	2.6	2.7
1.	Less than 500	30	12	10	2.6	2.7
2.	500-549	39	19	15	3.7	3.3
3.	550-599	45	20	15	2.2	2.2
4.	600 or more	50	30	25	8.0	8.9
5.	Unknown	130	26	11	8.0	0.7
4-Year	Public Colleges					
Select	ivity:				00.0	10 0
6,9.	Less than 450 and unknown		12	10	20.2	18.2
7.	450-499	67	11	9	8.9	7.4
8.	500 or more	73	17	14	4.1	6.5
4-Year	Private Non-sectarian					
Select	ivity:			-4	5 /	r 0
10,14.	Less than 500 and unknown	n 197	30	24	8.4	5.8
11.	500-574	44	9	7	6.0	6.2
12.	575 <b>-</b> 649	54	18	18	3.0	2.9
	650 or more	48	29	27	1.6	1.9
	Roman Catholic					*
Select						
15.18.	Less than 500 and unknown	n 111	19	15	9.8	6.3
16.	500-574	75	14	13	5.3	6.7
17.	575 or more	42	16	15	5.8	3.3
	Protestant					
Select	<del></del>					
	Less than 450 and unknown	n 119	16	14	7.2	9.7
20.	450-499	54	7	7	6.7	9.1
21.	500-574	68	13	13	6.2	6.4
22.	575 or more	48	14	14	2.9	2.8
	Colleges					
24 1ear	Selectivity less than 40	0 87	7	4	32.9	33.6
	Selectivity 400-499	63	13	11	6.9	5.9
26.	Selectivity 400-499	57	9	8	6.0	6.9
27.	Selectivity 450 or more Expenditures**/less than			•	- · ·	
•	\$1000	192	19	12	24.6	22.6
30.	Expenditures**/\$1000- \$1249	39	5	4	3.3	4.3
31.	Expenditures**/\$1250 or more	52	7	7	6.7	5.4
32,33.	Selectivity or Expendi-				, a. 4	10 7
•	tures unknown	272	22	17	12.4	13.7
Predom	inantly Negro Colleges					
34.	Public	38	7	7	7.7	6.9
35.	Private	55	14	12	4.4	4.4

Ratio between the number of 1967 first-time students enrolled in all colleges and the number of 1967 first-time students enrolled at colleges in the ACE sample. These weights were further adjusted to correct for nonparticipation of individuals within colleges.

<sup>\*\*\*</sup>Per-student expenditures for educational and general purposes.

# Appendix B

Entering Freshman Student Information Forms

Appendix B-1 1961 Freshman Form

Appendix B-2 1965 Freshman Form

Appendix B-3 1966 Freshman Form

Appendix B-4 1967 Freshman Form

Appendix B-5 1968 Freshman Form



ERIC Provided by ERIC

Appendix B-1

#### 1961 Student Information Form

	FORM Fall 1									274	7-12
Name:	ast			First			М	iddle	Male 1	Fem.	13
Home Address:	Num	ber and Stre	ct			City		Zone	State		
Size of your high school graduating class (circle one):		Less than 50 (1)	50· 99 (2)	100· 199 (3)	200· 299 (4)	300· 399 (5)	400· 499 (6)	500· 599 (7)	600 +		14
Your high school average (circle one):	D (1)	C (2)	(3) C+	B (4)	B (5)	B+ (6)	A- (7)	A (8)	A +- (9)		15
Probable major field in colleg	(e :										16-17
Highest degree planned (circle one):	Less than BA or BS (1)	BA BS (2)	MA MS (3)	PhD EdD (4)	Ī	MD DDS (4)	LLB BD (4)	Other: .	(5)	_	18
Probable future occupation:	<del></del>										19-20
Father's education (circle one):	Grammar school (1)	Some hi school (2)		H. S. grad. (3)		Some college (4)		College degree (5)	Post-grad degree (6)	•	21
Father's occupation:							_		_		22-23
Indleate whether you ha tem you underline, indicate	ve achieved any the number of t	of the follo mes you hav	wing by ve achiev	underlining ved it.	the ar	propriate	words.	On the line	before any		
First, second, or third place contest	in:school	science cont	est;	regional	or state	selence	contest;	natio	onal science		24
leads in high school o contest;first. sec	r church sponso ond, or third in	red plays; . national spec	first	l, second, ebate conto	or third	in regio	nal or s	tate specel	h or debate		25
cleeted to one or mor- tion for leadership of a	e student offices; ny kind	electo	d presid	lent of my	class;	reed	eived awa	ard or spec	cial recogni-		26
participated in national music contest; received a rating of "good" or "execulent" in:state music contest;							27				
won a prize or award (painting, musical com	in art competiti position, sculptu	on (sculpture)	e, ceram	nies, paintir nool;	ng, etc.) place of	exhibite	d or per my scho	rformed a	work of art		28
edited school paper or literary magazine:had poems, short stories, or articles published in public newspaper or magazine (not school paper) or in state or national high school anthology;won literary award or prize for creative writing								29			

#### Appendix B-2

#### 1965 STUDENT INFORMATION FORM

Note: The information in this questionnaire is being collected as part of a study of the characteristics of this year's entering class. Please complete all items. Your responses will be kept entirely confidential and used only in group comparisons for research purposes. Your name (please print)\_\_\_\_\_ First Middle or Maiden Home street address\_ City State Social Security Number: (leave blank if you have no number) In case you should move from the above address, please give the name and address of a close friend or relative who would be likely to know your whereabouts: Name of friend or relative (please print)\_\_\_\_\_\_ Street address \_ City 1. What occupation do you plan to pursue as a career? 2. What is your probable major field of study? \_\_\_\_\_\_ 3. The following activities cut across a number of jobs. Which ones do you anticipate will be part of your long-run career work? (Circle one answer for each activity) A Major Part A Minor Part Not a Part Activity of My Job of My Job of My Job Teaching..... 1 2 3 Research and development..... 1 2 3 Administration or management..... 1 2 3 2 Service to patients or clients...... 1 3 Personal service to an organization or employer..... 2 3 4. Answer if female: In the long run which one of the following do you really prefer and which one do you realistically expect? (Circle only one choice in

each column)

	<u>Prefer</u>	Expect
Housewife only	1	1
Housewife with occasional employment	2	2
Housewife for a few years, employment later	3	3
Housewife with regular employment	4	4
Employment only	5	5



5. What is the highest academic degree the	hat you inte	nd to obtain?	9.	What was your average grade in second	•	(Circle one)
(Circle one)				A or A+	1	
None				A	2	
Associate (or equivalent)				B+		
Bachelor's degree (B.A., B.S., etc.)				B	4	
Master's degree (M.A., M.S., etc.)				B	5	
Ph.D. or Ed.D				C+	6	
M.D., D.D.S., or D.V.M				C	7	
LL.B. or J.D		7		D	8	
B.D		8				
Other(specify)		9	10.	How old will you be on December 33	of this year?	
6. To how many colleges other than this for admission? From how many did						
(Circle one number in each column)	you receive	acceptances	11.	What is your racial background? (C	ircle one)	
N	lumber of	Number of	}	Caucasian	1	
•	Applica- tions	Accept- ances		Negro	2	
No other	0	0		American Indian	3	
One	1	i		Oriental	4	
Two	2	2	1	Other	5	
Three	3	3				
Four	4	4	12	(If you are married, skip the follow	ving quartion)	What is now
Five	5	5		best guess as to the chances that ye		What is your
Six or more	6	6			While	Within a
					in	Year after
7. Of the other colleges to which you app	died are the	ra any which			College?	College?
you would have preferred to attend? (C		ne any which		Very good chance	1	1
Yes, one other		1		Some chance		2
Yes, two others		2		Very little chance		3
Yes, three (or more) others		3		No chance	4	4
No		4				
***************************************	•••••	-	13.	Circle one in each column below:		
8. From what kind of secondary school of	11:1 11011	lunta? (Cirola		<b>300</b>	Religion in	Your Present
one)	nu you grac	mater (Circle	1		Which You Were Reared	Religious Preference
Public		1		Protestant	1	1
Roman Catholic		2		Roman Catholic	2	2
Protestant denominational		3		Jewish	3	3
Jewish		4		Other	4	4
Military		5	ļ	None	5	5
Private (nondenominational, nonmilita		6				
Other (specify)	• -	7				
				What is the highest level of formal	education obt	ained by your
Name of above school:				parents? (Circle one in each column)	Father	Mother
			1	Grammar school or less	1	1
				Some high school	2	2
I amatal in :				High school graduate	3	3
Located in:City	-			Some college	4	4
·				College degree	5	5
State				Postgraduate degree	6	6
					-	-

15.	Are you: The first-born (or only) child?	17. Please indicate the state (or foreign country) in which your parents were born:
	The second-born?	
	The third-born?	Father
	Fourth- (or later) born? 4	
	routen (or later) botter	Mother
16.	How many brothers and sisters do (did) you have?	
	(If ten or more, write "9.")	
		,
18.	What is your best estimate of the total income last year of your	parental family (not your own family if you are married)? Consider annual
	income from all sources before taxes.	
		· · · · · · · · · · · · · · · · · · ·
	Less than \$4,000 1	\$15,000 <b>-\$19,999</b> 6
	\$4,000-\$5,999	\$20,000-\$24,999
	\$6,000 <b>-\$</b> 7,999	\$30,000 or more
	\$10,000-\$14,9995	400,000 of moterniting
	410,000 <b>4</b> 11,222 1111	•
19.	Do you have any concern about your ability to finance your coll	ege education?
	None (I am confident that I will have sufficient funds)	
	Some concern (but I will probably have enough funds)	
	Major concern (not sure I will be able to complete college).	3
	• • •	
20.	The following questions deal with accomplishments that might p it covers many areas of interest and few students will be able to	possibly apply to your high school years. Do not be discouraged by this list; say "yes" to many items. (Circle items that apply)
	Was elected president of one or more student organizations (reco	ognized by the school)
	Received a high rating (Good, Excellent) in a state music conte	
	Participated in a state or regional speech or debate contest	
	Had a major part in a play	
	Won a varsity letter (sports)	
	Won a prize or award in an art competition	
	Edited the school paper, yearbook, or literary magazine	
	Had poems, stories, essays, or articles published	
	• • • • • • • •	
	Participated in a National Science Foundation summer program	
	Placed (first, second, or third) in a regional or state science co	
	Was a member of a scholastic honor society	
	Won a Certificate of Merit or Letter of Commendation in the N	ational Merit Program 1
21.	While attending high school, did you:	
	Date one steady girl friend (boy friend) 1	
	Have a series of steady girl friends (boy friends) 2	
	Date a few different girls (boys), but none steadily 3	
	Pretty much play the field 4	
	Seldom or never date 5	
22.	What was the frequency of your dates during the past year? I	ndicate the average number of dates of each type that you had per month.
	If less than one every two months, write in "00." (If married, in	dicate the number of times you and your spouse went out together to these
	events.) Write in preceding zeros (e.g., "four" would be "04").	
	Casual coke, Informal date	
	coffee, or movies, stude	
	study dates gatherings, et (No. per month) government gatherings, et	c. big parties th) (No. per month)

23. Below is a general list of things that high school students sometimes do. Indicate which of these things you did during the past year in school. If you engaged in an activity frequently, circle "1." If you engaged in an activity one or more times, but not frequently, circle "2" (occasionally). Circle "3" (not at all) if you have not performed the activity during the past year. (Circle one for each item)

	Etc.	duently	Florally	all /	Frec	Hently Occasi	Hotatally Hotatall
Voted in a student election	1	2	3	Checked out a book or journal from the school library	1	2	3
Came late to class	1	2	3	Went to the movies	1	2	3
Listened to New Orlean's (Dixieland) jazz		2	3	Discussed how to make money with other students	1	2	3
Gambled with cards or dice		2	3	Said grace before meals	1	2	3
Played a musical instrument		2	3	Prayed (not including grace before meals)		2	3
Took a nap or rest during the day		2	3	Listened to folk music	1	2	3
Drove a car		2	3	Attended a public recital or concert	1	2	3
Stayed up all night		2	3	Made wisecracks in class		2	3
Studied in the library		2	3	Arranged a date for another student	1	2	3
Attended a ballet performance		2	3	Went to an over-night or week-end party	1	2	3
Participated on the speech or debate team		2	3	Took weight-reducing or dietary formula	1	2	3
Acted in plays		2	3	Drank beer	1	2	3
Sang in a choir or glee club		2	3	Overslept and missed a class or appointment	1	2	3
Argued with other students		2	3	Typed a homework assignment	1	2	3
Called a teacher by his or her first name		2	3	Participated in an informal group sing	1	2	3
Wrote an article for the school paper or literary magazine.		2	3	Drank wine	1	2	3
Had a blind date		2	3	Cribbed on an examination	1	2	3
Wrote a short story or poem (not for a class)	1	2	3	Turned in a paper or theme late	1	2	3
Played in a school band	1	2	3	Tried on clothes in a store without buying anything	1	2	3
Played in a school orchestra	1	2	3	Asked questions in class	1	2	3

24. Rate yourself on each of the following traits as you really think you are when compared with the average student of your own age. We want the most accurate estimate of how you see yourself. (Circle the number in the appropriate column)

Percent	Average	Average	Below Average	Lowest 10 Percent
. 5	4	3	2	1
_	4	3	2	1
_	4	3	2	1
	4	3	2	1
_	4	3	2	1
_	4	3	2	1
_	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
_	4	3	2	1
	4	3	2	1
_	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
	4	3	2	1
	. 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5	. 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4 . 5 5 4	.       5       4       3         .       <	.       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4       3       2         .       5       4

-35-

Prepared by American Council on Education 1785 Massachusetts Ave., N.W. Washington, D.C.

		Appendix B-3	[513206]
	1966 \$	STUDENT INFORMATION FORM	0000000000000
YOUR NAME(please print)			
, oo ; , , , , , , , , , , , , , , , , ,	First Middle	or Maiden Last	
			00000000000000000000000000000000000000
HOME STREET ADDRESS			- 66666666666
			0000000000000
CITY	STATE	ZIP CODE (if known)	-    00000000000000000000000000000000000
			00000000000
as part o address will be o	of a study of this year's has been requested in or	being collected through the American entering class. Please complete all der to facilitate mail follow-up studio aries for research purposes, and will	items. Your name and es. Your responses
Social Security N		If you recently took any of the national a	chievement tests and happen to
(if known)		remember your score, fill in the appropria	ite information:
		Score	Score
		SAT Verbal	ACT Composite
			· L
Data of Divih		207.11.11	NMSC Selection Score
Date of Birth	Day Year	SAT Math	TAMISO SCIESTISM SCORE
Make heavy black mark	device. Your careful we simple rules will be not (No. 2½ or softer). s that fill the circle. Ver you wish to change. of any kind.  Yes No with ball pen or	Associate (or equivalent to be a second to be a sec	that you intend to obtain? (Mark one)
. Your Sex: Male	Female O	high school years. Do not be discou interest and few students will be abl (Mark all that apply)	
		L1	ore student organizations (recognized
. From what kind of secondary	school did you graduate?		ellent) in a <u>state</u> or <u>regional</u> music contest C
(Mark one) Public	$\circ$		speech or debate contest
Private (denominational)		Had a major part in a play	
Private (nondenomination		Won a varsity letter (sports)	
Other		Won a prize or award in an art com	petition · · · · · · · · · · · · · · · · · · ·
		Edited the school paper, yearbook	, or literary magazine · · · · · · · · · · · · · · · · · · ·
. What was your average grade	in secondary school?	Had poems, stories, essays, or art	ticles published
(Mark one)	s	Participated in a National Science	Foundation summer program · · · · · · · · · · · · · · · · · · ·
A or A+ O A O	в О c+ О	Was a member of a scholastic bone	or society
А− О в+ О	c O		er of Commendation in the National
в О	D Ö		C

6. Do you have any concern about your ability to finance your college education? (Mark one)  None (I am confident that I will have sufficient funds)					
Major concern (not sure 1 will be able to complete college)	12. In deciding where to go to college, through what source did this	13. To what extent do you think each of the following describes the			
7. Through what source do you intend to finance the first year of your undergraduate education?  (Mark one for each item)	college <u>first</u> come to your attention?  (Mark one)	think each of the following describes the psychological climate or atmosphere at this college?  (Mark one answer for each item)			
Employment during college	Relative	IntellectualOOO SnobbishOOO VictorlanOOO Practical-mindedOOO WarmOOO RealisticOOO			
8. What is your racial background? (Mark one)	14. Answer each of the following as you think it a  The students are under a great deal of pro-	Yes No			
Caucasian O  Negro O  American Indian O  Oriental O  Other	The student body is apathetic and has little "school spirit"				
What is the highest level of formal education obtained by your parents? (Mark one in each column)      Father Mother	Athletics are overemphasized The classes are usually run in a very information of the state of the				
Grammar school or less	15. Are you:  An only child (Mark and skip to number 20  The first-born (but not an only child)	$\sim$ 1			
10. What is your best estimate of the total income last year of your parental family (not your own	The second-born	1 2 3 4 5 6 7 8 or more			
family if you are married)? Consider annual income from all sources before taxes.  Less than \$4,000 \$15,000-\$19,999	17. Mark one circle for each of your brothers and s between the ages of 13 and 23	sisters			
\$4,000-\$5,999O \$6,000-\$7,999O \$8,000-\$9,999O \$10,000-\$14,999O	13 14 15 16 1 Brothers O O O O	7 18 19 20 21 22 23 O O O O O O			
11. Mark one in each Religion in Your Present column below: Which You Religious Preference	18. Are you a twin? (Mark one)	19. Is your twin attending college?			
Protestant         O           Roman Catholic         O           Jewish         O           Other         O           None         O	No, (Mark and skip to number 20), . O Yes, identical	No			

Mark one in		. دە.
each column:	70	ir.
	in the	ith,
,		1 100
2	3/2/	222
Alabama	$\sim$	000
Alaska	$\sim$	200
Arizona	$\sim$	900
Arkansas	$\sim$	
California	$\sim$	000
Colorado	$\sim$	
Connecticut	$\sim$	
Delaware	$\sim$	
D. C	$\sim$	
Florida	$\sim$	
Georgia Hawaii	$\sim$	
Idaho	$\sim$	200
Illinois	$\widetilde{\mathcal{C}}$	
Indiana	$\widetilde{\mathcal{C}}$	000
Iowa	$\widetilde{O}$	000
Kansas	$\widetilde{O}$	000
Kentucky	O	ŎŎŎ
Louisiana	Ŏ.	ŎŎŎ
Maine	Ŏ.	ŎŎŎ
Maryland	Ŏ.	000
Massachusetts.	Ŏ.	000
Michigan	Ŏ.	000
Minnesota	Ο.	000
Mississippi	O.	000
Missouri	O.	000
Montana	.Q	000
Nebraska	.Q	ÖÖÖ
Nevada	Q.	ÖÖÖ
New Hampshire,	.Q	ÖÖÖ
New Jersey	Q.	000
New Mexico	Q.	000
New York	.O	000
North Carolina.	$\circ$	000
North Dakota	$\sim$	
Ohio	$\sim$	
Oklahoma	$\sim$	
Oregon	$\sim$	
Pennsylvania	$\sim$	
Rhode Island	$\widetilde{\mathcal{C}}$	
South Carolina .	$\widetilde{\mathcal{C}}$	000
South Dakota Tennessee	$\widetilde{\mathcal{C}}$	000
Texas	$\widetilde{O}$	000
Utah	$\ddot{\circ}$	000
Vermont	Ŏ.	ŏŏŏ
Virginia	.ŏ	ŎŎŎ
Washington	Ŏ.	ŎŎŎ
West Virginia	Ŏ.	ŌŌŎ
Wisconsin	Ō.	000
Wyoming	Ö.	ŌŌŎ
Latin America .	Ö.	000
Europe	Ò.	000
Africa	$\bigcirc$	000

20.

21. Below is a list of 66 different undergraduate major
fields grouped into general categories.
Mark only three of the 66 fields as follows:

0	First choice (you	r probable	major	field of	study)
(2)	Second choice.				

<b>(</b>	The	field	of	study	which	is	<u>least</u>	appealing	to	you
----------	-----	-------	----	-------	-------	----	--------------	-----------	----	-----

Arts and Humanities	Professional
Architecture ① ② ⑤	Health Technology
English (literature) ① ② ⑤	(medical, dental,
Fine arts ① ② ⑤	laboratory) 0@©
History ① ② ⑤	I Nursing ひどに
Journalism (writing) ① ② 🕒	Pharmacy U 2 C
Language (modern) ① ② ⑤	Predentistry ひとし
Language (other) ① ② ©	Prelaw 0 @ C
Music ① ② ⑤	Premedical ①② ©
Philosophy ① ② ©	Preveterinary ①② ©
Speech and drama ① ② ©	Therapy (occupat.,
Theology U2U	physical, speech) 00 ©
Other ① ② ©	Other ①② ©
Biological Science	Social Science
Biology (general) ①②①	Anthropology 02 ©
Biochemistry ①②⑤	Economics ①②©
Biophysics ① ② ⑤	Education ①② C
Botany ① ② ⑤	History ①②ⓒ
Zoology ① ② ⑤	Polítical science
Other ① ② ⑤	(government.
	int. relations) ①②€
Business	Psychology ひどと
Accounting ①②①	I Social work ひどし
Business admin ① ② ©	Sociology
Electronic data	Other ①② ©
processing	
Secretarial studies	Other Fields
Other ① ② ⑤	Agriculture ①@ⓒ
	Communications
Engineering	(radio, T. V., etc.). ①② €
Aeronautical ① ② ©	Electronics
Civil ①②⑤	(technology) ①②ⓒ
Chemical ① ② ⑤	Forestry UQC
Electrical ①② ⑤	l Home economics ひじし
Industrial ① ② ©	Industrial arts UCC
Mechanical ① ② ©	Library science ひ②と
Other ① ② ©	Military science 000
Physical Science	Physical education and recreation ①② ©
Chemistry ①②⑤	Other (technical) 0 2 C
Earth science ① ② ⑤	Other (nontechnical).
Mathematics ①②⑤	Undecided
Physics ①②⑤	
Statistics ①②⑤	
Other ①②①	
	•

Please be sure that  $\underline{\text{only }}\underline{\text{three}}$  circles have been marked in the above list

# 22. Probable Career Occupation

Make only three responses, one in each column  Make only three 2 Second Ch	oic	
Accountant or actuary	2) 2)	(U)
(management, administrator) ① ( Business owner or proprietor ① ( Business salesman or buyer ① ( Clergyman (minister, priest) ② ( Clergy rother religious) ② ( Clinical psychologist ② ( College teacher ② ( Computer programmer ② ( Conservationist or forester ② ( Dentist (including orthodont:st) ② ( Dietitian or home economist ② ( Engineer ③ ( Conservationist or forester ③ ( Conservationist or forester ④ (	00000000000	$\Theta\Theta\Theta\Theta\Theta\Theta\Theta\Theta\Theta\Theta\Theta$
Foreign service worker (including diplomat)	② ②	(U (U
Interior decorator (including designer)	0	000000000000000000000000000000000000000
	2 2 2 2	000000

Relow is a general list of things that students sometimes do.   Indicate which of these things you did during the past year in school. If you engaged in an activity frequently, Mark 'f'.'   If you engaged in an activity one or more times, but not frequently, Mark 'o'' (occasionally). Mark 'n' (not at all) if you have not performed the activity during the past year. (Mark one for each item)    Voted in a student election   Food Notes   Food N	24. Indicate the importance to you personally of each of the following:  (Mark one for each item)  Becoming accomplished in one of the performing arts (acting, dancing, etc.).  Becoming an authority on a special subject in my subject field.  Obtaining recognition from my colleagues for contributions in my special field.  Becoming an accomplished musician (performer or composer).  Becoming an expert in finance and commerce.  Having administrative responsibility for the work of others.  Being very well-off financially.  Helping others who are in difficulty.  Participating in an organization like the Peace Corps or Vista.  Becoming a community leader.  Becoming a community leader.  Making a theoretical contribution to science  Writing original works (poems, novels, short stories, etc.).  Beod 9
Wrote a short story or poem (not for a class) F. O. N. Played in a school band F. O. N. Played in a school orchestra F. O. N. Smoked cigarettes F. O. N. Attended Sunday school F. O. N. Checked out a book or journal from the school library F. O. N. Went to the movies F. O. N. Discussed how to make money with other students F. O. N. Said grace before meals F. O. N. Prayed (not including grace before meals) F. O. N. Listened to folk music F. O. N. Attended a public recital or concert F. O. N. Made wisecracks in class F. O. N. Arranged a date for another student F. O. N. Went to an over-night or week-end party F. O. N. Took weight-reducing or dietary formula F. O. N. Drank beer F. O. N. Overslept and missed a class or appointment F. O. N. Typed a homework assignment F. O. N. Participated in an informal group sing F. O. N. Cribbed on an examination F. O. N. Turned in a paper or theme late F. O. N. Asked questions in class F. O. N. Attended church F. O. N.	25. Rate yourself on each of the following traits as you really think you are when compared with the average student of your own age. We want the most accurate estimate of how you see yourself. (Mark one for each Item)    Highest 10   Above   Below   Lowest 1
26. How old will you be on December 31 of this year?  (Mark one)  16 or younger	27. (If you are married, omit the following question) What is your best guess as to the chances that you will marry  While in College? Within a Year after College?  Very good chance

# Appendix B-4 1967 STUDENŢ INFORMATION FORM

YOUR NAME (please print)  First  HOME STREET ADDRESS	Middle or Maiden Last	When were you born?  Month Day Year  Your Social Security Number (please copy
City State	Zip Code (if known)	carefully)
NOTE: The information in this report is being col Education as part of a continuing study of in this research will contribute to an unde ed by their college experiences. Identifyin the Council in order to make subsequent mesponses will be held in the strictest proused only in group summaries for research	higher education. Your cooperation rstanding of how students are affecting information has been requested by fail follow-up studies possible. Your fessional confidence, and will be	0000 000000000000000000000000000000000
DIRECTIONS: Your responses will be read by an automatic scanning device. Your careful observance of these few simple rules will be most appreciated.	I came to this college from a junior	ed in college as a freshman
Use only black lead pencil (No. 2!2 or softer).  Make heavy black marks that fill the circle.  Erase cleanly any answer you wish to change.  Make no stray markings of any kind.  Yes No  Example: Will marks made with ball pen or fountain pen be properly read?	to your high school years. Do no areas of interest and few student (Mark all that apply)  Was elected president of one or more by the school)	h accomplishments that might possibly apply to be discouraged by this list; it covers many its will be able to say "yes" to many items.  The student organizations (recognized Yes Oldent) in a state or regional music contest. Osspeech or debate contest.
1. Your Sex: Male Female   2. How old will you be on December 31 of this year? (Mark one)  16 or younger O 20 O 17 O 18 O Older than 21 O 19	Had a major part in a play  Won a varsity letter (sports)  Won a prize or award in an art comp Edited the school paper, yearbook, Had poems, stories, essays, or arti Participated in a National Science Placed (first, second, or third) in a Was a member of a scholastic hono Won a Certificate of Merit or Letter	petition O O O O O O O O O O O O O O O O O O O
school? (Mark one)  A or A+ O B O B+ O C O B+ O D O  4. To how many colleges other than this one did you actually apply for admission? From how many did you receive acceptances? (Mark one in each column)  Applications Acceptances  No other O O Two O  Three O  Four O  Five O  Six or more	7. What is the highest academic degree that you intend to obtain? (Mark one)  None	Some concern (but I will probably have enough funds)



10. Through what source do you intend to finance the first year of your undergraduate education?  (Mark one in each row)	17. For each of the following activities, indicate if you press competently. (Mark one in each row)	ently can perform the activity
(Mark one in each row)		No.
Personal savings and/or employment	Yes,	but! and I have
Parental or other family aid	I can	
Repayable loan	present do thi	
Scholarship, grant, or other gift	well	
Scholar Ship, grant, or other given.	Type 40 words or more per minute	
11. What is the highest level of formal education ob-	Sketch people so that they can be recognized	
tained by your parents? (Mark one in each column '	Speak a second language fluently	
Father Mother	Break 100 in golf	
	Water-ski	
Grammar school or less.	Ski on snow	•
Some high schoolO	Sight-read piano music	
High school graduateO	Read music (singing)	
Some collegeOO	II	•
College degreeOO	Identify at least fifteen species of birds on sight	
Postgraduate degreeOO	Referee one or more sporting events	
12. What is your <u>best</u> <u>estimate</u> of the total income	Recite long passages from plays or poems without notesO.	
last year of your parental family (not your own	Identify or describe examples from several	0 0
family if you are married)? Consider annual in-	architectural styles	
come from all sources before taxes. (Mark one)	Sail a boat	
_	Identify most of the major constellations of stars	Ξ Ξ
Less than \$4,000 \$15,000-\$19,999	Use a sewing machine	_
\$4,000-\$5,999O \$20,000-\$24,999O	Use Robert's Rules of Order	_
\$6,000-\$7,999\ \$25,000-\$29,999\	Mix a dry Martini	<u> </u>
\$8,000-\$9,999	Set a table for a formal party	
\$10,000-\$14,999 .	Name the starting players for a professional athletic team $.$	
70 1/1 1 10 00 0	Score a tennis match	
13. What is your racial background? (Mark one)	Identify many classical musical compositions	
Caucasian	by title and composer	<u>Q</u>
Negro	Program a computer	
American Indian	Use a slide rule	
Oriental	Swim a mile without stopping	
Other	Name the animal phyla	QQ
14 Mark and is each Religion in Your Present	Describe the difference between stocks and bonds	
Which You Religious	Develop and print photographs (darkroom work)	
column below: Were Reared Preference	Bake a cake from scratch (no mixes)	OO
ProtestantQQ	Describe the personal freedoms guaranteed by	
Roman CatholicO	the Bill of Rights	QQ
Jewish	Do at least 15 push-ups	
Other		
NoneOO	18. What is your best guess as to the chances	ery Very
16 While are dien high about 1 did anno (Africana)	II Alama view viille (Almite iim iii iim to iii v	ood Some Little No
15. While attending high school, did you: (Mark one)	1	ance Chance Chance Chan
Date one steady girl friend (boy friend)	Get married while in college?(	
Have a series of steady girl friends	Get married within a year after college?(	
(boy friends)	Obtain an A-or better over-all grade point average?	
Date a few different girls (boys),	Change major field?(	
but none steadily	Change career choice?	
Protty much play the field	Fail one or more courses?(	
Seldom or never date	Graduate with honors?	
	Be elected to a student office?	
16. How many students in high school did you know	Join a social fraternity, sorority, or club?	
by their first names or nicknames? (Mark one)	Author or co-author a published article?	
5 or less 6·10 11-20 21-50 51·100 101-200 more	Be elected to an academic honor society?	OOO
0 0 0 0 0 0 0	Participate in student protests or demonstrations?	DOO
How many of these students did you consider	Drop out of this college temporarily (exclude transferring)?(	
close friends? (Mark one)	Drop out permanently (exclude transferring)?	
5 or less 6-10 11-20 21-50 51-100 101-200 more		

19. Mark one in each calumn:

) Your birthplace O Your father's birthplace Your mother's birthplace Alabama .....O 000 000 Alaska..... 000 Arizona ..... Arkansas..... 000 California ..... 000 Colorado ..... 000 Connecticut .... 000 000 Delaware..... D.C. ..... Florida ..... 000 Georgia ..... 000 Hawaii..... 000 Idaho ..... 000 Illinois .....O 000 Indiana ..... 000 lowa ..... Kansas ..... 000 000 Kentucky..... Louisiana ..... 000 Maine..... 000 Maryland ..... 000 Massachusetts .. O Michigan ..... 000 Minnesota ..... 000 Mississippi..... 000Missouri .....O 000 Montana..... 000 Nebraska ..... 000 Nevada ..... New Hampshire . O 000 New Jersey .... O New Mexico .... O 000 New York ..... 000 North Carolina .. O 000 North Dakota ...O Oklahoma ..... O 000 Oregon...... 000 Pennsylvania ...O 000 Rhode Island ...O 000 000 South Carolina .. O South Dakota ... 🔾 Tennessee ..... 000 Texas ...... 000 Utah ..... 000 Vermont..... 000 Virginia..... 000 Washington ..... 000 West Virginia ... O Wisconsin ..... 000 Wyoming ..... 000Other U.S. ..... Canada ..... 000 Latin America... 000

20. Mark only three responses, ane in each calumn.

Your probable career occupation. Your father's occupation. Your mother's occupation. ⑦®

NOTE: If your father (or mother) is deceased,

Arizona	000	please indicate his (her) last occupation.
ArkansasO	000	Accountant or actuary
Colorado	000	Actor or entertainer
Connecticut	ŏŏŏl	Architect
Delaware	ŏŏŏl	Artist
D.C	ŎŎŎ	Business (clerical)
Florida	000	Business executive
Georgia	000	(management, administrator) 🏵 🖲 🔞
Hawaii	000	Business owner or proprietor 🏵 🕒 🗎
Idaho	000	Business salesman or buyer Y F W
Illinois	000	Clergyman (minister, priest) 💇 🕒 💮
Indiana	000	Clergy (other religious)
lowa	000	Clinical psychologist
Kansas	000	College teacher
Kentucky	800	Conservationist or forester © 🕒
LouisianaO	000	Dentist (including orthodontist)
Maryland	000	Dietitian or home economist
Massachusetts	000	Engineer
Michigan	ŏŏŏ	Farmer or rancher $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$
Minnesota	000	Foreign service worker
Mississippi	000	(including diplomat) 🏵 🕒 🔞
Missouri	000	Housewife ♥ 🗗 🗎
Montana	000	Interior decorator
Nebraska	000	(including designer)
Nevada	000	Interpretor (translator)
New Hampshire . O	000	Lab technician or hygienist (*) (*) (*)
New Jersey	000	Law enforcement officer (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)
New Mexico O	000	Military service (career)
North Carolina	000	Musician (performer, composer) ( P M
North Vakota O	ÖÖÖ	Nurse 🏵 🖲 🕅
Ohio	000	Optometrist 🏵 🕒 🔞
Oklahoma	000	Pharmacist
Oregon	000	Physician
Pennsylvania O	000	School counselor
Rhode IslandQ	000	School principal or superintendent $\mathcal{O} \mathcal{O} \mathcal{O}$
South Carolina	000	Scientific researcher 🏵 🗓 💮
South Dakota O	000	Social worker
Tennessee	000	Statistician 🏵 😉 🟵
Utah	000	Therapist (physical, occupational, speech)
Vermont	000	Teacher (elementary)
Virginia	000	Teacher (secondary)
Washington	ÖÖÖ	Veterinarian YEW
West Virginia O	000	Writer or journalist YEW
Wisconsin	000	Skilled trades
Wyoming	000	Other
Other U.SQ	000	Undecided
Canada	000	Laborer (unskilled)
Latin America	000	Semi-skilled worker
Europe	000	Other occupation
Other	000	Unemployed

- 21. Belaw is a list of 66 different undergraduate major fields grouped into general categories. Mark only three of the 66 fields as follows:
  - 1 First choice (your probable major field of study).
  - ② Second choice.
  - The field of study which is least appealing to you.

ARTS AND HUMANITIES  Architecture	PROFESSIONA L Health Technology (medical, dental, laboratory)
BIOLOGICAL SCIENCE Biology (general)①②① Biochemistry①②① Biophysics①②① Botany①②① Zoology①②① Other①②①	SOCIAL SCIENCE Anthropology①② ① Economics①② ① Education①② ① History①② ① Political science (government, int. relations)①② ①
BUSINESS	Psychology ①② 🕒
Accounting ① ② Û Business admin ① ② Û Flectronic data processing ① ② Û	Social work①② C Sociology①② C Other①② C
Secretarial studies ① ② ① Other ① ② ①	OTHER FIELDS Agriculture ① ② ① Communications
ENGINEERING  Aeronautical ①②①  Civil ①②①  Chemical ①②①  Electrical ①②①  Industrial ①②①  Mechanical ①②①  Other ①②①	(radio, T.V., etc.) ① ② ①  Electronics (technology) ① ② ①  Forestry ① ② ①  Home economics ① ② ①  Industrial arts ① ② ①  Library science ① ② ①  Military science ① ② ①  Physical education
PHYSICAL SCIENCE         Chemistry       ① ② Û         Earth science       ① ② Û         Mathematics       ① ② Û         Physics       ① ② Û         Statistics       ① ② Û	and recreation ① ② Û Other (technical) ① ② Û Other (nontechnical) ① ② Û Undecided ① ② Û

Please be sure that only three circles have been marked in the above list.

11	
22. Below is a general list of things that students sometimes do.	
Indicate which of these things you did during the past year in school.	24. Indicate the importance to you personally of each of the following: (Mark one for each item )  Becoming accomplished in one of the performing arts (acting,
If you engaged in an activity frequently, mark "F."  If you engaged in an activity one or more times, but not frequently, mark "O" (occasionally). Mark "N" (not at all) if you have not performed the activity during the past year. (Mark one for each item)	each of the following:(Mark one for each item )  Somewhat  Becoming accomplished in one of the performing arts (acting,
If you engaged in an activity one or more times, but not frequently, mark "O" (occasionally). Mark "N"	γ γ γ γ γ γ γ γ γ γ γ γ γ γ γ γ γ γ γ
(not at all) if you have not performed the activity	Becoming accomplished in one of the performing arts (acting,
during the past year. (Mark one for each item )	dancing, etc.)
Voted in a student election	Becoming an authority on a special subject in my subject field . 🗉 🛇 🕄 🕟
Voted in a student election	Obtaining recognition from my colleagues for contributions in my
Came late to class	special field © © 9 ®
Played a musical instrument	Becoming an accomplished musician (performer or composer) 🖲 🔾 🗓 🔞
	Becoming an expert in finance and commerce (a) (a) (b)
Checked out a book or journal from the school library P 🔘 🔞	Having administrative responsibility for the work of others © ② ③ ®
Arranged a date for another student	Being very well-off financially
Overslept and missed a class or appointment P @ N	Helping others who are in difficulty
Typed a homework assignmentP 📵 🔞	Participating in an organization like the Peace Corps or Vista (© )
Participated in organized demonstrations	Becoming an outstanding athlete
Failed to complete a homework assignment on time 🗗 🔘 🔞	Becoming a community leader
Argued with a teacher in class	Becoming a community reader
Was a guest in a teacher's home 🗐 🔘 🔞	Making a theoretical contribution to science
Rode on a motorcycle	Writing original works (poems, novels, short stories, etc.)   © (S) (N)
Slept or dozed in class	Never being obligated to people
Studied with other students	Creating artistic work (painting, sculpture, decorating, etc.) (© (V) (S) (N)
Did extra (unassigned) reading for a course 🖻 🔘 🔞	Keeping up to date with political affairs
Took sleeping pills	Being successful in a business of my own
Tutored another student	Developing a meaningful philosophy of life 🖹 🔾 🕤 🔞
Played chess	
Saw a foreign movie	
Took a tranquilizing pull	Agree strongly
Discussed religion © ON	25. Mark one in 7 Agree somewhat
Took vitamins (FON)	each row: ) Disagree somewhat
Visited an art gallery or museum	Disagree strongly
Took a trip of more than 500 miles © 🔘 🕦	S S S S S S S S S S S S S S S S S S S
Got a traffic ticket © 🔘 🗎	Agree s Bree s lisagre
Got a traffic ticket	25. Mark one in Agree somewhat each row: Disagree strongly  College faculty are more competent than are students
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	The activities of married women are best confined to the home and family
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum
Got a traffic ticket	to specify the curriculum  The activities of married women are best confined to the home and family
Got a traffic ticket	to specify the curriculum



1069	Appendix B-5 STUDENT INFORMATION FORM	818950
YOUR NAME (please print)	Middle or Molden Last You Se Zin Code (if known)	When were you born?  Month Day Year (01-12) (01-31)  Curity Number lease copy arefully)
Education as part of a cont in this research will contributed by their college experient the Council in order to mak	ort is being collected for the American Collected for the American Collected for the American Collected to an understanding of how students acces. Identifying information has been received as subsequent mail follow-up studies possible strictest professional confidence, and less for research purposes.	operation 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
DIRECTIONS: Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.	I came to this college from a junior col	legeO
Use only black lead pencil (No. 212 or softer).  Make heavy black marks that fill the circle.  Erase cleanly any answer you wish to change.  Make no stray markings of any kind.  Yes No  Example: Will marks made with ball pen or  fountain pen be properly read?	to your high school years. Do not be areas of interest and few students w (Mark all that apply)  Was elected president of one or more stoy the school)	lack
1. Your Sex: Male	Had a major part in a play	iterary magazine
3. What was your average grade in secondary school? (Mark one)  A or A+ ○ B○  A○ C+○  B+○ D○		8. Do you have any concern about your ability to finance your college education? (Mark one)
4. To how many colleges other than this one did you actually apply for admission? From how many did you receive acceptances? (Mark one in each column)  Applications Acceptances  No other	None	None (I am confident that I will have sufficient funds)



tend to finance the <u>first yeor</u> of your undergroduote education?  (Mark <u>one</u> in <u>each tow</u> )	18. During the post year in school, how often did the following statements apply to you? (Mark one in each row)	
Personal savings and or employment.	Rarely Always Usually Sometimes of Neve	-
Repayable loan	Turned in assigned work on time	
11. What is the highest level of formal education obtained by your parents? (Mark one in each column)	Was too bored to study	
Father Mother Grammar school or less.	Made careless mistakes on a test	
Some high school	Did my homework at the same time every day	
College degree	Put off starting my homeworkO.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O	
12. What is your <u>best estimate</u> of the total income last year of your parental family (not your own	Memorized facts or formulas without understanding them	
family if you are married)? Consider annual income from all sources before taxes. (Mark one)  Less than \$4,000 \$15,000-\$19,999.	Quit before completing a difficult assignment	
\$4,000-\$5,999O \$20,000-\$24,999.O \$6,000-\$7,999O \$25,000-\$29,999.O	Shared or reviewed notes with other students	
\$8,000-\$9,999O \$30,000 or more .O \$10,000-\$14,999.O	or test	
13. What is your racial background? (Mark one)  Caucastan  Negro. O American Indian.	Daydreamed while studying	
Oriental O Other O  14. Mark one in each Religion in Which You Religious	Included minor details when taking notes	
column: Were Reared Preference Protestant	Analyzed my mistakes to be sure I understood what was wrong	
Jewish	Carefully went over diagrams or tables in the textbook	
15. How would you rate the academic standards of your high school? (Mark one)	Clarified assignments with an instructor O O	
Very high	Get married while in college?	Q
Definitely below average	Obtain an A-or better over-all grade point average?	0
school graduating class? (Mark one)  Top 1%O Top 10%O Top Quarter O  2nd Quarter.O 3rd Quarter O 4th Quarter.O	Change career choice?	000
17. Where did you live for most of the time while you were growing up?	Be elected to a student office?	0
On a farm	Be elected to an academic honor society?	0000
. •	11	

20. Mark one in each column:

Vour birthplace
Vour father's birthplace
Vour mother's birthplace Alabama .....O Alaska..... 000 Arizona..... 000 Arkansas..... 000 California ..... 000 Colorado ..... 000 000 Connecticut .... O Delaware..... 000 D.C. ..... 000 Florida ..... 000 Georgia ..... 000 Hawaii..... 000 Idaho .....O Illinois ..... 000 Indiana ..... 000 lowa..... 000 Kansas ..... 000 Kentucky..... 000 000 Louisiana ..... O 000 Maine..... Maryland ..... 000 000 Massachusetts .. O Michigan ..... 000 Minnesota ..... 000 Mississippi..... 000 Missouri ...... 000 Montan a..... 000 Nebraska ..... O 000 Nevada ..... New Hampshire . O 000 New Jersey .... O 000 New Mexico .... O 000 New York .....O 000 North Carolina .. O 000 North Dakota ... O 000 000 Oklahoma .....O 000 Oregon ..... 000 Pennsylvania...O 000 Rhode Island ... O 000 South Carolina.. O South Dakota ... O 000 Tennessee ..... 000 Texas ...... 000 000 Utah ..... Vermont..... 000 Virginia..... 000 000 Washington ..... 000 West Virginia... O Wisconsin ..... 000 Wyoming ..... 000 Canada ..... Latin America...O 000 Europe ...... 

21. Mark only three responses, one in each column.

Your probable career occupation. Your father's occupation. Your mother's occupation.

NOTE: If your father (or mother) is deceased, please indicate his (her) last occupation.

000	
Accountant or actuary $\bigcirc \bigcirc \bigcirc \bigcirc$	
Actor or entertainer $\bigcirc \bigcirc \bigcirc \bigcirc$	
Architect $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$	
Artist ♥ 🗈 🚳	
Business (clerical)	
Business executive	
(management, administrator)♡ 🗗 М	
Business owner or proprietor $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$	
Business salesman or buyer $\bigcirc \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	
Clergyman (minister, priest) 💬 🕒	
Clergy (other religious) $\bigcirc$ $\bigcirc$ $\bigcirc$	
Clinical psychologist	
College teacher $\bigcirc$ $\bigcirc$ $\bigcirc$	
Computer programmer	
Computer programmer	
Conservationist or forester $\bigcirc \bigcirc \bigcirc \bigcirc$	
Dentist (including orthodontist) (PM)	
Dietitian or home economist	
Engineer	
Farmer or rancher	
Foreign service worker	
(including diplomat) $\bigcirc \bigcirc \bigcirc \bigcirc$	
Housewife ♥  🕅	
Interior decorator	
(including designer)	
Interpretor (translator) 🛇 🕒 🔞	
Lab technician or hygienisf $\bigcirc \bigcirc \bigcirc \bigcirc$	
Law enforcement officer $\bigcirc \bigcirc \bigcirc \bigcirc$	
Lawyer (attorney)	
Military service (career) 🏵 🗗 🕅	
Musician (performer, composer) 💇 🖲 🔞	
Nurse	
Optometrist	
Pharmacist	
Physician $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$	
School counselor 🎔 🖹 🕅	
School principal or superintendent ( F (	
Scientific researcher	
Social worker 🏵 🕒 🚳	
Statistician	
Therapist (physical,	
occupational, speech) 🛇 🗗 🚳	
Teacher (elementary)	1
Teacher (secondary)	1
Veterinarian	
Writer or journalist	1
Skilled trades	
Other	
Undecided	
Laborer (unskilled)	
Semi-skilled worker	1
Other occupation	
Unamplement	

22. Below is a list of 66 different undergraduate major fields grouped into general categories. Mark only three of the 66 fields as follows:

①	<u>First</u>	choice	(your	probable	major	field of	study)
---	--------------	--------	-------	----------	-------	----------	--------

- Second choice.
- (L) The field of study which is <u>least</u> appealing to you.

ARTS AND HUMANITIES	PROFESSIONAL.
Architecture①②①	Health Technology
English (literature) ① ② 🗅	(medical, dental,
Fine arts ① ② ①	laboratory)①② C
History	Nursing
Journalism (writing) ① ② ①	Pharmacy①② C
Language (modern) 1 2 L	Predentistry ① ② ①
Language (other) 1 2 L	Prelaw
Music ① ② Ū	Premedical①② Ū
Philosophy①②①	Preveterinary①② ①
Speech and drama ① ② ①	Therapy (occupat.,
Theology ① ② 🗅	physical, speech)①② 🗅
Other ① ② ①	Other
BIOLOGICAL SCIENCE	SOCIAL SCIENCE
Biology (general)①②①	Anthropology ①② 🕒
Biochemistry ① ② ①	Economics①② ①
Biophysics①②①	Education①② 🕒
Botany ① ② ①	History
Zoology①②①	Political science
Other ① ② 🕒	(government,
	int. relations) ① ② 🕒
BUSINESS	Psychology ① ② 🕒
Accounting①②①	Social work
Business admin 1 2 🕒	Sociology 1 2 🗅
Electronic data	Other
processing ① ② 🗅	
Secretarial studies ① ② 🕒	OTHER FIELDS
Other ① ② 🕒	Agriculture
	Communications
ENGINEERING	(radio, T.V., etc.) .1 2 🕒
Aeronautical ① ② 🕒	Electronics
Civil ① ② 🕒	(technology) ① ② 🕒
Chemical	Forestry
Electrical	Home economics ① ② 🗅
Industrial	Industrial arts①② 🕒
Mechanical①②①	Library science①② 🗅
Other ① ② L	Military science①② C
	Physical education
PHYSICAL SCIENCE	and recreation ①② C
Chemistry	Other (technical) ① ② C
Earth science ① ② Ū	Other (nontechnical) ① ② L
Mathematics①②①	Undecided①② ©
Physics	
Statistics ①②①	

Please be sure that only three circles have been marked in the above list.

23.	Below is a general list of things that students sometimes do. Indicate which of these things you did during the <u>past year</u> in school.	25.			rtant Imports
	If you engaged in an activity frequently, mark "F."  If you engaged in an activity one or more times, but not frequently, mark "O" (occasionally). Mark "N" (not at all) if you have not performed the activity during the past year. (Mark one for each item)		each of the following:(Mark one for each item )	tiar	Very Important Somewhat Impor
	not frequently, mark "O" (occasionally). Mark "N"			Essential	ery II
	(not at all) if you have not performed the activity during the past year. (Mark one for each item)		Becoming accomplished in one of the performing arts (acting, dancing, etc.)		8 S 8 S
	Voted in a student election	l	Becoming an authority on a special subject in my subject field		
	Came late to class		Obtaining recognition from my colleagues for contributions in my		
	Played a musical instrument		special field		V (S (N
	Studied in the library	1	Becoming an accomplished musician (performer or composer)		
	Checked out a book or journal from the school library		Becoming an expert in finance and commerce		
	Arranged a date for another student		Having administrative responsibility for the work of others	. E	<u> </u>
	Overslept and missed a class or appointment FON	ł	Being very well-off financially		<b>W (B) (W</b>
	Typed a homework assignment		Helping others who are in difficulty		
	Discussed my future with my parents		Becoming an outstanding athlete	. (E) (	(N (S) (N)
	Failed to complete a homework assignment on time F O N  Argued with a teacher in class	İ	Becoming a community leader	. E	0 0 0
	Argued with a teacher in class		Making a theoretical contribution to science		
	Participated in a demonstration against the war in		Writing original works (poems, novels, short stories, etc.)	.E	V (S (N
	Viet Nam € ⊙ N		Never being obligated to people	E	(V (S) (N)
	Participated in a demonstration against racial		Creating artistic work (painting, sculpture, decorating, etc.)		(N (B) (M)
	discrimination F 🗇 🔞		Keeping up to date with political affairs	E)	$\mathbb{Q} \otimes \mathbb{Q}$
	Participated in a demonstration against some		Being successful in a business of my own		W @ W
	administrative policy of my school	_	Developing a meaningful philosophy of the		
	Did extra (unassigned) reading for a double first				at
	Took sleeping pills		( Agree strongly	at	емћ
	Played chess	26	. Mark one in Agree somewhat	new!	Som
	Read poetry not connected with a course		Agree strongly  Agree somewhat  each row:  Disagree somewhat  Disagree strongly  Students should have a major role in specifying the	. Agree somewhat	) Disagree somewhat ) Disagree
	Took a tranquilizing pill	1	Disagree strongly	g/ee	Disagr <sub>e</sub> Disagr <sub>e</sub>
	Discussed religion		Students should have a major role in specifying the	₹ ^\	a (
	Took vitamins FON		college curriculum	٠	OC
	Visited an art gallery or museum F O N  Worked in a school political campaign F O N		Scientists should publish their findings regardless of	<b>D</b>	0 0
	Worked in a school political campaign		the possible consequences.	<b>-</b>	· • · · · · •
	Missed school because of illness		Realistically, an individual person can do little to bring about changes in our society	D	OC
	Smoked digarettes FON	ŀ	Callege essiciate house the sight to regulate student	_	
	Discussed politics		behavior off campus	ر	.OC
	Drank beer		The chief benefit of a college education is that it increases one's earning power	$\overline{}$	$\circ$
	Discussed sports		merodoos eno a coming provincia	J	٠٠
	Asked a teacher for advice after class F O N  Had vocational counseling F O N		Faculty promotions should be based in part on student evaluationsO	<b>D</b> .	.OC
	Stayed up all night ⑤ ⑥ ℕ		My haliate and attitudes are similar to those of most		
2/	Indicate the importance to you personally of		other studentsO	Э	.OC
	the following persons or events in your of decision to enroll in this college.		Student publications should be cleared by college	$\overline{}$	0 0
	the following persons or events in your of the decision to enroll in this college.  (Mark one for each item)		officials	≺…	.C
	Parent or other relative		Marijuana should be legalizedO	٠	c
	High school teacher or counselor		Current levels of air pollution in large cities justify		
	Friends attending this college		the use of drastic measures to limit the use of motor vehicles	<b>D</b>	.OC
	Graduate or other representative from		At a second seco		
	this collegeOO		investments of Federal moneyO	<b>D</b>	.O C
	Professional counseling or college		Cinc. At advantation should be published on redin		
	placement service		and TV	٠	.OC
	Athletic program of the college		College officials have the right to ban persons with	$\overline{}$	$\circ$
	Other extracurricular activities		extreme views from speaking on campus	$\tilde{O}^{}$	0.00
	Opportunity to live away from home			<b>~</b> ,,,	,
	Low cost	H	Students from disadvantaged social backgrounds should be given preferented treatment in college		
	Academic reputation of the college		admissions	O	OC
	Most of the students are like meQQQ		and the second s		
	Religious affiliationOO	11	with student protests on campus	J	00

# Appendix C

Freshman Follow-up Questionnaires

Appendix C-1 1965 follow-up of 1961 freshmen

Appendix C-2 1967 follow-up of 1966 freshmen

Appendix C-3 1968 follow-up of 1967 freshmen



# Appendix C-1

1965 Follow-up Questionnaire of 1961 Freshmen

#### Dear Student:

You may remember that when you first entered college in 1961 you filled out a brief questionnaire in which you indicated your future educational and career plans. The results of the study based on this questionnaire have recently been published in a small book, Who Goes Where To College? (Science Research Associates of Chicago, 1965).

Now that nearly four years have elapsed since the original study, we would like once again to ask you about your current activities and plans and also to get your impressions of your undergraduate college. The purpose of this follow-up study, which is being supported jointly by the National Science Foundation, the U.S. Office of Education, and the National Institutes of Health, is to examine changes in career plans that occur after the student enters college, and to determine some of the factors that influence students to drop out of college, to take up graduate study, or to pursue a particular type of career.

We should greatly appreciate your completing this booklet and returning it to us in the enclosed envelope. All of the information is to be coded and used in group comparisons for research purposes only, so your responses will be kept entirely confidential.

Since we are following up only a limited sample of students, it is important to secure as complete a response as possible. We hope you will be able to participate.

Thank you for your consideration.

Logan Wike

Logan Wilson President

Is your name and address correct? Please add your zip code and make any other changes:

Bureau of the Budget No. 99-6503 Expiration Date: June 15, 1966

© 1965 American Council on Education - 51- رزير ٿئ



	Social Security Number:													
	If you should move from your person we could contact who	curre	ent Id I	addi be lil	ress	and to k	we s	houle of yo	l los ur wl	e contact nereabout	with yos?	u, is the	re som	e
	Name													
	Street Address													
	City and State													
	City and State		_							•		·	<del></del>	
	HOW TO MARK THIS BOOKL device. Certain marking requ these few simple rules will b Use black lead pencil on Make heavy black marks Erase cleanly any answer Do not make any stray ma	ireme e mo: ly (#2 that f r you arks i	ents st 2½ fill wi	approof	ess ecia ofter circ o ch	entia ted. ). le co ange let.	al to mple	this tely.	proce	ess. Your	careful	observa	Yes	<u>No</u>
	EXAMPLE: Will marks made	with	ba	all po	en, f	ounta	in pe	nord	color	ed pencil l	oe prope	rly read?	0	
1.	Please mark one answer in ea	ach c	olu	ımn:							Highe: Degree Now He	e	Highes Degree Planne	•
	None Associate (or equivalent) Bachelor's Degree (A.B., Master's Degree (M.A., M Ph.D. or Ed.D. M.D., D.D.S., or D.V.M. L L.B. or J.D.  Other	(A.A B.A. .S., e	., F	A.S.,	, etc.	:.) .)					0000000		00000	
2.	When do you expect to obtain	your	hi	ghes	t de	gree	P (Ma	ırk o	ne)					
	I have already obtained it This year (1965)											_		
	1966				(	C				69		_		
	1967		• • • • •	•••••	(	)	Not	sure				O		
3.	What occupation do you plan													
	to pursue as a career?													@@
,	·												3 3	33
4.	What is your current (or most undergraduate major field of													$\Theta \Theta$
	undergraduate major field of	study	• –										_	(6)
5a.	Answer if male: Have you ev served on full-time active dut in the armed services?		No	0	Y	es	Less		2 y 3 y	ear () ears () ears () nore ()			6 7 8 9	6 7 8 9
5b.	Answer if <u>female</u> : In to one do you realistically <u>expe</u>	he lo	ng (Ma	run irk o	which	ch on nswe	e of r in e	the feach	ollov colu	ving do yo mn)	ou really	y prefer	and wh	ich
									Rea	ally prefe	r	Realist	ically	expect
	Housewife only										_			
	Housewife with occasiona	al emp	plo	ymei	1t			•••••		. O	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	Ō	
	Housewife for a few years	s, em	plo	ymei	ıt la	ter .				. O	• • • • • • • • • • • • • • • • • • • •		Ō	
	Housewife with regular en	nploy	m e	nt	•••••	•••••	• • • • • • • • • • • • • • • • • • • •	•••••	•••••	. 🔾	•••••	• • • • • • • • • • • • • • • • • • • •	<u>O</u>	
	Employment only	•••••	••••	•••••	•••••	•••••	 -5		••••••	. O	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	O	

	,	ach activit	(y)	
	•		moderate amount	Little <u>or none</u>
Research and development Administration or management	0		0	O
your long-run future employer? (If y	ou are still a stude:	ıt, answer		
		]	First Employer	Long-run Career Employer
Government:			_	
Education:	Higher education		🔾	O
Other non-profit organizations:	Hospitals, clinics Social welfare Church			  
Business and services:	Self-employed, or family business		O	
	Professional partne	ership	🔾	
Other (Mark and specify)			_	ŏ
apply in each column below. (Pleas	se mark at least one	in each co	vlumn)	
	cadenic er 1961-62 12 er 13 er 13 er er 1961-62	mme	19 19 19 19 19 19 19 19 19 19 19 19 19 1	1965 1965 140 an ar 1965 1965 1965 1965 1965
for part of the period				<u> </u>
for the entire period				
Employed: in career-related job	OOO(	O O (	0 0 0	OO
in non-cateer-related job  Housewife: Other (vacation, illness, etc.)			0 0 0	0 0 0 0 0 0
•	_		•	
Other private home, apartment College dormitory	or room	00000		
	Research and development	Teaching	Teaching	Teaching Research and development Administration or management Service to patients or clients  After completing your studies, which of the following do you expect as your your long-run future employer? (If you are still a student, answer in terms of after you complete your studies.) (Mark one in each column)  First Employer  Government: Federal State and local Education: Elementary & secondary Higher education Other non-profit organizations: Hospitals, clinics Social welfare Church Other non-profit organization: Business and services: Self-employed, or family business Private company Professional partnership Research Other (Mark and specify)  Please account for your activities since entering college in 1961 by marking apply in each column below. (Please mark at least one in each column)  Full time student: for the entire period for part of the period for part of the period in non-career-related job in non-career-related job in career-related job in caree

w.	In what college did you first enroll (Fall o	1 1961)?		
	Name of college			
	Located inCity	,	State	- India ang manghi Add All The Institute management
11.	Since entering this college, have you chan of time? (Exclude graduation and summer		dout of colleg	e for any perio
	No $\bigcirc$ If $\underline{No}$ , skip to item 17 Yes $\bigcirc$ If $\underline{\underline{Yes}}$ , please answer	on the next page. the questions below:		
12.	Under what conditions did you leave your f	first institution? (Mark one	2)	
	I was asked to leave because of unsati (mark and skip to item 15)			. 0
	to item 15)			$\sim$
13.	In deciding to leave your first college, ind factors (mark one in each row):	licate the importance for yo	ou of each of t	he following
		A <u>major</u> reason for my	A minor reason for my	Unrelated to my
	I had changed my career plans I was dissatisfied with the environmen		<u>decision</u> O	<u>decision</u> O
	the college			
	Career goals		O	O
	Pregnancy  I was tired of being a student  I could not afford the cost of further			
	education	y O	O	O
14.	If you had had greater financial resources anyway? (Mark one)	at your disposal, would yo	ou have left th	is college
	Yes O No	O Not sure		
15.	Have you attended any other undergraduate	institutions since 1961?	(Mark one)	
	No (mark and skip to item #17) Yes, one other institution Yes, two other institutions	00		
16.	What is the name of your current (or most r	ecently attended) undergra	duate institut	ion?
	Name			<del></del>
	Located inCity		State	<del></del>

# YOUR UNDERGRADUATE INSTITUTION

17.	Note: If you did not attend college during the pas on page 8.	t academic year (1964-65) skip to que	stion 30
	Which of the following experiences applies to you	during the past year? (Mark either "y	es" or
	"no" for each item.)	Yes	No
			$\overline{\bigcirc}$
	Elected to a student office	• • • • • • • • • • • • • • • • • • • •	$\sim$
	Played on a varsity athletic team		
	Flunked a course		
	Changed your major field	_	
	Fell in love	O	O
	Got married		Q
	Had a lead in a college play	Q	<u>O</u>
	Wrote an article for the school paper or magaz	sine O	O
18.	Of which of the following college organizations w	vere you a member during the past yea	ır?
		Active Inactive	Not a
		Member Member	Member
	National Social Fraternity or Sorority		_
	Local Social Fraternity or Sorority		0
	Intramural athletic team		
	College athletic team		$\bigcirc$
	Choir or glee club		
	Marching band		
	Honorary (subject matter) Fraternity		
19.	Below is a list of things that college students so you did during the past year in college. (Exclude tion.) If you engaged in an activity regularly with mark the circle under "frequently." If you engage frequently, mark the circle under "occasionally." formed the activity. (Mark one for each item)  Stayed up all night	things which you did only while on variety a frequency appropriate for that actived in an activity one or more times, but have the state of the same o	aca- ity, ut not
	ently	nat all	endy on at al
	c suggest of	e of the second	reduced for at
	000	Became intoxicated	
	Stayed up all night	Drank wine	500
	Came late to class		ŠŎŎ
	before meals)	Discussed how to make money	
	Listened to New Orlean's		200
	(Dixieland) Jazz OOO	Listened to folk music	000
	Gambled with cards or dice	Attended a public recital	~~~
	Lost privileges for infraction of		
	college rules	Widdle Wibelinetto III elabo	000
	Played a musical instrument	Arranged a date for another	000
	Took a nap or rest during the day	Went to an overnight or week-	
	Drove a car	end party	000
	Drank beer	Took weight-reducing or	
	Voted in a student election	dictary formula	000
	Studied in the library	Argued with other students	000
	Attended a ballet performance OOO	Been interviewed as a client in	
	Overslept and missed a class	the college counseling center	
	or appointment	Called a teacher by his first	000
	Had a blind date	A LATIN C	
	Drank in a bar or club	Checked out a book or journal from the college library	000
		Tried on clothes in a store	
	Participated in informal group singing	without buying anything	000
	Cheated on examinations	Asked questions in class	000
	· · · · · · · · · · · · · · · · · · ·	<b>-55</b> -	

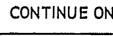


20.		g the <u>past year</u> ? Indicate the average number of da han one every two months, mark "none". (If marri	
		spouse went out together to these events.)	·
	·	Average Number Per Month	
		None 1 2 to 3 4 to 5 6 to 9 10	or more
	Carnal cake coffee or study days	OOOOO	
	•	O O O	. •
	Informal dates to movies, student	0 0 0 0	$\circ$
	gatherings, etc.		. 🔾
	Formal dates to dances and big parties	· · · · · · · · · · · · · · · ·	. O
21.	Description of One of Your Classes:		
	Name below the course you took this past		
	year which was most closely related to you	ur Name of Course	
	primary field of interest.		
	(,		
	TT	Department Time at which cl	ass met
	What was the academic rank of the teacher		_
	Instructor O Assistant	professor O Associate professor	. O
	Full professor Lee	cturer (or other)	
	·	•	
22.	Approximate number of students in class: (	Mark one)	
	14 or less		
	15 – 19 0 30 – 34	O 45 – 49 O	
	20 - 24 0 35 - 39	O 50 or more	
		,	
23.	Number of class sessions per week. (Mark	one)	
	One O Two O Three	O Four or more O	
24.	Please mark "ves" for all the following st	atements which apply to this course. Mark "no" i	fthe
	statement does not apply. (If the course ha	d a lab portion, mark "yes" only for those items	which
	apply to the lecture portion.)	a a lab polition, main yes only for those items	W111C11
		Yes No	<u>Yes No</u>
	The class met only at a regularly	Students had assigned seating	00
	scheduled time and place	Attendance was usually taken	
	The instructor had a good sense of humor	oo every day	00
	The instructor was often sarcastic in class	OO The instructor spoke in a monotone	
	Students were permitted to smoke in class	O The instructor was often dull	ŏŏ
	The class was taught by a graduate student		ŏŏ
	The lectures followed the text book closely	OO The instructor was engaged in research	$\bigcirc$
	The instructor was a woman		00
	The instructor called students by	We sometimes had unannounced or	$\circ$
	their first name	OO "pop" quizzes	
	The instructor encouraged a lot of	The examinations were usually of	
	class discussion	OO the "objective" type (multiple	
	The instructor was exceptionally well-	choice, matching, etc.) rather than	~ ~
	grounded in the course subject matter	the "essay" type	00
	The instructor outlined the day's	I almost never spoke in class unless	
	lecture or discussion at the be-	I was called on	00
	ginning of each class	OO If he had wanted, a student could	
	I sometimes argued openly with	probably have passed this course	
	the instructor	mainly on "bluff"	00
	I took notes regularly in class	I sometimes argued openly with other	
	I usually typed my written assignments	oo students in the class	00
	I was in the instructor's office one or	I knew the instructor's first name	ŎŎ
	more times	OO I knew which institution awarded the	
	I was a guest in the instructor's home	instructor his degree	00
	one or more times	I usually did all of the assigned	
	The instructor was enthusiastic	reading in this course	00
	·		

25.	Impressions of Your Undergraduate College: Answer each of the following as it applies to your
	college (the one attended during the past year)  Yes No
	The students are under a great deal of pressure to get high grades
26.	How many students did you call 5 or less 6-10 11-20 21-50 51-100 101-200 More by their first names or by nickname?  (Estimate this as best you can) O O O O O O
	(Estimate this as best you can,
	How many of these students did you consider close friends? O O O O O O O
27.	To what extent does each of the following describe the psychological climate or atmosphere at
	this college? (Mark one column for each)  Not at all
	Very Descriptive In-Between Descriptive
	Intellectual         O <t< td=""></t<>
28.	What is your over-all evaluation of this institution? (Mark one)
	Very satisfied with my college
29.	All in all, in terms of your own needs and desires, how much of the following did you receive during the past year? (Mark the appropriate column after each item)
	Too much Just about or the right Not Too many amount enough
	Freedom in course selection  Social life Personal contacts with classmates Work required of you in courses Outlets for creative activities Sleep Exercise Personal contacts with faculty Personal contacts with family Advice and guidance from faculty and staff

### RECENT AND CURRENT ACTIVITIES

	Loca than one tarm (quertar, comparer, trimageer)
	Less than one term (quarter, semester, trimester)
	One year (but less than two)
	Two years (but less than three)
	One year (but less than two) Two years (but less than three) Three years (but less than four)
414.4	Four years (or more)
31.	How have you financed your college and living expenses during your undergraduate years? (Mark the appropriate percentage in each row below):
	None 1-20% 21-40% 41-60% 61-80% 81-100%
	a. Support from your parents O O O O O
	b. Support from your spouse
	c. Scholarship or fellowship from:
	your college O O O O
	state or local government
	Federal government
	d. Earnings from your own employment
	e. Loans:
	from the Federal government
	from your state or local government O O O
	from your college O O O O
	commercial
	other
	f. Other sources (savings, etc.) O O O O
32.	How much money have you earned from summer work since entering college? (Mark one response in each row)
	\$1- \$100- \$200- \$300- \$500- \$600- \$700- \$1000
	None 99 199 299 499 599 699 999 or more
	Summer 1962 O O O O
	Summer 1963 O O O O
	Summer 1964 O O O O
	Summer 1965 O O O O
33.	Estimate your average undergraduate grade (or grade point average) so far: (Mark one)
	Over-all In major subject
	3.75 – 4.00 (A or A+)
	3.25 – 3.74 (A- or B+)
	2.75 – 3.24 (B)
	2.25 - 2.74 (B- or C+)
	1.75 – 2.24 (C)
	1.25 – 1.74 (C- or D+)
	Less than 1.25 (D or less)
34.	Do you plan to enroll (or are you enrolled) in graduate or professional school?
	Yes, immediately after completing college
	(mark and skip to #35 on the next page)
	Yes, but not immediately after college
	Not sure
	No (mark and skip to #45 on page 10)





	Which of the following factors <u>best</u> describes your reason for not enrolling in graduate or professional school right away? (Mark only one)
	Lack of finances
35.	When will you enroll in graduate or professional school? (Mark one)
	I am already enrolled
36.	To begin with, will you attend (or are you attending) graduate or professional school on a (mark one):
	Full time basis? O Part time basis? O Not sure
37.	To how many graduate institutions did you apply for admission, and how many acceptances did you receive?
	Number of graduate institutions  applied to
38.	Where do you plan to attend (or are you attending) graduate or professional school?
	Name of Institution
	Located in State
39.	Located in City State  In what department or school will (or did) you enroll?
39.	City State  In what department or school will (or did) you enroll?
	City State
	City State  In what department or school will (or did) you enroll?  Graduate Field of Study
	City State  In what department or school will (or did) you enroll?  Graduate Field of Study  Is the above your (mark one):  First choice institution?
40.	City State  In what department or school will (or did) you enroll?  Graduate Field of Study  Is the above your (mark one):  First choice institution?
40.	City  State  In what department or school will (or did) you enroll?  Graduate Field of Study  Is the above your (mark one):  First choice institution?
40.	City State  In what department or school will (or did) you enroll?  Graduate Field of Study  Is the above your (mark one):  First choice institution?
41.	City  State  In what department or school will (or did) you enroll?  Graduate Field of Study  Is the above your (mark one):  First choice institution?

Source of Stipend		(or Award		Award		
I. Federal Government		ted) offere	d <u>ac</u>	cepted	r	efuse
A. Atomic Energy Commission	_	Q		Q		Ō
B. Department of Defense	_	Q		Q		Ō
C. National Science Foundation		0		$\tilde{}$		Q
D. Veterans Administration	_			0		$\circ$
E. National Aeronautics and Space Administr	ation ()	············· O		O		0
F. U. S. Office of Education:						_
National Defense Education Act	$\sim$	🔾		O		$\widetilde{\mathcal{O}}$
Other Office of Education	$\sim$			O		Ö
G. U.S. Public Health Service	$\sim$			O		$\circ$
N.I.H. Fellowship Program	0 .			O		0
N.I.H. Training Grant and		$\sim$		$\sim$		$\sim$
Traineeship Program	_		•••••	0	• • • • • • • • • • • • • • • • • • • •	$\circ$
Other Public Health Service	$\tilde{}$	🔘	•••••	Ö	• • • • • • • • • • • • • • • • • • • •	Õ
H. Other Federal Government	_		•••••	0		$\circ$
II. Woodrow Wilson National Fellowship	_		•••••	$\tilde{}$	•••••	$\circ$
III. Other private source		O	•••••	O	•••••	0
IV. Directly from the school that I am						$\sim$
(or will be) attending	$\sim$	$\sim$		$\tilde{}$	•••••	$\sim$
V. Other	0 .	O		O	•••••	0
44. Which of the following best describes the type of Teaching Assistantship			old? (Mar	k one)		
Work free stipend (tuition plus cash grant).						
No stipend awarded						
•			1	6 11		
45. In an average day during the past year, how muc activities?	in time did y	<del>-</del>			_	,
			age numbe			
Studying for class assignments ("zero" if n		~ ~	2 3 4 5			10(+)
enrolled during the past year)			0000			Ŏ
Reading for pleasure			0000			Õ
Sleeping			0000		OO	Ŏ
Attending movies or plays			ÖÖÖÖ	000	$\widetilde{O}$	Q
Playing games (cards, chess, etc.)			SOSC		$\circ$	Q
Domestic duties (including child care)	****************		0000	000	00	0
46. Since entering college in 1961, which of the follower for each):	lowing applic	es to you?(	Mark ''ye:	s" or "	•	4.7
Participated in the Undergraduate Research	Participatio	n (URP) pro:	gram		Yes	No
sponsored by the National Science Found	•		,		0	0
If "yes", please indicate when you par						
fromMonth Year		Month				
Been placed on academic probation				Year	$\bigcirc$	$\bigcirc$
Assisted on a professor's research project					$\tilde{c}$	$\tilde{c}$
Worked on an independent research project.					$\tilde{c}$	$\tilde{c}$
Been elected to "Who's Who in American Co					$\sim$	$\sim$
	_				000000000	00000000000
Been elected to Phi Beta Kappa (or compara					$\sim$	$\sim$
Graduated (or expect to graduate) with honor Served as a laboratory assistant	٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠	••••••••••••••••••••••••••••••••••••••	••••••••	•••••	$\sim$	$\sim$
					$\sim$	$\sim$
Participated in departmental honors program					$\sim$	$\mathcal{C}$
Participated in general honors program					$\mathcal{C}$	$\sim$
Was author or co-author of an article in a sc.	•					$\mathcal{C}$
Was author or co-author of an article in othe	•	r literary pu	blication.		0	$\cup$
•	-60-					

43. Mark all that apply below:

47.	Since entering college in 1961, have you received any professional vocational counseling? (Mark one)
	No         O           Yes:         one hour or less         O           two - three hours         O           four - five hours         O           six - nine hours         O           ten or more hours         O
48.	Have you ever been married? (Mark one)
	No (skip to #51)
	Yes: now living with spouse
	separated O
	divorced O
	widowed
49.	When were you married? (Mark one)
	Before entering college
	While in college: in 1961
	in 1962
	in 1963
	in 1964
	After leaving college (or graduating)
	mer reaving correge (or graduating)
50.	How many children do you have (include current pregnancy)?
	None
51.	married, report totals for your family.) (Mark one in each column.)
	From your own work or employment Total (incl. spouse)
	None
	\$100 - \$249
	\$250 — \$499
	\$500 - \$749
	\$750 - \$999
	\$1000 - \$1249
	\$1250 <b>–</b> \$1499
	\$1500 and up
52.	Please indicate the national origin of your parents (Mark one in each column).
	<u>Father</u> <u>Mother</u>
	North America
	South America
	Britain and Western Europe
	Eastern Europe
	Asia
	Africa
	Other (mark and specify) ————————————————————————————————————



53.	What is the highest level of formal education obtained by your parents? (Mark one in each column):
	Father Mother
	Grammar school
	Some high school
	High school graduate
	Some college
	College degree         O          O           Post-graduate degree         O          O
	Post-graduate degree
54.	Please estimate the total current income of your parents. (Mark one)
	Less than \$ 4,000 per year
	4,000 - 6,999 0 19,000 - 21,999
	7,000 - 9,999
	10,000 - 12,999
	13,000-13,999
55.	What is your racial background? (Mark one)
	White Negro American Indian
	Oriental Other (mark and specify) O
56.	Please mark one answer in each column below:
	Religion in Present
	which you religious
	Protestant were reared preference
	(mark and specify)
	Roman Catholic
	Jewish
	Other (mark and specify)
	None
57.	Below is a listing of possible legal and social changes affecting women in the U.S. In your opinion, how important or desirable would each of these changes be? (Mark one for each item)
	Not Not Detri-
	Essential Desirable Sure Desirable menta
	Ask parents, high school teachers and
	counselors to urge qualified girls to con-
	tinue education for occupations which are
	now held mainly by men
	Make available professionally supervised
	child care facilities for children of working
	mothers at all economic levels
	Change the income tax laws to permit
	working mothers to deduct all costs of child care in home
	Make paid maternity leave or comparable in-
	surance benefits available to all working mothers O O O
	Ask private and public organizations to make a
	concentrated effort to give money to qualified
	women for further education at all
	levels
	Encourage women to seek elective and
	appointive posts at local, state and national
	levels of government
	THIS IS THE END OF THE QUESTIONNAIRE * * * * * THANK YOU
	THAIR TOO

#### Appendix C-2

1967 Follow-up Questionnaire of 1966 Freshmen

000000000
൭൙൞൏൏൏൏ഩ
<u>୭</u> ୭୭୭୭୭୭୭୭୭୭
9000000000

#### Dear Student:

You may remember that when you first entered college in 1966 you completed a brief information form in which you indicated your educational and career plans. Our research staff is now engaged in several studies that are intended to contribute to an understanding of how students are affected by their college experiences. Such studies will yield useful information for re-examining educational policy and practice.

We should greatly appreciate your completing this brief questionnaire and returning it to us in the enclosed envelope. All of the information is to be coded and used in group comparisons for research purposes only, so your responses will be held in the strictest professional confidence.

Since we are following up only a limited sample of students, it is important to secure as complete a response as possible. We hope that you will be able to participate.

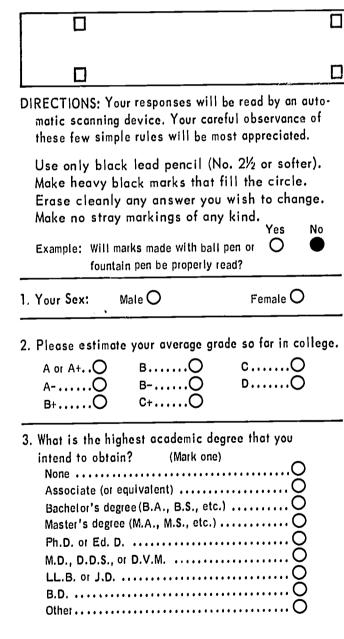
Thank you for your consideration.

Logan Wike

Li left coffege voluntarily	
6. Will you be a full-time student this fall (1967)? Yes	(Mark one)
No, primarily because of (mark the one most important reaso a change in my interests and/or career goals	n):
dissatisfaction with college	
recent or impending marriage	Q
the draftillness or accident	Q
other reason	

Yes \ I was asked to leave for disciplinary reasons ......

How much money	have you	earned s	ince ente	ring coll	ege in 19	66?	
		\$1	\$200-	\$400	\$600-	\$800-	\$1,000
	None	\$199	\$399	\$599	\$799	\$999	01 mot
Academic year 1966-1967		O	O	O	0	a	0
Summer 1967	ŏ	Ŏ	Ŏ	o	ŏ	a	0



7.

$\cdot$	
8. Where did you live for most of the time while you were growing up?  On a farm	12. To what extent do you think each of the following describes the psychological climate or atmosphere at your college?  (Mark one answer for each item) Intellectual Snobbish
Fall Spring Summer  1966 1966-67 1967  With parents	Victorian       000         Practical-minded       000         Warm       000         Realistic       000         Liberal       000
College dormitory O O O Fraternity or sorority house O O Other campus student housing O O Other	13. Answer each of the following as you think it applies to your college:  Yes No  The students are under a great deal of
10. Indicate below the source(s) you used to finance your college and living expenses last year. (Mark one in each row)	The student body is apathetic and has little "school spirit"
Not a   Minor Source   Major Source   Support from family (excluding   Source   (1ºº - 25%)   (26° - 50%)   (more than 50° 2)	Most of the students are of a very high calibre academically
11. All in all, in terms of your own needs and desires, how much of the following did you receive during the past year at college? (Mark one in each row)  Too much Just about or the right Not Too many amount enough  Freedom in course selection	(Mark all that apply)  Yes  Elected to a student office
Outlets for creative activities	Wrote an article for the school paper or magazine

والمراجعت وال

15. Mark only three responses, one in each column. Your probable career occupation. Your father's occupation.	16. What action would be taken by the administration at your college if a student in your living quarters were known to have done the following? (Mark one response for each item)  NOTE. If you lived only at home, skip this question.				
				Major dis•	
NOTE: If your father (or mother) is de-				ciplinary	
ceased, please indicate his (her) last				action (pos-	
occupation.			Reprimand or	sible expul	Sure expul-
Accountant or actuary		No policy	minor disci	sion from	sion from
Actor or entertainer ⊕ 🗗 🔞	Coming in from a	against this	plinary action	college)	college
Architect	date two hours late				
Artist	Cheating on exams	Q	Q	Q	Q
Business (clerical) 🏵 🗗 🔞	Orinking in living quarte	rsQ		······· Q	Q
Business executive	Being drunk		O		0
(management, administrator) $\bigcirc \bigcirc \bigcirc \bigcirc$	Being alone with a date your room during the da	ın 🔾	$\circ$	$\circ$	$\circ$
	Being alone with a date				
Business salesman or buyer $\bigcirc \bigcirc \bigcirc \bigcirc$	your room at night	O	O	O	O
Clergy (other religious)	Staying off campus overn	ught			
Clinical psychologist	without permission		0		O ·
College teacher 🛇 🗗 🚳	Organizing a student den	non			
Computer programmer © 🕒 🕅	stration against some	•			
Conservationist or forester 🛇 🕒 🔞	administrative policy .		······	· · · · · · · · · · · · · · · · · · ·	O
Oentistrincluding orthodontisti (© 🗐 🔞	Writing off color stories in a student publication	$\circ$	$\circ$	$\circ$	$\circ$
Oletitian of home economist $\Theta \Theta \Theta$	ll '				
Engineer $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$	Participating in a water fight or dominitory raid.	0			
Farmer or rancher (*) (*) (*)  Foreign service worker	Using LSO	Ö		Ŏ	ŏ
(including diploinat)	Using marijuana	Ö	Ö	Ö	Ö
Housewife $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$					
Interior decorator	17. Think about the course				
(including designer) 🛇 🕒 🔞	mary field of interest. I	•		-	• • •
Interpretor (translator)	this course. (If the cour	se had a lab porti	on. mark "yes" only	for those items which	ch apply to the
Lab technician or hygienist	lecture portion.)	a.ulaulu aabadul	ad time and place		
Law enforcement officer	The class met only at a students had assigned so	regularly schedul Pating	ed time and prace		
Military service (career)	The lectures followed the				
Musician (performer, composer) 🏵 🗗 🔞	The instructor called stu		•		_
Nurse	The instructor encourage				
Optometrist	I knew the instructor's f				_
Pharmacist 🏵 🗗 🕅	I was in the instructor's				_
Physician 9 EM	The instructor was enthu				_
School counselor $\Theta \bigcirc \Theta$	The instructor had a goo				
School principal or superintendent $\bigcirc \bigcirc \bigcirc$	The instructor was often The instructor knew me b				
Social worker $\Theta$	I sometimes argued open				
Statistician	I usually typed my writte				
Therapist (physical	I was a guest in the inst				
occupational. speech)					
Teacher (elementary) 🖤 🛡 🖤	10.07 1:1 7:1 7:1		1 20 6:		- 1
Teacher (secondary) 🏵 🖻 🔞	18. Of which of the follow		4	nce entering colleg ceived any professi	
Veterinarian 🛇 🖻 🚳	tions were you a memb year? (Mark all that app			cational counseling	
Writer or journalist		-		O	•
Skilled trades	National Social Fraterni Local Social Fraternity			es; one hour or less	-
Undecided	Intrainural athletic team			es, one nour or less 2 – 3 hours	_
Laborer (unskilled)	Cullege athletic team			4 – 5 hours	_
Semi-skilled worker	Choir or glee club			more than 5 hours	
Other occupation 🗐 🕅	Marching band		Q		
Unemployed 🗈	Honorary (subject matter				

20. Below is a general list of things that students sometimes do. Indicate which of these things you did during the past year.	21. Indicate the importance to you personally of each of the following: (Mark one for each item)  Becoming accomplished in one of the performing arts (acting, dancing, etc.)
If you engaged in an activity frequently, mark "F."	ial Port
If you engaged in an activity one or more times, but	enti Tump
not frequently, mark "O" (occasionally). Mark "N"	Becoming accomplished in one of the performing arts $\mathcal{S} \stackrel{\mathcal{S}}{\sim} \mathcal{S} \stackrel{\mathcal{S}}{\sim} \mathcal{S}$
(not at all) if you have not performed the activity	(acting, dancing, etc.)
not frequently, mark "O" (occasionally). Mark "N"  (not at all) if you have not performed the activity  during the past year. (Mark one for each item)	Becoming an authority on a special subject in my subject field. 🗉 🛇 🔇 🔞
	Obtaining recognition from my colleagues for contributions
Voted in a student election	in my special field
Came late to class	Becoming an accomplished musician (performer or composer) © ② ⑤ №  Becoming an expert in finance and commerce
Gambled with cards or dice	Having administrative responsibility for the work of others 🖲 🔾 🕄 🔞
Played a musical instrument	Being very well-off financially
Took a nap or rest during the day	Helping others who are in difficulty
Drove a car	Participating in an organization like the Peace Corps or Vista . © @ ® N
Stayed up all night	Becoming an outstanding athlete
Studied in the library	Becoming a community leader
Attended a ballet performance	Making a theoretical contribution to science
Participated on the speech or debate team	Writing original works (poems. short stories, etc.)
Acted in plays (F) (I) N	Never being obligated to people
Sang in a choir or glee club	Creating artistic work (painting, sculpture, decorating, etc.) 🖲 🛇 🕲 🕲
Argued with other students	Keeping up to date with political affairs
Called a teacher by his or her first a me	Being successful in a business of my own
Wrote an article for the college paper or literary magazine 🕒 🔘 🚷	
Had a blind date	22. Rate yourself on each of the following traits as you really think you
Played in the college band	are when compared with the average student of your own age. We want
Played in the college orchestra	the most accurate estimate of how you see yourself. (Mark one for each
Smoked cigarettes	item) Highest 10 Above Below Lowest 10
Attended Sunday school	Trait Percent Average Average Percent
Checked out a book or journal from the college library 🕒 🔘 🔞	Academic ability
Went to the movies	Athletic ability
Discussed how to make money with other students	Artistic ability
Said grace before meals	Cheerfulness
Prayed (not including grace before meals)	Defensiveness
Listened to folk music	Drive to achieve
Attended a public recital or concert	Leadership ability
Made wisecracks in class	Mathematical ability
Arranged a date for another student	Originality
Took weight-reducing or dietary formula	Political conservatism
Drank beer	Polítical liberalism
Overslept and missed a class or appointment	Popularity
Typed a homework assignment	Popularity with the opposite sex. O
Participated in an informal group sing	Public speaking ability
Drank wine	Self-confidence (intellectual)QQQQ
Cribbed on an examination	Self-confidence (social) O O O O
Turned in a paper or theme late (E) (I) (I)	Sensitivity to criticism
Tried on clothes in a store without buying anything	StubbornnessQQQQ
Asked questions in class	Understanding of others
Attended church	Writing ability
Participated in a demonstration against racial discrimination.	
Participated in a demonstration against some administrative	23. What is your over-all evaluation of your college? (Mark one)
policy of the college	201 10 / 201 0.12. 311 0.12. 31. 37. 37. 37. 301 00110gor (main only)
Viet Nam	Very satisfied with my college
Had psychotherapy or personal counseling	Satisfied with my college
Tried to get an instructor to change a test or course grade 🕒 🖲 🕦	On the fence
Siept or dozed in class	Dissatisfied with my college
Got a traffic ticket (F) (O) (N)	Very dissatisfied with my college
Tutored another student	

#### Appendix C-3

#### 1968 Follow-up Questionnaire of 1967 Freshmen

#### Dear Student:

You may remember that when you first entered college in 1967 you completed a brief information form in which you indicated your educational and career plans. Our research staff is now engaged in several studies that are intended to contribute to an understanding of how students are affected by their college experiences. Such studies will yield useful information for re-examining educational policy and practice.

We should greatly appreciate your completing this brief questionnaire and returning it to us in the enclosed envelope. All of the information is to be coded and used in group comparisons for research purposes only, so your responses will be held in the strictest professional confidence.

Since we are following up only a limited sample of students, it is important to secure as complete a response as possible. We hope that you will be able to participate.

Thank you for your consideration

Thank you for your consideration.	Sincerely yours,
◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ○ ○ ○ ○ ○ ○ ○ ○ ○	Logan Wilson, President  Softer). ircle. change. (es No Mark one in each column:  Fall Spring Summer 1967 1967-68 1968
<ol> <li>Please estimate your average grade so far in college. (Mark only one)         A or A · O A - O B · O B O B - O C · O CO</li> <li>Since entering college in 1967, how much undergraduate education have you convert part-time attendance into full-time equivalents):         Less than one term (quarter, semester, trimester) One academic year         More than one academic year. More than one academic</li> </ol>	houseOOOOOOOOOOOO
3. Since entering college in the fall of 1967 have you changed institutions or dro of college for any period of time? (Mark only one)  No and I plan to attend the same college this fall	7. How long did it take you to get from your residence to your nearest class? (Mark one)  Less than 5 minutes
dissatisfaction with college On a facilimited finances In a small recent or impending marriage In a mode pregnancy, children, or other family responsibilities Size to my poor academic record Or city the draft In the sillness or accident In the salarge On a facility of a large of the draft Or a large On a facility of a facility of a large On a facility of a fac	school year? (Mark one)  Yes, he (she) Yes, I chose NoO was assigned O him (her)O  wing up?  7. Through what source did you finance the first year of your undergraduate education? (Mark one in each row)



10.	All in oil, in terms of your own needs and desires, how much of the
	following did you receive during the post year at college?
	(Mark one in each row)

Freedom in course selection	Too much or Too many	Just about the right amount	Not enough
Social life	Ö		0
Personal contacts with classmates			
Work required of you in courses	Q	Q	Q
Outlets for creative activities	Q	<u>Q</u>	Q
Sleep	Q	<u>Q</u>	
Exercise Personal contacts with faculty			
Personal contacts with family	Ö	Ö	0
Advice and guidance from faculty and	staff . O	Ö	Ö
Required courses	O		O
Easy courses	Q	Q	Q
Difficult courses	Q	g	Q
Courses related to social problems	O		0

	Courses related to social problems	, 🗢	·····	
1.	For each of the following activities,		N	0,
	indicate if you presently can perform	Yes,	but I	and I have
	• • • •	l can	would <u>like</u>	
	the octivity competently.	presently	to be able to do	to be able
	(Mark one in each row)	do this	this well	this well
	Type 40 words or more per minute	\Q	····· \	
	Sketch people so that they can be recognized	ي	····· \	· · · · · · =
	Speak a second language fluently	Q	<u>Q</u>	<u>o</u>
	Break 100 in golf	Q	····· છુ ·····	Q
	Water-ski			
	Ski on snow			
	Sight-read piano music	Q	Q	Q
	Read music (singing)	Q	Q	Q
	Identify at least fifteen species of birds on s	sightO	O	O
	Referee one or more sporting events			
	Recite long passages from plays or poems			
	without notes	0	0	O
	Identify or describe examples from several			
	architectural styles	O	0	O
	Sail a boat	Ö	O	
	Identify most of the major constellations of	etare O	Õ	Õ
	Use a sewing machine		$\widetilde{\mathcal{O}}$	$\widetilde{}$
	Use a sewing machine	····O	$\sim$	·····
	Use Robert's Rules of Order	····	$\cdots $	$\cdots$
	Mix a dry Martini			
	Set a table for a formal party		····· • ·····	
	Name the starting players for a professional	$\circ$	$\circ$	$\circ$
	athletic team	9		٠
	Score a tennis match		······ O ·····	
	Identify many classical musical composition	s 🔾		
	by title and composer	9	····· \	<u>o</u>
	Program a computer			<u>O</u>
	Use a slide rule			Q
	Swim a mile without stopping	Q	Q	Q
	Name the animal phyla	Q	Q	Q
	Describe the difference between stocks and bo	onds O	Q	Q
	Develop and print photographs (darkroom wor			Q
	Bake a cake from scratch (no mixes)	7.3	0	0
	Describe the personal freedoms guaranteed			
	by the Bill of Rights	O	0	0
	Do at least 15 push-ups		0	0
	~ - ~ 1 10001 xa baon abattitititititititi			

12.	Whic	h of	the	fol	lowing	experienc	es	opplies	to	you	duri	ng
	the	post	yea	r?	(Mark	all that ap	ply)	)				

13. Think obout the course you took this post year which was most closely related to your primary field of interest. Please mark "yes" for all the following statements which apply to this course. (If the course had a lab portion, mark "yes" only for those items which apply to the lecture portion.)

	Yes
The class met only at a regularly scheduled time and place.	Ŏ
Students had assigned seating	Õ
The lectures followed the textbook closely	$\mathbf{Q}$
The instructor called students by their first names	Š
The instructor encouraged a lot of class discussion	Ÿ
I knew the instructor's first name	Ō
I was in the instructor's office one or more times	$\mathcal{Q}$
The instructor was enthusiastic	$\mathcal{Q}$
The instructor had a good sense of humor	Q
The instructor was often dull and uninteresting	$\mathbf{Y}$
The instructor knew me by name	$\simeq$
I sometimes argued openly with the instructor	$\simeq$
I usually typed my written assignments	O
I was a guest in the instructor's home one or more	$\overline{}$
times	.U
The instructor sometimes assigned outside reading in	$\overline{}$
professional journals	O
The instructor seemed to be more interested in doing his	$\cap$
own research than in teaching	
The instructor often seemed to be interested more in	$\bigcirc$
current social issues than in the content of the course	
The instructor frequently missed class because of other	$\bigcirc$
obligations	
Many of the other students did not appear to be particularly	$\bigcirc$
interested in the course	$\approx$
The grading in the course was too lenient	
The instructor attempted to involve the students actively in current political or social problems	$\bigcirc$
IN CHIERE DOUGLER OF SOCIAL DEODIEMS	$\sim$

14. Of which of the	following college organizations were	you a member
during the post	year? (Mark all that apply)	<b>M</b> - a

National Social Fraternity or Sorority	Q.
Local Social Fraternity or Sorority	.Ö
Intramural athletic team	Ò.
College football or basketball team	Ų.
Other college athletic team	$\mathcal{O}$
Chair or glos club	$\cdot$
Marching hand	. 🕠
Honorary (subject matter) Fraternity	Ų.

15. Below is a general list of things that students sometimes do. Indicate which of these things you did during the past year in school. If you engaged in on activity frequently, mark "F." If you engaged in on activity one or more times, but not frequently, mork "O" (occasionally). Mark "N" (not at all) if you have not performed the activity

uring the post year. (Mark one for each item)	0 Fee
Voted in a student election	'AAA
Came late to class	'ÀĂĂ
Played a musical instrument	
Studied in the library	<b>600</b>
Checked out a book or journal from the college library	
Arranged a date for another student	600
Overslept and missed a class of appointment	(A)
Typed a homework assignment	600
Participited in organized demonstrations	, 600
Failed to complete a homework assignment on time	600
Argued with a teacher in class	600
Was a guest in a teacher's home	600
Rode on a motorcycle	600
Slept or dozed in class	600
Studied with other students	
Did extra (unassigned) reading for a course	(A)
Took sleeping pills	.000
Tutored another student	, (A)
Played chess	
Savy a foreign movie	
Took a tranquilizing pill	
Discussed religion	
Teok vitamins	
Visited an art gallery or museum	ඔබ්බ
Took a trip of more than 500 miles	
Got a traffic ticket	
Missed school because of illness	<u> </u>
Smoked cigarettes	
Discussed politics	· <u>@</u>
Played tennis	·@@@
Drank beer	:000 000
Played bridge	
Discussed sports	<b>:</b> 6 6
Asked a teacher for advice after class	000
Had vocational counseling	'AAA
Stayed up all night	'AAA
Did voluntary service work (tutoring, counseling, etc.)	`@@@
Did voluntary service work in a hospital or prison	600
Did other voluntary service work	'AAA
Had personal counseling or psychotherapy	,000

- 16. Below is a list of 66 different undergraduate major fields grouped into general categories. Mark only three of the 66 fields as follows:

  - Your most recent major field of study.
     Second choice.
     The field of study which is least appealing to you.

ARTS AND HUMANITIES Architecture	PROFESSIONA L Health Technology (medical, dental, laboratory)
BIOLOGICAL SCIENCE Biology (general)	SOCIAL SCIENCE Anthropology.
BUSINESS	Psychology UCU
Accounting①②①	Social work
Business admin ① ② ©	Sociology D@G Other D@G
processing	Office
Secretarial studies 0 0 0	OTHER FIELDS
Other ①@©	Agriculture ①②②
ENGINEERING	Communications (radio, T.V., etc.) .000
Aeronautical	Electronics
Civil	(technology) ①@@
Chemical	Forestry
Electrical	Homo oconomics UCU
Industrial	Industrial arts000
Mechanical	Library science 000
Other O@©	Military science O@O
	Physical education and recreation
PHYSICAL SCIENCE Chomistry	Other (technical) 1000
Chemistry	Other (nontechnical)
Mathematics	Undecided ①②©
Physics	
Statistics 0@©	
222	

Please be sure that only three circles have been marked in the above list.

17. How many times during the year did	you see a taculty adv	visor or vocationa	l counselor for (	advice on (N	lark one in each i	ow)
			Never	Once	2-3 times	4 or more times
Selecting courses?	e?		Q	   	0 0 0	0 0 0
18. What was the field of study of the during the school year? (Mark one i		ents with whom y	ou spent most of	your time	е	/hat is your over-all valuation of your
	Students With Whom	My Best Friends	••	Students in My		ollege? (Mark one)  Very satisfied with  my college
	Attended Classes	Among Students	My Roommate(s)	Living Quarters		Satisfied with my college
A variety of different fields	000000	0000000	0000000	00.00.000		On the fence O  Dissatisfied with my college O  Very dissatisfied with my college O
20. Mark one in each row:  Agree strongly Agree somewhat Disagree somewho						Agree stongly Agree somewhat Disagree somewhat Disagree strongly
College faculty are more competent to The activities of married women are Parents should be discouraged from the Colleges would be improved if organic Scientists should publish their finding Realistically, an individual person of The chief benefit of a college educated My beliefs and attitudes are similar to Faculty promotions should be based Student publications should be cleared Women should be subject to the drafted The voting age should be lowered to College officials have the right to be Students from disadvantaged social by Most college officials have been too Marijuana should be legalized	best confined to the home having large families  zed sports were de-employs regardless of the post and to little to bring about ion is that it increases to those of most other contined by college officials  18	ne and family nasized sible consequences ut changes in our so one's earning power ollege students ations views from speaking iven preferential tre ent protests on cam of drastic measures f Federal money	gon campusatment in college	admissions	es	



# $\underline{\text{Appendix}}\ \underline{D}$

Guide to GROSS Data Accessing System

# Appendix D

#### GUIDE TO THE GROSS DATA ACCESSING SYSTEM

The GROSS system is a "package" computer program designed to accomplish a wide variety of data editing and statistical tasks common to many research problems utilizing social science data. The system was designed with the social scientist in mind and with a knowledge of many of his particular needs both in terms of data manipulation and display requirements.

At present, GROSS enables the user to perform both basic preliminary processing and analytical operations. Preliminary processing capabilities include a wide range of data editing procedures, including the collapsing of variable categories and the generating, coding, recoding, transforming, and transgenerating of variables. In addition, GROSS provides for the labeling of variables and their categories.

The GROSS system also has the capability to perform several analytical tasks on both categorical and continuous variables. Frequency distributions for categorical variables may be produced which include the count of responses by variable category, the percentage of the total observations represented by that category, and the cumulative percentages in a distribution. Cross-tabulations may also be requested for categorical variables. GROSS can produce both simple and more complex tables that involve up to 20 variables simultaneously. Many options may be utilized when requesting cross-tabulations, including percentage distributions, tests of significance, and measures of association.

For continuous variables, only basic summary statistics can be produced. These statistics include the mean, standard deviation, standard



error, range, skewness, and kurtosis. Frequency distributions and crosstabulations may also be produced if the user first categorizes the continuous variables in the preliminary processing stage.

Work is continuing on the GROSS system to add new operations and analytical techniques. When completed, the system is scheduled to include the standard cross-products statistical analyses, such as regression and correlation. It will also be possible to interface the system output tape with separate independent programs such as missing-data correlation, match/merge operations, factor analysis, and regression analysis.

# SYSTEM INPUT FOR GROSS

GROSS is designed so that data are always read in from magnetic tape. All of the data files in the data accessing system are GROSS binary tapes. These binary tapes have resulted from a previous GROSS run in which all categories of the raw data have been preserved and all variables have been defined, generated, and labeled. These binary tapes are used in subsequent jobs as input to GROSS for user processing, which may include the generating of additional variables, specialized labeling of variables to suit a particular analysis, and specially defined statistical analyses. GROSS automatically references the variables as defined and labeled in the GROSS binary input tape. Thus, the user does not need to introduce or repeat the labeling of these previously defined variables in setting up his control cards unless he requires preliminary processing in order to recategorize some of the If only the analytical operations available in GROSS are revariables. quired, all references may be made to the original variable numbers provided in the documentation of the GROSS binary tape. 1

<sup>&</sup>lt;sup>1</sup>Documentation of the required GROSS binary tape is available on request from the ACE Office of Research.

An abbreviated illustration of the variable identification section which produced the GROSS binary tape and is part of the GROSS binary tape documentation is shown below. These variable identification numbers and labels are part of the GROSS binary tape and may be referenced in the GROSS control cards which are prepared by the user.

```
*VAR(1)=X(1)=DEGREE PLANS 1966(9 CATEGORIES)

*VAR(2)=X(2)=CAREER PLANS 1966(66 CATEGORIES)

*VAR(3)=X(3)=MAJOR FIELD 1966(44 CATEGORIES)

*VAR(4)=X(4)=SATV SCORE

*VAR(5)=X(5)=CAREER PLANS 1967(66 CATEGORIES)

*VAR(6)=X(6)=DEGREE PLANS 1967(9 CATEGORIES)

*VAR(7)=X(7)=MAJOR FIELD 1967(44 CATEGORIES)

*VAR(8)=X(8)=SEX(MALE/FEMALE)

*VAR(9)=X(9)=SATM SCORE
```

# EXAMPLE OF GROSS CONTROL CARD DECK.

Based on the illustration above of the variable specification and documentation of the GROSS binary tape, the user might submit the following set of 80-column control cards for his analysis:

```
*DECK ILLUSTRATIVE PROBLEM
*NOBINARY
*VAR(10)=ORDER VAR(1)=DEGREE PLANS 1966(1=NONE/2=ASSOC/3-9=BA OR MORE)
*VAR(11)=ORDER VAR(6)=DEGREE PLANS 1967(1-6=LESS THAN MA/7-9=MASTERS OR PHD)
*VAR(12)=VAR(4)+VAR(9)=SAT COMPOSITE
*VAR(13)=VAR(4)=ENGLISH SCORE
X(100) = VAR(4) \times 100
X(101)=VAR(9)*100
X(102)=X(100)+X(101)/2
*VAR(14)=X(102)=SATC CONTRIVED SCORE
*CODE(A) = (BLANK, 0=1/UNDER 401=2/401-600=3/601-800=4/801-1000=5/1001-1200=6/801-1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/10000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1000=1/1
*1201-1400=7/1401-1600=8)
*VAR(15)=RECODE(A) VAR(12)=SATC SCORE(NONE/LESS 401/401-600/601-800/801-1000/
*1001-1200/1201-1400/1401-1600)
*VAR(16)=ORDER VAR(4)=SATV SCORE(0,1-500=LESS MEDIAN/501-800=ABOVE MEDIAN)
*VAR(17)=1 IF VAR(2)=VAR(5)=CAREER CHANGE (NO/YES)
*OR=2 IF VAR(2)NOT EQUAL VAR(5)
*GROUP=1 IF VAR(3)=7=HISTORY MAJORS
*GROUP=2 IF VAR(3)=8=SOCIOLOGY MAJORS
*GROUP=3 IF VAR(3)=1-6,9-44=OTHER
*COMPUTE STATISTICS(4,13,14)
 *COMPUTE CROSSTABS(11 BY 10), ROW, COLUMN
 *COMPUTE CROSSTABS (11 BY 10 BY 8), ROW, COLUMN
```

水

×

The illustrative control cards shown above are discussed in detail on the following pages. This example illustrates the necessary control cards required to activate the computer, manipulate the data, and select desired analyses. Many of the options that are available in GROSS are presented; these options described here should be sufficient for most data-accessing needs. <sup>2</sup>

### GENERAL INSTRUCTIONS FOR PREPARING GROSS CONTROL CARDS

The control cards must be punched on a Model 026 keypunch. All control cards for GROSS must have an asterisk (\*) punched in Column 1. In order to keep the length of the control deck minimal, it is advisable to use spacing only in label portions of control cards. If it is not possible to punch all of the necessary information for a particular control on a single card, continuation control cards may be used. To create a continuation control card, an asterisk (\*) is punched in Column 80 of the card containing the statement to be continued. The continuation card must contain an asterisk (\*) in Column 1, followed by the control information continued from the previous card. A continuation control card should not be broken in the middle of a word or number. Up to 20 continuation control cards can be linked to a particular main control card.

#### CONTROL CARDS FOR PRELIMINARY PROCESSING

\*DECK. The \*DECK card must be the first card in the GROSS control deck. This card identifies the job to be run and triggers the reading of

-76-

<sup>&</sup>lt;sup>2</sup>If highly complex analyses are required by the user, reference should be made to the GROSS manual, which describes other options available in the system and specifies the appropriate control card set-up.

the remaining cards and subsequent data tape. \*DECK is a key word which must be contained in the first 5 columns of the card. Columns 6-80 may be used for a job title. This title will be printed at the top of each page of listed output, thus enabling identification of the particular job for the user.

\*NOBINARY. For the typical data accessing user, the control card \*NOBINARY should be inserted in the control deck after the \*DECK card. In the unusual situation where more than 300 new variables are created for data processing, a new binary output tape must be created. Under such a condition, the user should refer to the GROSS manual for a description of the control cards required in place of the \*NOBINARY card.

<u>\*VAR(N).</u> The \*VAR(N) control cards are used to create new variables or to recategorize variables which had previously been created in the production of the GROSS binary tape. \*VAR(N) cards are also used for specialized labeling of variables and their categories, and to provide instructions for preliminary processing (i.e., recoding, transgenerating, and transforming of variables). \*VAR(N) must start in column one of the control card. The 'N' is a symbolic designation for the variable number. The typical procedure is to number the variables sequentially, STARTING FROM THE LAST NUMBERED VARIABLE ON THE GROSS BINARY FILE.

# Relabeling of Variables

In the case where special labeling is not required for a particular set of categorical or continuous variables, cross-reference in the control cards may be made directly to the original variables specified in the GROSS binary tape documentation. No \*VAR(N) card is needed. Each variable is identified in the GROSS binary input tape by a separate sequential number

which gives the specifications for its content, a label, and category names. In our example, for instance, VAR(1) through VAR(9) are already labeled. The labels for the categorical \*VAR(N)'s are listed in the sequential order that corresponds to their codes (1,2,3, etc.). In our test case, for example:

### \*VAR (8) = SEX (MALE/FEMALE)

This statement indicates that variable 8 represents the sex of the respondent; the variable has two categories, male and female, with a 1 indicating that the respondent is male and a 2 indicating that the respondent is a female. In reference to VAR(8) in the analytical operations discussed later, the labels for sex will automatically be included on the print-out. If code values have not been assigned specific labels, GROSS will automatically label the N categories as Category 1 to Category N in the print-out, according to the sequential order of the code values from 1 to N. An example of this from our test case would be:

### \*VAR(3)=MAJOR FIELD 1966(44 CATEGORIES)

This statement indicates that Variable 3 represents the major field of the respondent in 1966, and the variable has 44 categories. An analytical operation using this variable would print out the appropriate category numbers.

If the data are in the form desired, but specialized labeling is required, a new VAR(N) must be specified. This control card has three parts: variable identification, source of the variable, and new label.

#### \*VAR(N)=VAR(n)=VARIABLE LABEL

where 'n' is the sequence number of the variable in the original VAR-array, and 'N' is the sequential number of the new variable in the VAR-array. The

variable name may contain up to 24 characters.

The use of this option is illustrated by examining \*VAR(13) in the example:

If one wished to label a block of variables, GROSS can be instructed to give all of them a common name of up to 20 characters followed by a sequential serial number:

An example of this block labeling would be the following:

This causes four variables to be created, the first one having the label "trait ratings 1" while the fourth label has "trait ratings 4."

# Creation of New Continuous Variables

Often a user wishes to create new continuous variables by performing some arithmetic operation on one or a combination of items from the VAR-array. The control card takes the following form:

An example of this option is the following:

The following arithmetic instructions are available in GROSS:

Symbol:	Operation:	Example:
+	Addition	*VAR(N)=VAR(19)+VAR(20)
64	Subtraction	*VAR(N)=VAR(22)-VAR(23)
×	Multiplication	*VAR(N)=VAR(4)*100
/	Division	VAR(N)=VAR(7)/2.0
***	Exponentiation	*VAR (N)=VAR (21) ***2

-79-

Complex computations can be performed by generating several intermediate "X-variables." An example of the use of the X-array for intermediate computation is illustrated below:

\*X(100)=VAR(4)\*100 \*X(101)=VAR(9)\*100 \*X(102)=X(100)+X(101)/2 \*VAR(14)=X(102)=SATC CONTRIVED SCORE

The operations listed above can be performed in any combination but the user should be aware that the order of the operations follows the basic rules of arithmetic replacement in the FORTRAN computer language.

If a given operation is to be performed on a block of variables rather than on a single variable, GROSS offers the use of a list operation in creating new variables. A useful example, but not from our test case, is the adding together of several variables:

\*VAR(N)=SUM VAR(20-30)=SUMMATION SCORE

VAR(N) now contains the sum of VAR(20-30) and has been assigned the label "SUMMATION SCORE." This operation can be used with VAR's and numerical constants in any combination:

\*VAR(100)=SUM VAR(20-30), SUM VAR(40-42),-10.00=TRAIT RATING
VAR(100) now contains the sum of VAR(20-30), plus the sum of VAR(40-42),
less the constant 10.00. Other uses of the list operation are detailed
in the GROSS manual.

\*CODE, \*RECODE. Code values assigned or established before the data are tabulated are often not adequate in every respect after the distributions are known. 3 It is often desirable to combine categories or re-arrange



Information on the distribution of each variable on a GROSS binary tape is provided to the user as part of the file documentation.

the sequence of codes. These changes can be made by use of the \*CODE, \*RECODE operations.

\*CODE(X) control cards consist of a series of orders, separated by slashes (/). The left hand side of each order represents the original values, while the right hand side represents the new (recoded) values. The left and right hand sides are connected by an equal (=) sign. It should be noted that any original values not specified for recode will retain their original value in the new variable.

An example from our illustrative case follows:

<u>Original Values</u>	Recoded Values
Blank,0	1
001-400	2
401-600	3
601-800	4
800-1000	5
1001-1200	6
1201-1400	7
1401-1600	8

A completed \*CODE(A) card would look as follows:

\*CODE (A)=(BLANK,0=1/UNDER 401=2/401-600=3/601-800=4/801-1000=5/1001-1200=6/\*1201-1400=7/1401-1600=8)

In the case where the values of a continuous variable are to be maintained, except for recoding of selected ranges, the \*CODE control card might appear as follows:

$$*CODE(B) = (BLANK=0)$$

This order will change all blanks to zeros, and all other variables will retain their original value.

The \*RECODE card is related to the \*CODE control card as follows:

\*VAR(N)=RECODE(X) VAR(n)=NEW LABEL

The \*RECODE order consists of four parts:

- 1. VAR(N) -- Identification of the new variable sequence number.
- 2. RECODE(X)--where X can be an alpha-character referring to the appropriate \*CODE instructions.
- 3. VAR(n)--the variable to be recoded.
- 4. New Label--the name to be assigned to the new variable.

An example of this option is the following:

\*VAR(80)=RECODE(B) VAR(10)=SATC SCORE

where \*CODE(B) has been previously defined and \*VAR(80) is maintained as a continuous variable. In the case where a continuous variable is categorized by the \*CODE(X) operation, the assigned category names should follow the new label in parentheses with category labels separated by slashes (/). From our test case, \*VAR(15) is an example of this option:

\*VAR(15)=RECODE(A) VAR(12)=SATC SCORE(NONE/LESS 401/401-600/601-800/801-1000/ \*1001-1200/1201-1400/1401-1600)

### Grouping and Excluding Values from Categorized Variables

In some cases the data fields read into the computer may not be in the form of sequential integer codes, and therefore, not in the form required for cross-tabulations. Also, it may be desirable to group the data into fewer categories than specified in VAR(N) or to define a categorized variable from a continuous variable. These adjustments can be carried out by use of an \*ORDER operation.

The \*ORDER operation simultaneously "recodes" the original values of VAR(n) and attaches a category label to each of the separate recoded values. This is accomplished by writing a small "equation" that specifies each category within the parentheses. The left hand side of each equation specifies

the range of values to be recoded given the sequence number 1,2,3, etc., in which they occur. The right hand side is the category label, of up to 16 characters, that will be printed out to identify the classification. An example from our test case follows:

\*VAR(16)=ORDER VAR(4)=SATV SCORE(0,1-500=LESS MEDIAN/501-800=ABOVE MEDIAN)
This illustration reads as follows: variable 16 is created from the fourth variable in the GROSS binary tape and it represents the SATV score of the respondent. Category 1 indicates that the respondent's SATV score was less than the median value, while category 2 indicates that the respondent's SATV score was SATV score was greater than the median value.

In the \*ORDER operation, GROSS automatically excludes from classification all values that fall outside the range given by the equations. Thus, all values less than 0 or greater than 800 would be excluded in this example, and treated as missing data by GROSS whenever VAR(16) is referenced.

Instructions such as UNDER and OVER may be used to create end categories.

The instruction OTHER can also be used to create a final "catch-all" category of values not explicitly recoded. If present, the instruction OTHER must be the last one mentioned. Instructions containing UNDER and OVER are processed in sequence order in which they occur. As with \*RECODE, ranges, individual values, and BLANK are permitted on the left hand side of the equation.

In addition to arithmetic computations and recoding operations, it is often desirable to restrict an analysis to a certain class of observations, to particular subsets of units, or to create new variables by selecting or recoding under a variety of specified logical conditions. GROSS offers facilities for creation of new variables by use of Boolean-logic operations,

including IF, OR, and AND/OR instructions. These useful control cards are described in detail in the GROSS manual. An example is the following from our illustrative case:

\*VAR(17)=1 IF VAR(2)=VAR(5)=CAREER CHANGE(NO/YES)
\*OR=2 IF VAR(2)NOT EQUAL VAR(5)

\*GROUP. The use of the \*GROUP option is to restrict the analytical operations to certain subsets of respondents. \*GROUP definitions may be used for the \*COMPUTE STATISTICS and the \*COMPUTE FREQUENCIES options described below, but not for \*COMPUTE CROSSTABS. At least two groups must be defined for analyses; these \*GROUP cards precede the \*COMPUTE cards in the control deck. A set of \*GROUP cards is shown below:

\*GROUP=1 IF VAR(3)=7=HISTORY MAJORS
\*GROUP=2 IF VAR(3)=8=SOCIOLOGY MAJORS

\*GROUP=3 IF VAR(3)=1-6,9-44=OTHER

The \*COMPUTE operations will provide the requested analyses for each of the three groups defined in the example above, with the assigned group category labels. In addition, the same analyses will be referenced for the total of all "GROUPS" combined.

#### CONTROL CARDS FOR ANALYTICAL OPERATIONS

The \*COMPUTE options give instructions for analysing the data.

\*COMPUTE cards follow the preliminary processing cards in the control deck, and the \*COMPUTE statement must be contained in the first eight columns of the card. At present, there are three analytical techniques available through GROSS; these provide for computing selected statistics, for computing frequency distributions, and for computing cross-tabulations.

\*COMPUTE STATISTICS. GROSS is designed to compute and print out a number of univariate statistics for each variable, including the count of

the number of unit observations on the variable, the arithmetic mean, the range, the standard deviation, the standard error of the mean, the skewness, and the kurtosis. The variable number and name are printed out, followed by a row listing of these statistics.

The control card consists of the basic order \*COMPUTE STATISTICS, followed by a specification of the variables for which univariate statistics are desired. This specification may consist of a list, a range specification, or a combination of both, all enclosed in parentheses. Only one \*COMPUTE STATISTICS instruction is allowed in the GROSS control deck, but variable specifications can be continued on up to 20 continuation cards. An example from our test case would be:

# \*COMPUTE STATISTICS (4,13,14)

If no list specification appears on the \*COMPUTE STATISTICS control card, summary statistics will be computed for all variables. A maximum of 2,000 cells (number of groups X number of variables) is allowed for the \*COMPUTE STATISTICS option.

\*COMPUTE FREQUENCIES. By use of a \*COMPUTE FREQUENCIES control card, the user can obtain a completely labeled print-out of:

- a. the specific values for a categorized variable (up to 100 categories per variable, including blanks)
- b. The number of cases (frequency) having each value.
- c. The percentage (relative to the total number) of cases having each value.
- d. The cumulative percentage, beginning with the lowest value.

-85-

The control card consists of the basic order \*COMPUTE FREQUENCIES, followed by a specification of the variables for which frequencies are desired. This specification may be a list, a range specification, or a combination of both, all enclosed in parentheses. If desired, the user can include blanks in the computation of the percentages by including the word BLANKS on the control card following directly after the specification of variables, without any spacing, and separated only by a comma. In addition, the option NWGT(N) may be called and will cause the value of variable 'N', which is the variable number for the weighting factor, to be the tally value instead of 1. For example:

\*COMPUTE FREQUENCIES(1-3,5-7), BLANKS, NWGT(172)

If no list specification appears on the \*COMPUTE FREQUENCIES control card, the frequencies will be computed for all categorized variables. Only one \*COMPUTE FREQUENCIES instruction is allowed in the GROSS control card deck, but variable specifications can be continued on up to 20 continuation cards. The \*COMPUTE FREQUENCIES option cannot be included in the same control card deck with a set of \*COMPUTE CROSSTABS cards (see below). If the \*GROUP option appeared before a \*COMPUTE FREQUENCIES control card, the distributions would be presented for each specified group separately as well as for the total of all the groups. A maximum of 10,000 cells are allowed for the \*COMPUTE FREQUENCIES option.

\*COMPUTE CROSSTABS. GROSS contains a major cross-tabulation program which requires categorized variables and tabulates up to a 20-way table. The output is listed in the form of an actual statistical table in which rows and columns are fully labeled. The cell frequencies are accompanied by percentages which can be based upon row totals, column totals, total

totals, and/or the grand total. Marginal totals and percents are also displayed. All percentages and frequencies for a given cell are printed within the particular cell of the cross-tabulation. The maximum single table size is 100 by 100. In addition, the GROSS cross-tabulation program permits the user to select from among several different tests of significance and measures of association relevant to cross-tabulations.

Only categorized variables can be involved in cross-tabulation orders. IN THE EVENT A CROSS-TABULATION REQUEST INCLUDES A NONCATEGORIZED VARIABLE, GROSS WILL AUTOMATICALLY LIST THE ERROR CONDITION, ignore the request involving such variables, and complete whatever tabulations remain that are legitimate.

Instructions for cross-tabulations are made on the \*COMPUTE CROSSTABS control card. This card has five sections as follows:

- 1. \*COMPUTE CROSSTABS--basic order to the computer.
- 2. List of variables to be cross-tabulated.
- 3. Base(s) on which percents are to be computed: ROW, COLUMN, TOTAL, GRAND.
- 4. Specification of tests of significance and measures of association desired: CHISQUARE, PHI, C, V, LAMBDA, TAU B, TAU C, GAMMA, D.
- 5. Options: BLANKS--include blanks in the table; WEIGHT=N--employs variable N, which is a weighting factor, as <u>value</u> to increment counter rather than 1.

A maximum of 30,000 cells is allowed for the \*COMPUTE CROSSTABS option. The \*COMPUTE CROSSTABS option cannot be included in the same control deck as a \*COMPUTE FREQUENCIES card. Several \*COMPUTE CROSSTABS

instructions are allowed in the GROSS control deck, and variable specification can be continued on up to 20 continuation cards. The variable specification may consist of a list, a range specification, or a combination of both.

The control card for a 2-way table with percents computed by rows and with the chi-square test of significance is as follows:

\*COMPUTE CROSSTABS(I BY J), ROWS, CHISQUARE

The first variable mentioned (I) will constitute the rows of the table, the dependent variable. The categories of the second variable (J) will constitute the columns of the table, the independent variable.

The control card for a 3-way table is as follows:

\*COMPUTE CROSSTABS(I BY J BY K), GRAND

The variable I will appear in each table as rows. The categories of variable J will appear in each table as columns. There will be a series of these tables, one such table for each category of variable K, the control variable. Several sets of tables may also be specified in a single \*COMPUTE CROSSTABS instruction:

\*COMPUTE CROSSTABS(22 BY 23),(25 BY 30),(22 BY 25 BY 29 BY 30),(31-33 BY \*34,36-38),(39-50 BY 30),ROW,TOTAL,GRAND,CHISQUARE

Examples from our test case follow:

\*COMPUTE CROSSTABS(11 BY 10), ROW, COLUMN \*COMPUTE CROSSTABS(11 BY 10 BY 8), ROW, COLUMN

The first request would cause the following cross-tabulation table to be produced, where degree plans 1966 would be the independent variable and degree plans 1967 would be the dependent variable:

#### DEGREE PLANS 1966

D E		None	Assoc	BA or More		
G		60.0%	60.0%	20.0%	colum	ın
R E E	Less Than MA	30.0%	60.0%	10.0%	row	
P		15	30	5	50	50%
L		40.0%	40.0%	80.0%		
A N	Masters or	20.0%	40.0%	80.0%		
S 1	PHD	10	20	20	50	50%
9	Col Total	. 25	50	25	100	
6 <b>7</b>	Percent	25.0%	50.0%	25.0%		100%

Number of Missing Observations = 0

The second request would cause two tables to be produced: the first table would have Degree Plans 1966 as the independent variable and Degree Plans 1967 as the dependent variable for males. The second table would have the same cross-tabulation for females. The following tables illustrate this.

D			DEGREE PLANS	1966		
E G		None	Assoc	BA or More	washin.	
R E E	Less Than BA	46.0% 24.0%	60.0% 60.0%	33.0% 16.0%	colum row	າກ
P L		6	15	4	25	50%
A N S	Masters or PHD	54.0% 28.0%	40.0% 40.0%	67.0% 32.0%		
1		7	10	8	25	50%
9 6 7	Col Tota Percent	1 13 26.0%	25 50.0%	12 24.0%	50	100%

#### DEGREE PLANS 1966

D E	DEGREE PLANS 1966					
G R		None	Assoc	BA or More		
E E	Less Than	75.0% 36.0%	60.0% 60.0%	8.0% 4.0%	colum	ın
P L A	Masters	9	15	1	25	50%
N S	Masters	25.0% 12.0%	40.0% 40.0%	92.0% 48.0%		
1 9 6	PHD	3	10	12	25	50%
7	Col Total Percent	1 12 24.0%	25 50 <b>.</b> 0%	13 26.0%	50	100%

Number of Missing Observations = 0

# CONTROL CARD FOR TERMINATION

\*END. This control card must always be the last control card in the control deck and signals the end of the control deck. When \*END is encountered, GROSS begins data processing for the user's analyses.

-90-

### Other Research Reports by staff of the Office of Research:

- A Program of Longitudinal Research on the Higher Educational System Alexander W. Astin, Robert J. Panos, John A. Creager Volume 1, No. 1, 1966
- Some Characteristics of Junior College Students
  Robert J. Panos
  Volume 1, No. 2, 1966 (out of print)
- Evaluation and Selection in the 1966-67 Academic Administration Internship Program
  John A. Creager
  Volume 1, No. 3, 1966
- Trends in the Characteristics of Entering College Students, 1961-1965
  Alexander W. Astin
  Volume 1, No. 4, 1966
- \*National Norms for Entering College Freshmen-Fall 1966
  Alexander W. Astin, Robert J. Panos, John A. Creager
  Volume 2, No. 1, 1967 (\$2.00)
- The Use of Publication Citations in Educational Researc<sup>3</sup>.

  John A. Creager

  Volume 2, No. 2, 1967
- \*Supplementary National Norms for Freshmen Entering College in 1966
  Alexander W. Astin, Robert J. Panos, John A. Creager
  Volume 2, No. 3, 1967 (\$1.00)
- Attrition Among College Students
  Robert J. Panos, Alexander W. Astin
  Volume 2, No. 4, 1967
- They Went to College: A Descriptive Summary of the Class of 1965 Robert J. Panos, Alexander W. Astin Volume 2, No. 5, 1967
- Implications of a Program of Research on Student Development in Higher Education Alexander W. Astin, Robert J. Panos, John A. Creager Volume 2, No. 6, 1967
- National Norms for Entering College Freshmen-Fall 1967 Robert J. Panos, Alexander W. Astin, John A. Creager Volume 2, No. 7, 1967 (\$2.50)
- National Norms for Entering College Freshmen-Fall 1968

  John A. Creager, Alexander W. Astin, Robert F. Boruch, Alan E. Bayer
  Volume 3, No. 1, 1968 (\$3.00)
- General Purpose Sampling in the Domain of Higher Education John A. Creager Volume 3, No. 2, 1968

\*The complete national norms reports for 1966 can be obtained from The Publications Division, American Council on Education, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036 for \$3.00 a set.

