#### DOCUMENT RESUME

ED 111 261 HE 006 632

AUTHOR Butler, Richard P.

TITLE Comparison of USMA Graduates from the Class of 1950

with Graduates from Other Colleges on Selected

Variables (A Product Appraisal Report).

INSTITUTION Military Academy, West Point, N.Y. Office of

Institutional Research.

REPORT NO OB3.00-72-021

PUB DATE Nov 71 NOTE 69p.

EDRS PRICE MF-\$0.76 HC-\$3.32 Plus Postage

DESCRIPTORS Citizenship Responsibility; \*College Graduates;

Comparative Analysis; \*Educational Assessment; \*Higher Education; Institutional Role; Leadership Qualities; Military Personnel; \*Military Schools;

\*Military Training; Questionnaires; Social

Responsibility

IDENTIFIERS \*United States Military Academy

#### ABSTRACT

The responses of USMA graduates from the Class of 1950 are compared with those of graduates from civilian colleges on a number of topics of current interest. Most of the topics dealt with many of the goals of education which are obtainable and observable only in adult life. The questionnaire that was used consisted of seven major sections: background information, activities, changing society, viewpoints, educational benefits, memory of college experiences, and personal traits. The respondents to the mailed questionnaire were divided into five groups: USMA graduates still on active duty; USMA graduates not on active duty; the total number of USMA graduates responding; graduates from eight civilian engineering and science schools; and graduates from 74 civilian colleges and universities. In general, it appears that the USMA graduate compares favorably, if not more favorably, with graduates from civilian colleges and universities on most of the topics analyzed. It is noted that the typical USMA graduate feels that he has benefited more by going to college than does the graduate from a civilian institution of higher education. It is cautioned that any interpretations of these results must be made in conjunction with the goals, philosophies, values, and beliefs of USMA and the other colleges, since they may vary from institution to institution. (Author/LBH)



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## UNITED STATES MILITARY ACADEMY

WEST POINT NEW YORK

COMPARISON OF
USMA GRADUATES
FROM THE CLASS OF 1950
WITH GRADUATES
FROM OTHER COLLEGES
ON SELECTED VARIABLES

(A Product Appraisal Report)

OFFICE OF
INSTITUTIONAL RESEARCH
NOVEMBER 1971

**DUTY-HONOR-COUNTRY** 

### COMPARISON OF USMA GRADUATES FROM THE CLASS OF 1950 WITH GRADUATES FROM OTHER COLLEGES ON SELECTED VARIABLES

OB3.00-72-021

Report Prepared By: Dr. Richard P. Butler

November 1971

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OFFICE OF INSTITUTIONAL RESEARCH UNITED STATES MILITARY ACADEMY WEST POINT, NEW YORK 10996



#### FOREWORD

The USMA Product Appraisal Project was initiated in 1961 in order to assess the success of the Military Academy in preparing its graduates for a military This assessment of college impact, or educational "accountability," is one of the central themes in educational research today. The methodological problems associated with measuring educational impact are many and varied. The current state-of-the-art dictates that such research concern itself more with the consequences of higher education rather than its objectives, and the investigative style is necessarily exploratory in nature. thorough assessment of the USMA as an institution would be a mammoth undertaking requiring many years of investigation by a large research staff. fact, at one time (1965) a task force of eight personnel and a budget of over \$576,000 was envisioned for this purpose at West Point. However, for budgetary and other reasons this plan was never implemented. Consequently, Product Appraisal research was virtually dormant from 1965 until June 1970 when a researcher was made available for that project on a full-time basis. Although several reports have been produced during the past year, this one is unique in that comparative data are available from a large number of other institutions.

The reader interested in a summary of the methodological problems associated with the evaluation of educational impact is referred to the short monograph published by the College Entrance Examination Board: Accountability in Higher Education by Rodney T. Hartnett of the Educational Testing Service (1971).

Colonel Gerald W. Medsger
Director of Institutional Research



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#### ABSTRACT

The purpose of this study was to compare the responses of USMA graduates from the Class of 1950 with those of graduates from civilian colleges on a number of topics of current interest. Most of the topics dealt with many of the goals of education which are obtainable and observable only in adult The questionnaire that was used to gather data on these goals of education and other information consisted of the following seven major sections: background information, activities, changing society, viewpoints, educational benefits, memory of college experiences, and personal traits. dents to the mailed questionnaire were divided into five groups: USMA graduates still on active duty; USMA graduates not on active duty; the total number of USMA graduates who responded to the questionnaire; graduates from eight civilian engineering and science schools; and graduates from 74 civilian colleges and universities. Analysis of the results shows that although the groups have very similar response patterns to some items, their responses on other items were often markedly distinct. Generally speaking, it appears that the USMA graduate compares favorably, if not more favorably, with graduates from civilian colleges and universities on most of the topics that were ana-It is especially noteworthy to report the finding that the typical USMA graduate feels that he has benefited more by going to college than does the graduate from a civilian institution of higher education. It is cautioned that any interpretations of these results must be made in conjunction with the goals, philosophies, values, and beliefs of USMA and the other colleges, since they may vary from institution to institution.



#### INTRODUCTION

One of the aims of the Product Appraisal Project, which was established by General William C. Westmoreland in 1961, is to survey periodically United States Military Academy (USMA) graduates on questions pertaining to their school experiences, current activities, and attitudes toward various issues of current interest. The purpose of the present study is intended to fulfill partially this aim by surveying USMA graduates from the Class of 1950 and then comparing their responses with those of graduates from other colleges and universities from the Class of 1950 in regard to some background information, activities, awareness and attitudes toward the changing society, viewpoints, educational benefits, memories of college experiences, and personal traits. As such, this study deals with many of the long range goals of education which are obtainable and observable only in adult life; and that it is therefore useful and relevant to be concerned about activities, opinions, and judgments of USMA's alumni.

#### **METHOD**

#### Subjects

The subjects consisted of 5981 male graduates of 75 colleges and universities from the Class of 1950. Of this total, 330 were USMA graduates, and 5651 were graduated from schools other than USMA. For the USMA sample, the respondents were divided into three groups: those graduates who were still on active duty (USMA AD); those not on active duty (USMA NAD); and the total number of USMA graduates who responded to the questionnaire, including the first two groups and also those respondents who could not be classified as either on active duty or not on active duty because of a clerical difficulty\* (USMA Total).

For the USMA total group, 567 questionnaires were mailed, and the 330 usable returns represented a response rate of about 60 percent. For the other two USMA groups it is impossible to determine the exact response rates because a proportion of each, in all probability, was included in the USMA total group but could not be separated out as either on active duty or not on active duty because of the clerical difficulty. The N of 39 for the not on active duty group is relatively quite small, and it is possible that some sampling bias may be present in its responses. At the time the questionnaires were sent, there were approximately 160 graduates from the Class of 1950 who were no longer on active duty and whose addresses were available. The 39 respondents who could be classified as not on active duty thus represent around 25 percent of this group. It must also be noted that respondents not on active duty have left the profession for which their Military Academy education had prepared A comparative group of civilian college graduates who switched occupations is not available. Therefore, conclusions drawn from the not on active

<sup>\*</sup>The clerical difficulty was caused by the fact that roughly 47 percent of the respondents failed to fill in their identification numbers in the spaces provided for them. The identification number allowed the respondents to be classified on active duty or not on active duty.



duty group should be made with extreme caution.

For the graduates of the 74 civilian colleges and universities involved in the present study, a total of 9,411 questionnaires were mailed, and the 5651 usable returns represent a response rate of 60 percent. For purposes of analysis, the respondents from the civilian institutions were divided into two groups: graduates from eight engineering and science schools (engineering and science), and the total number of graduates from the 74 civilian schools combined (national norm).

#### Questionnaire

Data for this study were gathered by means of a questionnaire (see Appendix A) developed at the Research and Development Center (Center for the Study and Evaluation) at UCIA. Dr. C. Robert Pace, Professor of Higher Education, had the major responsibility in preparing the questionnaire. The survey questionnaire consisted of eight major parts, seven of which were used for the present report. A brief description of each of these seven parts follows:

- 1. Background or Personal Information—this section includes census—like questions dealing with personal and family background—economic, political, religious, satisfaction with college choice, and level of education.
- 2. The Activity Scales--measure interest and involvement in important areas of life--community affairs, national and state politics, international and intercultural affairs, art, music, drama, literature, religion, and science. These scales are based on the assumption that the extent to which people engage in certain kinds of activities is a reflection of their interests, values, satisfactions, and commitments. The question that these scales attempt to answer is: "To what extent have college graduates developed an interest and involvement in certain areas of content and experience relevant to some of the objectives of higher education?" The items in each of the scales include some that are commonplace, easy-to-do activities and others that require more effort and thus imply a deeper or more intense level of interest and involvement. Because the items form this kind of pattern, the number of items checked in a scale provides a meaningful and reliable index of activity level. A person's score, then, is simply the number of activities he has checked.
- 3. The Changing Society—items from this part are intended to measure one's knowledge, awareness, and attitudes toward major trends that are thought to be occurring in American society. The items comprising these scales address themselves to trends in the areas of education, the labor market, economy, government planning, general societal values, sociology and environment, and resources. The two major scales of this section are the Changing Society Occurring scale, which measures one's sensitivity to what some experts think are major trends in our society, and the Changing Society Desirable scale, which measures attitudes toward such actual or assumed changes. Items were drawn and adapted from a variety of writings by social analysts. The response "generally true" is regarded as the correct response to every item



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for the Changing Society Occurring scale. Thus, an individual's score is the number of statements marked "generally true." The score for the Changing Society Desirable scale is the number of statements marked "generally desirable," with the exception of one item that is scored "generally undesirable" and another which is not scored.

- 4. Viewpoints--three scores are derived from various items in this section--the role of government, equal opportunities for women, and civil rights. The higher the scores the more the individual favors interdependence and friend-ship among all nations, fuller opportunities for women, and civil rights causes, respectively.
- 5. Educational Benefits—items comprising this section include many of the goals and values commonly sought in higher education. For the purpose of obtaining scores, the items were grouped into three categories—vocational benefits, personal and social benefits, and liberal arts benefits. A person's score on each of these groupings is simply the number of items he marked with the response "very much," indicating that he felt that he benefited very much from attending college on the item under investigation. In looking at the scores for these parts, one can see what objectives are judged to be most fully realized and whether the major benefits claimed are also the major benefits that are intended by the college.
- 6. Memories of College Experiences—this section of the questionnaire is actually a part of the School and College Experience division of the question-naire. The intent of items in this section is to see what aspects of college experience stand out in one's memory. The two scores that are developed pertain to the extent to which peer relations and academic experiences "stand out" in the respondents' memories about their college experiences. The score is simply the number of items that were checked in each section.
- 7. Personal Traits—in this section of the questionnaire certain combinations of responses are totalled to provide an estimate of three personal traits that are, in combination, related to what one may broadly describe as intellectual disposition. For the first trait, called Autonomy, a high score indicates a general independence of traditional authority. The second trait, Complexity, describes an individual's tolerance for ambiguous situations and enjoyment in dealing with complex and novel ideas. Individuals possessing the third trait, Theoretical Orientation, usually have a preference for using the scientific method in thinking. They tend to be logical, analytical, and critical in their approach to problems. For all three traits the scores are simply the number of times a respondent answered in the keyed direction.

#### Procedure

In the Spring of 1970 the Office of Institutional Research, USMA, in conjunction with the Association of Graduates, USMA, mailed the questionnaires to all USMA graduates from the Class of 1950 whose addresses were available. Data from the other 74 colleges and universities were obtained from the Research and Development Center at UCIA, which had mailed its questionnaires to a random sample of alumni (Class of 1950) in the Spring of 1969. The



selection of participating institutions, however, was not random and is not claimed to be representative of higher education in the United States. Rather, the institutions were selected as examples of various types or categories, so that the major kinds of institutional environments would be reflected. In all, eight categories of institutions were included:

- 1. Highly selective liberal arts colleges, private, non-sectarian.
- 2. Strongly denominational liberal arts colleges, Protestant and Catholic.
- 3. General liberal arts colleges, non-sectarian and moderately denominational.
- 4. Highly selective universities, public and private.
- 5. General comprehensive universities, public and private.
- 6. State colleges and other universities having less extensive graduate programs than comprehensive universities.
- 7. Colleges having a major emphasis on teacher education.
- 8. Colleges and universities having a major emphasis on engineering and sciences.

For purposes of the present report comparisons were made between the responses of the USMA graduates and those from institutions listed under category number 8 (engineering and science schools) and the national norm, which consists of the responses of every male respondent from every school except USMA. For the engineering and science schools the following eight institutions were included: California Institute of Technology, Lehigh University, Massachusetts Institute of Technology, Polytechnic Institute of Brooklyn, Purdue University, Rensselaer Polytechnic Institute, Rose Polytechnic Institute, and South Dakota Mines and Technology.

#### Procedural Caution

As stated in the Introduction, the purpose of the present study was to survey USMA alumni on a series of topics and then to compare the results with the results obtained from graduates of other colleges and universities. Many of the questions asked pertained to some of the long term goals of a college education, such as the following: alumni who are active and informed citizens, participants and contributors to the cultural life of the community, widely read, abreast of changes, and exposed to new ideas and experiences. However, under the limitations of the design of the present study, it is impossible to ascertain if the scores obtained on the various questions were caused by the respondents' college education, a self-selection factor, pre- or post-college experiences, or by an interaction of these factors. But, given these limitations, it is still possible to take the "black box" approach and to report the results at their face value, without considering what the actual



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causes of these results were. Essentially, this is the approach that will be taken in presenting the results of the present study. It must be kept in mind that any interpretations of the results of this study that a reader makes must be made in the light of a school's own philosophy, values, beliefs, and goals. This is so because different colleges often possess different goals; for example, for some colleges the extent to which alumni are active in church related areas is a relevant and important goal; but in some other colleges, church activity may be irrelevant and unimportant. Readers of this report are therefore cautioned not to extract results from this study without considering the goals of the colleges involved.

#### RESULTS

The results of this study can be presented most efficiently by examining the responses to the items in each of the seven major questionnaire parts in turn. This procedure will be followed throughout this section. All the tables used to report the results can be found in Appendix B. Each table has breakouts on five groups: USMA AD, USMA NAD, USMA Total, Engineering and Science, and National Norm. The numbers inside of the lines are all percentages. When the sample size (N), mean  $(\overline{X})$ , and standard deviation (SD) are given the columns are so labeled. In analyzing the results from each table, only the highlights will be pointed out; and only those questions that have norm data from the UCIA sample will be reported on.

- 1. Background Information—the purpose of this section is to compare USMA graduates with graduates from other colleges and universities on a number of variables pertaining to background data. Each of the items comprising this section will be considered in turn.
- a. Highest level of education attained—Table 1 indicates that a much larger percentage of USMA graduates than graduates from other schools have attained a master's degree. However, a smaller percentage of USMA graduates (3 and 4%) than graduates from other colleges (7%) have received a doctorate.
- b. Present feeling about undergraduate college—as can be seen from Table 2, very few graduates feel either thoroughly or generally negative about the college they graduated from. A large majority indicated that they are pleasantly nostalgic or have a strong attachment. For USMA Total this percentage was 92. Many more USMA graduates, percentage—wise, than graduates from other colleges, stated that they had a strong attachment to the college from which they received their bachelor's degree.
- c. Satisfaction with college choice--data for Table 3 were gathered from the question: "If you could do it over again, would you go to the same undergraduate college?" A greater percentage of USMA graduates would definitely attend their same undergraduate college than would graduates from other colleges. Even about 80% of USMA graduates not on active duty would either definitely or probably attend USMA if they could do it over again. More extensive data on this and related questions can be found in a study by Bridges.\*

<sup>\*</sup>Bridges, C.F. The Image of the United States Military Academy Among Cadets and Graduates.

Office of Institutional Research, USMA, West Point, NY, in preparation.



- d. Size of community of present residence—there is little noteworthy information in Table 4, except to indicate that typically the respondents tend to live in suburbs of metropolitan areas with populations of 500,000 to 2,000,000, or in small towns of 50,000 people or less.
- e. Current annual income from all sources--Table 5 shows that almost no USMA graduate has an annual income of less than \$10,000, whereas 8% of the graduates in the national norm sample do. It is interesting to note that 83% of USMA graduates still on active duty reported that their income was between \$15,000 and \$25,000, as compared to 55% for engineering & science graduates, and 45% for the national norm. However, fewer USMA AD graduates listed annual incomes of from \$25,000-\$50,000 than did graduates from other colleges. The group which appears to have the highest income is USMA NAD, with 53% reporting incomes of \$25,000 or more.
- f. Political party preference--Table 6 indicates that many more college graduates are Republicans than Democrats. The USMA NAD group is most heavily Republican, with 79% choosing this response. The USMA AD and USMA Total groups are more often non-partisan than are members of the other three groups, but a smaller percentage of USMA graduates listed the Democratic party.
- g. Religious identification--only a small percentage of USMA graduates have either no formal religion or no definite religious beliefs (see Table 7). This percentage is slightly higher for graduates of civilian colleges. By far, the Protestant faiths are favored by most college graduates.
- 2. Activity Scales—results from each of the 11 different Activity Scales will be presented separately. Each of the scales contained from 9 to 14 items, and a respondent's score was simply the number of items checked for each scale. The higher the score the more interested and involved the respondent was considered to be in the area under study. The respondents were instructed to check those items that described an activity which they had engaged in during the past year. Each scale covered a rather large number and variety of activities in different areas of interest and society—activities such as discussing, reading, observing, contributing, and participating. Results of each scale follow:
- a. Community affairs—the 12 items in this scale ranged from the fairly common, "I talked about local community problems with my friends," to the less common, "I held office in some local civic group or community organization." As Table 8 shows, USMA graduates still on active duty had a mean score of 4.7 (maximum score = 12.0) compared to means of 6.4 for engineering and science graduates and 6.8 for the national norm. This difference can be seen by noting that a larger percentage of the USMA AD group obtained scores of only 1, 2, 3, and 4. However, the mean score of 6.8 for the USMA NAD group was equivalent to the national norm mean. In drawing inferences from these findings, and all those that follow, it must be remembered that the Army community probably is somewhat different from the civilian community.
- b. National and state politics—the 14 items in this scale ranged from the discussion of national or state political issues with friends to the



holding of a political or public office. Once again, the USMA AD group obtained the lowest mean number of items checked (5.7--see Table 9). This appears consistent with Army rules and regulations which tend to be apolitical in nature and often forbid a soldier from taking an active part in a political venture. However, the highest mean score was the score for the USMA NAD group (7.8), indicating that this group was more actively involved in national and state politics than any other group that was studied.

- c. Art--once again, the maximum score could be obtained by checking all of the nine items in this section. The items ranged from talking about art to the actual doing of creative painting or other art work. The highest mean score was that of the USMA NAD group (2.6), and the means of the other groups were quite similar (see Table 10). No group had any individual scoring a maximum of 9.0, and no USMA group had anyone scoring 7.0, 8.0, or 9.0.
- d. Literature—the 9 items under literature ranged from the talking about new books and the reading of book reviews to the writing of any type of literature for publication. Table 11 indicates that the means of the 3 USMA groups are very similar to each other and about 0.5 and 0.9 higher than the means of the engineering & science and national norm scores, respectively.
- e. Education—the 10 items in this section ranged from the talking with friends about schools in the neighborhood to the reading of one or more books about education. Table 12 summarizes the findings from this section. The mean of the USMA Total group (5.2) is about equal to the mean of the engineering and science group (5.3), but lower than the national norm and USMA NAD group means of 5.8 and 5.7, respectively. The lowest mean was obtained by the USMA AD group. However, the range of mean scores for all 11 groups is only 0.8.
- f. Music--the 11 items ranged from the buying of phonograph records and listening to music on the radio to the playing of a musical instrument and the participation in some vocal or instrumental group. Table 13 reports that the means of the five groups are quite similar with a spread of only 0.7 between them.
- g. Drama--the 11 items went from the talking with friends about movies, plays, TV dramas, etc., to the participation in some drama activity. The three USMA groups scored slightly higher than the other two groups, but the range of the means was only 0.6 (see Table 14).
- h. Religion--the nine items went from the rather common attending of church services one or more times to the less common practice of observing religious rituals in one's home. The means of the five groups ranged from 5.5 for the national norm group to 4.9 for the USMA AD and USMA Total groups (see Table 15). It should be pointed out that relative to other activity scales, a much larger percentage of respondents obtained the maximum possible score on this Religion scale.
- i. Intercultural—the ten items here ranged from the talking with friends about cultural events in other countries to attending a meeting at which a



large majority of the participants were of a different racial background. Table 16 reports that the means of all three USMA groups are larger than those of the other two groups. The USMA AD group had the highest mean, 4.2.

- j. Science—the ten items that could be checked went from talking about science with friends to the making of some type of scientific apparatus. Table 17 shows the highest mean to be that of the engineering and science group (5.1), and the lowest to be USMA AD group (3.6). The means of the other three groups are quite similar to each other.
- k. International—the nine items ranged from the discussion of international relations to the participation in a public demonstration for or against some international issue. The means of the three USMA groups are a little higher than those of the other two groups, as reported in Table 18.
- 3. The Changing Society--this section of the questionnaire has two parts. The first, called Occurring, measures knowledge and awareness about certain major changes that are taking place in American society; and the second, named Desirable, measures attitudes toward such changes. Results follow:
- a. Occurring—the distribution of percentages in Table 19 indicates that most respondents received scores between 18 and 20 (the total number of items was 28, and thus the maximum score score was 28). There is not much variation in the mean scores, which ranged from 18.1 for engineering and science school graduates, to 19.00 for USMA NAD graduates.
- b. Desirable—on only 14 of the 28 items in the Changing society were the respondents asked to indicate if the changes in American society were desirable. Thus, the maximum score was 14. The results, as depicted in Table 20, show that there is very little variation in the mean scores. The means, which range from 7.1 to 7.3, indicate that the respondents felt that only about half of the changes were desirable.
- 4. <u>Viewpoints</u>—the results of the three parts of this section will be presented one at a time. Each part deals with issues of contemporary concern, and the attitudes of adults about such matters probably have an influence on our society.
- a. Government--for this section the higher the score the more the respondent favors interdependence and friendship among all nations, and not an "America Always First" policy. The mean scores of the five groups border at or around 2.0 out of a possible maximum score of 4.0 (see Table 21). The small variation in mean scores indicates that the groups are quite similar in their viewpoints for this art.
- b. Women--the five groups obtained identical mean scores of 2.2 on this part of the questionnaire, indicating that they essentially feel the same about equal opportunities for women (see Table 22).
- c. Civil Rights--the small variation in mean scores, 2.3 to 2.8, implies that the five groups of respondents felt generally quite similar in their



viewpoints toward civil rights (see Table 23).

- 5. Educational Benefits—this section measures the extent to which a respondent feels he benefited from going to college in three different areas: vocational, personal and social, and liberal arts. The higher the score the more the respondent felt that he benefited very much from going to college.
- a. Vocational—the items in this category include vocational training, specialization, facts in various fields of knowledge, and improved social and economic status. The mean scores of the three USMA groups are slightly higher than those of the other two groups, indicating that the former three groups felt that they benefited, vocationally, slightly more than the latter two groups (see Table 24).
- b. Personal and social--under this category were included items dealing with social development, personal development, individuality and independence, friendships and tolerance. Table 25 indicates that the mean scores of the three USMA groups are about twice the mean of the national norm group and over three times the mean of the engineering and science group.
- c. Liberal education—this category included items about various fields of knowledge and intellectual skills—literature, philosophy, culture, critical thinking, aesthetic sensitivity, communication, science, technology, and citizenship. Once again, all three USMA groups felt that they benefited more in these areas than did their counterparts in civilian institutions (see Table 26).
- 6. Memory of College Experiences—two scores are derived from items in this section. The first pertains to the extent to which peer or interpersonal relationships stand out in the respondents' memories, and the second concerns the extent to which academic experiences are prominent.
- a. Peer--all items in this part had reference to some group activities and peer relationships. The means of all three USMA groups are larger than those of the other two groups, indicating that USMA graduates are more aware of peer relationships while in college (see Table 27).
- b. Academic--items here pertain to professors, courses, and scholarships. Table 28 shows that academic experiences were more memorable to civilian school graduates than they were to USMA graduates. The means for the former are slightly larger than the means for the latter.
- 7. Personal Traits—the three personal traits measured in this section are autonomy, complexity, and theoretical orientation.
- a. Autonomy--a high score on this scale indicates a general independence of traditional authority. Table 29 presents data indicating that the engineering & science and the national norm groups have higher mean scores than the USMA groups. Apparently, the USMA groups are a little less autonomous and more concerned with traditional authority.

- b. Complexity—a high score indicates tolerance for ambiguous situations and enjoyment in dealing with complex and novel ideas. The mean scores of the five groups have a range of 11.9 to 12.6, indicating roughly equivalent amounts of this trait (see Table 30).
- c. Theoretical Orientation--respondents scoring high on this trait usually prefer using the scientific method, and thus are logical, analytical, and critical in their approach to problems. Table 31 shows that the mean score for USMA NAD is the highest and that the USMA AD and national norm groups are the lowest on this trait.

#### SUMMARY

The purpose of the present study was to compare the responses of USMA and civilian college graduates on a number of topics of current interest. Members of the USMA Class of 1950 were surveyed by means of a questionnaire developed at the Center for the Study of Evaluation at the University of California, Los Angeles (UCIA). Comparison data on 5651 graduates of the Classes of 1950 from 74 civilian colleges and universities were made available by this same Center. In order to make comparisons more meaningful, the respondents to the mailed questionnaires were divided into five groups: USMA graduates who were still on active duty; USMA graduates not on active duty; the total number of USMA graduates who responded to the questionnaire, including the first two groups and also those respondents who could not be classified as either on active duty or not on active duty; graduates from eight engineering and science schools; and graduates from the 74 schools combined, except USMA.

The questionnaire used to obtain the data consisted of items classified under seven major sections, most of which dealt with many of the goals of education which are obtainable and observable only in adult life. A summary of the results from each of these seven sections follows:

- 1. Background Information—the typical USMA 1950 graduate, as compared to the typical 1950 graduate of other colleges and universities, is more likely to have obtained a master's degree, to have a stronger attraction to his alma mater, to have about as high an income while on active duty, to have a higher income after leaving active duty, and to be more willing to come to USMA again if he could do it all over again. The USMA graduate, as well as the civilian college graduate, is likely to be Republican and of the Protestant faith.
- 2. Activities—the typical USMA graduate still on active duty is more likely to be less involved in community affairs, national and state politics, education, and science than are the graduates from civilian colleges and USMA graduates not on active duty. However, once the typical USMA graduate leaves active duty, he is more likely to be involved in national and state politics than are members of the other groups, and just as involved in community affairs as the national norm group. The USMA graduate, regardless of active or



not active duty status, tends to be slightly more interested and involved in drama, literature, intercultural activities, and international activities.

- 3. Changing Society—on the Occurring subscale, the five groups obtained roughly the same scores, indicating that their knowledge and awareness of certain major changes that are taking place in American society is quite similar. As to the desirability of such changes, results of the Desirable subscale showed the groups to be very similar in their attitudes.
- 4. Viewpoints--no major differences were evident on the three subscales of Government, Women, and Civil Rights, indicating that the respondents possessed similar viewpoints on these three variables. As far as could be ascertained, the responses of the groups appeared to be of the middle of the road variety on these three issues.
- 5. Educational Benefits—the three subscales of this section were Vocational, Personal and Social, and Liberal Education. For each subscale, the respondent's score indicated the extent to which he felt that he had benefited from going to college. In the Vocational subscale all three USMA groups felt that going to college was slightly more beneficial to them than did graduates from civilian colleges. On the other two subscales, Personal and Social and Liberal Education, the three USMA groups scored much higher than their counterparts from civilian colleges, indicating that the USMA graduates felt that they had benefited much more in these two areas by going to college.
- 6. Memory of College Experiences—on the Peer subscale the three USMA groups had higher scores than the two civilian groups, implying that the former are presently more aware of college peer and group activities. For the Academic subscale, which pertained to the extent to which professors, courses, and scholarships stand out in their memories, the graduates from civilian colleges scored higher, meaning that they were more aware of these variables.
- 7. Personal Traits--consisted of three subscales, Autonomy, Complexity, and Theoretical Orientation. Scores on the Autonomous subscale showed that the USMA groups are slightly less autonomous and more concerned with traditional authority than are the graduates from civilian colleges. On the Complexity subscale, the scores were roughly equivalent, and on the Theoretical Orientation subscale, the mean score of the USMA graduates not on active duty was the highest and that of the active duty USMA graduates and the national norm group's scores were the lowest.

In summation, the five groups have very similar response patterns to some items, yet markedly distinct response patterns to other items. Generally speaking, it appears that the USMA graduate compares favorably, if not more favorably, with graduates from civilian colleges and universities on most of the areas sampled in this study. It is particularly noteworthy to mention the finding that the USMA graduate feels that he has benefited more by going to college than does the graduate from a civilian college or university. However, it must be cautioned that any interpretation of the results of this study must be made in conjunction with the goals, philosophies, values, and beliefs of the schools involved, since they may vary from institution to institution.

APPENDIX A

ALUMNI SURVEY



# A $\mathbf{L}$ U M N S U R $\mathbf{E}$ Y



An Inquiry on the Activities, Opinions, and Experience of College Graduates



#### ABOUT THE QUESTIONNAIRE.....

This inquiry is one of several nationwide studies being conducted by the Research and Development Center at UCLA — in cooperation with about 100 other colleges and universities.

Its purpose is to understand more fully the activities, interests, and judgments of college graduates.

We believe that such understanding will be of benefit to those who carry out and attempt to improve the educational programs in our colleges and universities, both public and private.

#### ABOUT YOUR REPLY.....

Your individual reply is confidential.

The return envelope and questionnaire are numbered for clerical purposes only.

Most of the questions can be answered simply by filling in the oval next to the appropriate spaces. Please use a soft lead pencil No. 2 preferred.

We hope you will answer all the questions, but if there are some which you prefer not to answer, omit them.

The questionnaire is being sent to a carefully selected cross-section of college alumni. Your reply is important.

We hope you will find that answering the questions is personally interesting, informative, and well worth the forty five minutes or so of your time to do so.

We appreciate your cooperation.



#### **ACTIVITIES**

The check-lists in this section of the questionnaire cover a rather large number and variety of activities in different areas of interest and society — activities such as discussing, reading, observing, contributing, and participating. Opportunity, time, interest, and inclination all have a bearing on what one does, can do, or would want to do. No one does everything; every one does something. As you read the statements in these lists, please fill in the oval next to each one that describes an activity you have engaged in during the past year.

	MUNITY AFFAIRS ing the past year:		TIONAL and STATE POLITICS ing the past year:
0	I talked about local community problems with my friends.	0	I discussed political issues with my friends.
0	I followed local events regularly in my newspaper.		I listened to speeches, news specials, discussion programs, etc.
0	I gave money to the community fund or chest or other local		about political issues on TV or
_	charity.  I belonged to a community organ-	0	radio weekly or monthly.  I followed state and national
	ization interested in civic affairs-		political events regularly in my newspaper.
	such as PTA, Chamber of Commerce, League of Women		I read magazine articles about state and national problems weekly
	Voters, business or professional association, etc.		or monthly.  I read one or more books about
	I attended meetings of some local civic group.		politics.  I voted in the last national
0	I contributed time or money to some civic project—such as a play-	İ	election.  I voted in the last state election.
	ground, park, school, hospital, museum, theater, etc.		
0	I had contact with a local official	į	I attended meetings of a political club or group.
0	about some community problem.  I collected money, called on my		I did some volunteer or paid work for a political party.
	neighbors, carried a petition, or engaged in some similar activity	0	I contributed money to some political cause or group.
	in behalf of a local community project.	0	I talked with an elected official about some problem (national or
	I voted in the last local election		state). I signed a petition, wrote a letter,
	I attended a public hearing about a local issue-such as zoning,		card, or telegram concerned with some political issue.
	schools, taxes, traffic, etc. I participated in a demonstration	0	I participated in a public protest
	or protest about a local issue.  I held office in some local civic	0	or rally over some political issue.  I held a political or public office
	group or community organization.		(elected or appointed, full time or part time).

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(600)

ART During the past year:
I talked about art with my friends.  I read critiques or reviews of art shows or exhibits in the newspapers or magazines.  I visited an art gallery or art museum.  I attended an exhibition of contemporary painting or sculpture.  I read one or more books about art, artists, or art history.  I bought a painting or piece of sculpture.  I attended an art study group or workshop.  I contributed money or time in support of some activity related to art.  I did some creative painting or other art work myself.
LITERATURE During the past year:
<ul> <li>I talked about new books with my friends.</li> <li>I read book reviews in the newspapers or magazines at least once a month.</li> <li>I read for personal interest (not business) at least one book a month.</li> <li>I bought books for my personal library.</li> <li>I read one or more contemporary novels.</li> <li>I read poetry.</li> <li>I attended a lecture given by a novélist, critic, poet, or playwright.</li> <li>I belonged to a group which discussed books.</li> <li>I wrote an essay, story, play, poem, etc., for publication.</li> </ul>
EDUCATION During the past year:
I talked with my friends about the schools in the neighborhood.

	schools in the neighborhood.
	l visited a local school.
0	I talked with a school teacher or other
	school official.
	I read about education in the newspaper.
0	l voted (or would vote) in favor of a
	bond issue or other proposition to pro-
	vide more money for the public schools
0	I enrolled in a course offered by a
	college or university.
0	I attended one or more concerts or lec-
	tures at a college or university campus.
	I attended one or more athletic events

at a college or university. I gave money to a college or university. I read one or more books about education.

#### MUSIC

Durin	g the past year:
	bought phonograph records.  listened attentively to radio
	nusic at home or in my car. read reviews of musical perform- nces or new record releases in the
	newspapers or magazines. talked about music with my riends.
-	attended one or more symphony,
	opera, or chamber music concerts.  attended one or more concerts of contemporary folk music, rock,
	azz, etc. read one or more books about
	nusic, musicians, or music history.  listened to some serious music
	by contemporary composers.  contributed time or money in
	upport of some local musical nterprise. played a musical instrument. participated in some vocal or nstrumental group-choir, orchestra, or other group.
DRAM During	1A g the past year:
] O	talked about movies, plays 'V dramas, etc. with my friends.
	watched TV dramas at least
	nce a month. went to the movies at least
O I	read theater or movie reviews  the newspapers or magazines
$\bigcirc$ i	t least once a month. read one or more books about
	he theater, or a book of plays. attended one or more plays-
	ither professional or amateur. belonged to a group which dis- ussed contemporary drama.

I saw several movies that could be described as experimental, avant garde, etc.

I attended one or more plays by a contemporary dramatist.

- I contributed time or money in support of some local theatrical enterprise.
- I participated in some drama activity-acted, danced, sang, worked on sets or costumes, made movies, etc.



### RELIGION During the past year: I attended church services one or more times. I belonged to a church. I contributed a regular sum of money to the church. I read articles about church or religious activities in the newspapers or magazines. I read one or more books about religion. I attended one or more church functions held during the week. I did some volunteer work for my church. I discussed ideas, practices, or problems of religion with my friends. I observed religious rituals in my home (said grace before meals, lit candles on the Sabbath, etc.). INTERCULTURAL During the past year: l talked with my friends about people and cultural events in other countries. I saw one or more foreign movies. I went to a concert, theater, or exhibition which featured the art, music or drama of another country. I corresponded with a citizen of

another country.

I traveled in another country.

I entertained a visitor from another

or ethnic groups.

White, Other.)

I read one or more books by authors

I attended a meeting at which a large

majority of the participants were of

mine. (If so, what was the racial back-

a racial background different from

ground of most of the participants? Underline one: Black, Brown, Yellow,

understanding between countries, races,

from another country.

I attended one or more meetings or lectures about other countries or about other racial or ethnic groups.

I participated in efforts to improve

country.

#### During the past year: I talked about science with my friends. I watched special presentations about science on TV. I read articles about new developments in scientific research in the newspapers or magazines. I attended a scientific exhibit or museum. I read a new book about science. I subscribed to a magazine about science. I attended a lecture or demonstration on some aspect of science. I attended meetings of a science study club or work group. I carried out a scientific experiment. recorded scientific observations of things in the natural setting, or assembled and maintained a collection of scientific specimens. I made some piece of scientific

apparatus-such as a hi-fi component, photo-enlarger, telescope, etc.

#### INTERNATIONAL

SCIENCE

During the past year:

relations.

$\cup$	I discussed international relations,
	foreign policy, the U. N. etc., with
	my friends.
0	I read newspapers or magazine articles
	dealing with international relations.
0	I read one or more books about other
	countries or international relations.
0	I read U. N. publications or listened
	to U. N. sponsored programs on radio
	or TV.
0	I contributed time or money for some
	international group or project.
0	I spoke to a civic group or club on
	international relations or foreign policy.
0	I attended one or more meetings or
	lectures about international affairs
	or foreign policy.
0	I wrote to a news publication or govern-
	ment official in behalf of some legislation

or U.S. policy regarding international

for or against some international issue.

I participated in a public demonstration





#### THE CHANGING SOCIETY

There are periods of history when change seems to be more turbulent than others. Often the directions of change seem unclear; and people differ in their judgment about whether particular trends or tendencies are desirable or undesirable. We have listed below a number of statements that describe changes or tendencies which may or may not be occurring in the United States. For each statement indicate first, in the left hand columns, whether you think the change or trend it describes is or is not occurring -- by filling the appropriate oval Generally True, Don't Know, or Generally Not True. Then after some of these statements, and in the right hand columns, you will find space for an additional response. For this response, indicate whether you think the change described would be desirable or undesirable if it in fact occurred or is occurring.

Occurr	ing		Desiral	
Generally Truc Don't Know	Generally Not True		Generally Desirable No Opinion	Generally Undesirable
0	0	An increasing proportion of young people are graduating from high school and going to college.		0
00		The number of people going to school (old and young, full-time and part-time) is, or soon will be, greater than the number of people working at their job.		
00	0	The prolongation of education is increasing the economic dependence of adolescents and young adults on their parents.	00	0
00	0	There is an increasing gap and conflict between generations.		
00	0	The problem of disadvantaged individuals who find themselves in chronic poverty is becoming more serious.		
00	0	Environmental pollution (especially of the air and water) is becoming a critical problem.		
00	0	The rate of consumption of natural resources is threatening to exhaust their supply.		
00	0	Society is becoming so complex and interdependent that it is no longer adequate to try to solve one problem at a time.		
0	0	Long range planning is becoming essential for the health and welfare of large urban areas.		
00	0	A new style of politics, involving broader and more active participation at all levels, is emerging.	00	0
00	0	More people are coming to realize and accept the value of self-expression—for example, through the arts.	00	0
00	0	As our society develops, the capacity for inter-dependence (relating with others) may be valued more highly than the capacity for independence and self-reliance.	00	0
00	0	Less importance is being attached to the value of individual success and achievement than has been traditional in our society.	00	0
00	0	White collar workers are outnumbering blue collar workers.		



Occurring Desirable Generally Except for scientists, professionals, and executives, the number of leisure hours (among waking hours) is becoming greater than the number of working hours for the bulk of the employed population. Career changes are becoming common-one's initial occupation is less likely to last out a working life than was true in the past. A great many industrial jobs depending on unskilled and semiskilled labor are being eliminated by automation and computers. Scientists and professionals are having an increasingly important influence on economic and governmental policies. Technologies for producing and distributing information (computers, mass media, etc.) are becoming as significant to the economy as technologies for producing and distributing energy (fuels, electricity, atomic energy etc.) There is an increasing movement toward inter-city government embracing both urban and suburban areas, and adjacent cities. Some business and industrial organizations are moving away from competitive relations toward more collaborative relations. There is an emerging trend for major industries to regard their resources as belonging not just to them but to all of society. There is a growing trend to coordinate major public and private services-for example, in housing, transportation etc. There is a tendency for large neighborhoods to become more exclusive in the kinds of people who live in them-white middle class suburbs as well as parts of the "inner city". The market sector of the economy (manufacturing and private industry) is becoming less important than the non-market sector (services, non-profit organizations, households, etc.) in producing the wealth of our society. Within the market sector of the economy, the activities of the larger enterprises are becoming increasingly international in

The cost of producing a major commodity such as new housing creates equally large costs for such consequent needs as expanded sewage systems, access roads, traffic controls, recreational facilities, schools, public utilities, etc.

scope.

advanced industries.





Increasingly, government is controlling the markets for the most

#### **VIEWPOINTS**

The statements below express viewpoints that some people agree with and others don't. Indicate your own attitude by filling in one of the ovals to the left of each statement (A = Agree; ? = No Opinion; D = Disagree.)

A ? D	Government planning should be strictly limited, for it almost inevitably results in the loss of essential liberty and freedom.
	results in the ress of essential neorty and freedom.
	We are not likely to have lasting peace unless the U. S. and its allies are stronger than all the other countries.
	The United Nations should have the right to make decisions that would bind members to a course of action.
	Literature should not question the basic moral concepts of society.
	The United States has enough natural resources and scientific know-how to be economically self-sufficient.
	Parents know as much about how to teach children as public school teachers know.
	More women should be involved in policy formation both in business and government.
	Professional women should have the same benefits and opportunities as their male colleagues.
	Being a housewife provides many opportunities to apply broad and creative interests.
	Family patterns and attitudes should allow, and often encourage, married women to follow their own interests, even if they have young children.
000	If Negroes live poorly, it is in great part the fault of discrimination and neglect from whites.
	Anyone, no matter what his color, who is willing to work hard can get ahead in life.
	More money and effort should be spent on education, welfare, and self- help programs for the culturally disadvantaged.
	Issues such as law and order, civil rights, and public demonstrations are complex and need careful evaluation and judgment of individual cases.
	People who advocate unpopular or extreme ideas should be allowed to speak on college campuses if the students want to hear them.



20 🖫

#### SOME EDUCATIONAL BENEFITS

In thinking back to your undergraduate experience in college or university to what extent do you feel that you were influenced or benefited in each of the following respects? Please fill in one of the ovals for each of the items listed below.

Very much Quite a bit Some Very little	
0000	Vocational training-skills and techniques directly applicable to a job.
0000	Background and specialization for further education in some professional, scientific or scholarly field.
0000	Broadened literary acquaintance and appreciation.
0000	Awareness of different philosophies, cultures, and ways of life.
0000	Social development-experience and skill in relating to other people.
	Personal development—understanding one's abilities and limitations, interests, and standards of behavior.
0000	Critical thinking-logic, inference, nature and limitations of knowledge.
0000	Aesthetic sensitivity-appreciation and enjoyment of art, music, drama.
0000	Writing and speaking-clear, correct, effective communication.
0000	Science and technology-understanding and appreciation.
	Citizenship-understanding and interest in the style and quality of civic and political life.
0000	Appreciation of individuality and independence of thought and action.
0000	Development of friendships and loyalties of lasting value.
0000	Vocabulary, terminology, and facts in various fields of knowledge.
0000	Appreciation of religion - moral and ethical standards.
0000	Tolerance and understanding of other people and their values.
<b>COM</b>	Bases for improved social and economic status.



#### SCHOOL AND COLLEGE EXPERIENCE

The benefits one gets from education are related, at least in part, to various aspects of personal background and experience — the kind of school, what one studied, and other experiences during the school and college years. This section of the questionnaire asks about some of these factors.

From what kind of a high school did you graduate? (Mark one)  Public Catholic Other church-related Private (independent)	Approximately what was your average grade in High School? and in College? (Mark one in each column)  High School College  D, C-
About how many students were in your high school graduating class? (Mark one)  Fewer than 100  Between 100 and 500  More than 500  As well as you can recall, about how many students in your high school class went to college? (Mark one)  All, or nearly all  Most  About half  Less than half  Very few	C C+ B B+ A, A+ When you were in college, where did you reside most of the time? (Mark one)  Dormitory Fraternity or sorority Rooming house Apartment At home, or with relatives Other?
When did you decide that you wanted to go to college? (Mark one)  After I had graduated from high school During my last year in high	Is the college from which you received your Bachelor's degree the same as the college you entered as a freshman? (Mark one)  Yes  No. If no, what other college(s) did you attend?
school During the junior year in high school During the sophmore year in high school Earlier than any of the above Don't remember  Among your circle of friends in high school, about how many went	How much time elapsed between your enrollment in college as a freshman and your graduation with a Bachelor's degree?  (Mark one)  Four years (or less)  More than four years. If more, what accounted for the added time?
to college? (Mark one)  All, or nearly all  Most  About half  Less than half  Very few	What is the name of the college from which you received your Bachelor's degree?



In College what was	In Gradu- ate School	What field is most			enrolled in graduate school as to attend? (Mark one)		
your major	what was your major	closely re- lated to	│	s, currently	enrolled		
field of	field of	your present	Yes, plan to enroll				
study?		work?	□ No				
(Mark one)	(Mark one)	(Mark one)					
College	Graduate	Present  Question does not	exp	ect to obtai  Some grad			
0	0	apply to me Physical sciences			degree professional degree		
		or Math Biological	Whe	ere?			
_	_	sciences	Mai	or field?			
0		Social					
	0	sciences  Language		w sure are yo Very sure Fairly sure	ou of this? (Mark one)		
	0	Humanities		Unsure			
0	0	Arts	) ) ) )	<b></b> :			
0	0	Engineering	any of	he following	college did you ever discuss g topics with a counselor? r? or your parents?		
0	0	Business			pply under each)		
0	0	C Education	Coun- selor	Faculty	Parents		
0	0	Other, please specify	000	000	<ul><li>Your academic work</li><li>Your abilities and interests</li></ul>		
		<del></del> _	) ()	0 0	<ul><li></li></ul>		
What is the	highest level	of education obtained	00	00	to go to graduate school, etc.  Personal problems  Financial problems		
by you? (M Bache Master Docto	(ark one) lor's degree r's degree				Parents were not living		
	e a graduate o ere did you o	r professional btain it?					



As well as you can recall, about how much did you participate in various activities when you were in high school and college? For each type of activity listed below, please Mark the amount of your participation in it. If the activity was not available (did not exist) in your school or college, please so indicate by Marking in the special columns.

In	HIGH S	CHOOL	i					In C	OLLEGE	:
Not Available	Mich 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	No 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Varsity sport Other sports Publications Creative writ Dramatics Debate Arts and craf Music: choru Student gove Religious gro Social service Social groups etc.	ing ts s, band rnmen ups group	it os	Much 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Not Available
000	000	000	000	Political grou Science clubs Other acaden honoraries,	or pro nic gro clubs	ups, related	000	000	000	000
0	0	0	0	to your sch Foreign stude			0	0		0
Livi Livi Frat Info str Part Part co Part ha Havi ke The in ty-	ng away ng in a d ternity or ormal disc udents  icipation icular pro personal icular pro uraged n icular pro rd to get ing to wo ep up wi	in spor ofessors interest ofessors along work at a j th my si ce of be	y activitivith oth ts who too in me who envith ob and studies ing invocular act	er ok re still lved civi-	0 0 0 0 0 0 0 0	Particula especia Particula up new The expe some led larly st Realizing good so Having lo Meeting to choices Worrying	r course illy hard r course r interes rience campus a tures th imulatir what the cholarsh ots of da the perso be resp and act about we able to	s that we and de s that o ts for m of leader activity at were ag in really tes on I man consible civities whether o gradua	rere manding pened e ship in particu- nds of are tried for my I would	oply)



your college? (Mark one)	you go to the same college from which you received your Bachelors' degree? (Mark one
<ul> <li>I have a strong attachment to it.</li> <li>Pleasantly nostalgic, but no strong feeling.</li> <li>More or less neutral.</li> <li>Generally negative.</li> <li>Thoroughly negative.</li> </ul>	Yes, definitely Probably yes Probably no No, definitely
When you were in college, how well did you like it? (Mark one)  I was enthusiastic about it.	Regardless of any vocational benefit college may have had for you, would you now say that going to college was
I liked it.  I was more or less neutral about it.	a very important and beneficial experience in your life? (Mark one)
☐ I didn't like it.	Definitely yes Generally yes Generally no Definitely no



#### PERSONAL INFORMATION

People differ in many ways — in age, sex, marital status, in where they have lived and traveled, in the kinds of work they do, in their politics, religion, race ethnic background, in what they like, and in how they see themselves. Information about such matters is clearly relevant to a research study that is attempting to learn more about the lives of college-educated adults in our society. We hope you will be willing to answer all of these questions. If you have strong feelings about not answering a particular question, then don't answer it! We would remind you that all your responses are confidential, and that we have not asked you to write your name anywhere in the questionnaire. In answering fill in the oval next to the answer you choose.

How old are you? (Mark one)  under 21  21-25  26-30  31-35  36-40  41-45  46-50  over 50	What is the highest level of education obtained by your parents? (Mark one in each column)  Father Mother  Grammar school  Some high school  High school diploma  Some college  Bachelor's degree  Master's degree		
Are you? (Mark one)	Doctor's degree		
	Advanced professional  Law Medicine Other		
What is your marital status? (Mark one)			
<ul><li>Single</li><li>Married</li><li>Separated, widowed, or divorced</li></ul>	Which of the following best describes the community you think of as your residence—Before college? and Today? (Mark one in each column)		
Do you have any children? (Mark one)  Yes (How many?)	Before College Today Farm or open country Small town (Less than 50,000) City (50.000-500,000)		
○ N <sub>0</sub>	Big city:  (500,000-2,000,000)		
How many children are living in the same household with you? (Mark one)	C (over 2,000,000)  Suburb in a metropolitian area of:		
None One Two Three or more	(under 500,000) (500,000-2,000,000) (over 2,000,000)		



The State of

About how many books do you have in your Which of the following best describes your home? And about how many books were in your religious identification? And the identiparent's home at the time you were going to fication of your parents? (Mark one in college? (Mark one in each column) each column) **Parents** Parents You Under 50 Catholic 50 - 100 ⊃ Jewish 100 - 200 Protestant (What denomination?) 200 - 500 ⊃ over 500 No formal religion No definite religious beliefs Approximately what is your current economic Other? \_ status (annual income from all sources, including your spouse's)? And about what was Prefer not to answer your parent's income when you were in What is your racial identification? college? (Mark one in each column) Yours Parents under 5000 In what parts of the country have you → 5000 - 10,000 lived during various periods of your **10,000 - 15,000** life? (Mark as many as apply under each) **15,000 - 25,000 25,000 - 50,000 Before** During After over 50,000 College College College Northeast Middle Atlantic South With respect to political choices, how do Midwest you usually think of yourself? and your Southwest parents? (Mark one in each column) Mountain States Far West You Parents Republican Outside the U.S. → Democrat Non-partisan What is the approximate total length or no specific affiliation of time you have spent in countries outside of the U.S.? ( .ark one in Other?\_ Prefer not to answer each column) Before During After College College College None What do you identify as the predominant A few days ethnic or national background of your A few weeks ancestors? (for example, English, Irish Several months Polish, Italian, Swedish, German, etc.) A year or more In the country where you have spent the most time, outside the U.S., what was the main reason for your being Did any of your recent ancestors there? (Mark one) (parents or grandparents) come to the United States from another country? Have not been in other countries (Mark one) Armed Forces service ─ Work Yes Study  $\bigcirc$  No Personal travel I was a resident of the country Were you ever in the Armed Forces? (Mark one) C Yes

ERIC

\*Full Text Provided by ERIC

France (200)

⊃ No

Please classify your father's major occupation and your own present full-time occupation by marking the category which seems to fit best. (Note that the last category under the heading "you" is "housewife". Mark this only if you are a housewife full-time. If you work outside the home part-time, do not mark "housewife", but instead mark the nature of your work in the third column headed "Part-time".)

Part-Father You Time Professional 1 (typically requiring a doctorate or advanced professional degree-such as doctor, lawyer, professor, etc.) Professional 2 (typically requiring a master's degree or some professional training beyond college-such as teacher, engineer, accountant) Managerial or executive Semi-professional or technical (such as programmer, nurse, lab technician) → Public official or supervisor Small business proprietor or farm owner Sales or skilled clerical (such as department store salesman, stock clerk, secretary, etc). Semi-skilled or general labor (such as machine operator, farm laborer, construction worker, etc.) Housewife What exactly is your occupation? What do you do-for example, sales manager of an insurance company, chemical research in an oil company, teach physical education in high school?\_

In what kind of organization do you work? (Mark one)
Self employed Business or industrial firm Educational agency Government agency Other non-profit agency
Which of the following things do you do fairly regularly in your work? (Mark as many as apply) Plan your own work Supervise others Make policy decisions Write reports Do original research or writing Keep records Instruct others Counsel or advise others Make speeches or present reports Organize operations Attend meetings Analyze data
Which of the following characteristics do you associate with you work? (Mark as many as apply)
Initiative Responsibility Creativity Stability Prestige Recognition Security Opportunity Risk Variety Independence Regularity Stimulation Pressure Reward Pleasant surroundings Interesting associates
Among your circle of friends today (the people you frequently see, talk with, and do things with), about how many are college graduates? (Mark one)
<ul> <li>All, or nearly all</li> <li>Most</li> <li>About half</li> <li>Less than half</li> </ul>



→ Verv few

#### **VOCABULARY**

This vocabulary "test" is designed to provide information on the word power of college graduates. Some of the words are very difficult. Only a few people can define all of them correctly, so do not be surprised if some or many of them are unfamiliar to you.

The words to be defined are printed in capital letters. Underneath each of these capitalized words, look for a word that comes closest to the same meaning and fill in the oval in front of that word. Do not consult a dictonary!

HYPOTHESIS:  logic procedure mistake reality supposition	ANTITHESIS:	LUDICROUS:  clear comical believable profitable stupid	DIFFIDENT: Shy unusual quarrelsome sarcastic polite
ILLUSTRIOUS:  witty dead photographed famous busy	STIGMA:  web taint darkness dream creed	IRASCIBLE:     restless     reddened     methodical     cranky     righteous	PEDANTIC: heavy mischievous harsh stilted walking
IMMINENT:  weak wicked approaching huge subjective	EULOGY:     praise     poetry     funeral     harmony     substitution	DECOROUS:  proper conscientious gaudy pompous unaware	EQUIVOCAL loud deceitful mild just doubtful
FACILE: easy true artificial witty deceptive	AUSTERE:  thin severe starry strange colorless	ABSTRUSE: sharp evident obscure blunt irregular	EPHEMERAL: many-colored short-lived future feminine obscure
BLATANT:	AMBIGUOUS: changeable defective versatile doubtful dishonest	SUCCINCT:     enveloping     tasty     terrifying     terse     helpful	SEDULOUS: untiring tempting evil jealous rebellious



#### PERSONAL TRAITS

We all have different preferences and personal characteristics. We would like to know more about the relationship of different choices and traits to important college and subsequent career experiences. On the left please mark all the items below that you generally find to your liking. On the right, please mark all the adjectives that you think are generally descriptive of you. (Please Mark all the items that apply)



We are most appreciative of your cooperation in completing this questionnaire. To us, a questionnaire is nothing more nor less than an effort to ask honest and relevant questions in the hope that honest and relevant answers will be given. We believe that higher education is a very important fact in our society; and that those who are responsible for it, or are concerned about it, should know as much about it as they can. If our study, thanks to the response which you and thousands of others will give us, helps to provide the basis for better informed judgments, positive or negative, our efforts will have been worthwhile. If there is anything you would like to add - about yourself, or your college, or society in general, or this questionnaire in particular, please do so. Again, thank you for your interest, your time, and your sincerity. We hope that having this look at your own activities, views, and experiences has been of some interest and benefit to you.



#### APPENDIX B

#### TABLES 1 THROUGH 31





TABLE 1

## HIGHEST LEVEL OF EDUCATION ATTAINED\*

Z	133	39	326	1060	5651
Doctorate Degree	3%	ю	4	۲	7
Advanced Professional Degree	2%	œ	က	83	6
Master's Degree	64%	41	09	20	25
Bachelor's Degree	32%	49	33	71	59
Type of Institution	USMA AD	CO USMA NAD	USMA Total	Engineering & Science	National Norm
	•	<b>3.9</b> 37	٠.	6000	

\*Because of rounding errors, the percents across rows do not always equal 100 in this and succeeding tables.

TABLE 2

# PRESENT FEELING ABOUT UNDERGRADUATE COLLEGE

×	135	39	329	1060	5651	
Strong Attachment to it	73%	72	69	32	29	
Pleasantly Nostalgic But No Strong Feeling	23%	18	23	45	49	
More or Less Neutral	4%	10	Ŋ	19	18	
Generally Negative	1%	0	Ø	4	4.	
Thoroughly Negative	%0	0	0	1	г	
Type of Institution	USMA AD	S. LISMA NAD	USMA Total	Engineering & Science	National Norm	

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TABLE 3

#### SATISFACTION WITH COLLEGE CHOICE

z	133	38	326	1060	5651
No, Definitely	3%	œ	9	9	Q
Probably No	11%	13	13	16	21
Probably Yes	27%	37	26	41	43
Yes, Definitely	29%	42	56	37	30
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm

ERIC Full Text Provided by ERIC

TABLE 4

### SIZE OF COMMUNITY OF PRESENT RESIDENCE

N	131	37	319	1060	5651	
Suburb in Metro, Area (Over 2,000,000)	, n	19	12	17	12	
Suburb in Metro. Area (500,000- 2,000,000)	30%	19	24	15	11	
Suburb in Metro.Area (Under 500,000)	2%	ო	9	ω	2	
Big City Big City (500,000- (Over 2,000,000) 2,000,000)	3%	0	8	· <b>ধ</b>	4	
Big City (500,000- 2,000,000)	8%	11	œ	လ	9	
City (50,000- 500,000)	20%	16	21	21	24	
Small Town (less than 50,000)	27%	22	24	27	30	
Farm or Open Country	2%	11	ю	ω 	ß	
Type of Institution	USMA AD	O USMA NAD	USMA Total	Engineering & Science	National Norm	

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TABLE 5

## CURRENT ANNUAL INCOME FROM ALL NOURCES

z	134	39	329	1060	5651	
Over 50,000	%0	15	4	ო	ო	
\$25,000- 50,000	4%	38	14	23	17	
\$15,000- 25,000	83%	38	89	55	45	
\$10,000- 15,000	13%	œ	13	18	27	
\$5,000- 10,000	%0	Ó	0	1	2	
Under \$5,000	%0	0	1	0	1	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
	4	41		*	861	

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TABLE 6

#### POLITICAL PARTY PREFERENCE

×	135	39	328	1060	5651
Prefer Not To Answer	2%	. 0	N	0	Н
Other	1%	ო	83	H	г
Non-Partisan or No Specific Affiliation	35%	15	30	21	20
Democrat	10%	က	თ	16	24
Republican	53%	79	57	62	. 54
Type of Institution	USMA AD	USMA NAD	Kausma Total	Engineering & Science	National Norm

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TABLE 7

#### RELIGIOUS IDENTIFICATION

N	131	37	324	1060	5651
Prefer Not to Answer	%0	0	0	н	0
Other	2%	വ	Ø	េ្	က
No Definite Religious Beliefs	2%	က	Ø	4	4
No Formal Religion	4%	ည	9	10	œ
Jewish Protestant	%69	51	65	57	61
Jewish	2%	ည	4	2	4
Catholic	22%	30	22	17	18
Type of Institution	USMA AD	rusma nad	USMA Total	Engineering & Science	National Norm

TABLE 8

ACTIVITIES SCALES: COMMUNITY AFFAIRS

Percent of Alumni Obtaining Each Score

S.D.	2.	2.8	2.5	2.4	2.5	
ı×ı	4.7	8.8	5.2	6.4	6.8	
×	135	39	330	1060	5651	
12	%0	0	0	П	П	
11	1%	œ	Ø	ເດ	œ	
10	%0	13	4	9	G	
6	4%	13	4	œ	10	
œ	%9	13	10	12	12	
2	%6	<b>∞</b>	10	15	14	
9	13%	13	11	13	. 13	
ເດ	16%	10	15	16	13	ļ
4	19%	œ	16	14	12	
က	15%	10	14	7	ເນ	
Ø	10%	က	œ	က	N	
H	5%	0	4	П	7	
0	1%	ო	Ħ	1	Н	
Type of Institution	USMA AD	VSMA NAD	USMA Total	Engineering & Science	National Norm	

TABLE 9

# ACTIVITIES SCALES: NATIONAL & STATE POLITICS

Percent of Alumni' Obtaining Each Score

S.D.	1.4	2.3	1.9	2.0	2.2
IMI	5.7	7.8	6.2	7.0	7.4
z	135	39	330	1060	5651
14	%0	0	0	н	1
13	%0	2	1	1	- 1
12	%0	က	72	73	က
11	%0	œ	1	က	44
10	%0	က	Ø	4	9
6	3%	13	D.	0	10
œ	%8	18	10	16	17
7	10%	18	17	22	23
9	37%	18	8	25	21
വ	21%	ເດ	16	10	∞
4	15%	œ	14	က	4.
က	3%	0	က	83	7
N	1%	0	Н	П	-
	0% 1%	0	Н	0	0
0	%0	0	0	0	0
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm
		45, 7		1000	Į.

TABLE 10

#### ACTIVITIES SCALES: ART

S.D.	1.8	2.0	1.8	1.9	2.0	
IXI	2.2	2.6	2.2	2.1	2. 4.	
z	135	39	330	1060	5651	
ı						
6	%0	0	0	0	0	
œ	%0	0	0	Ħ	H	
2	%0	0	0	83	Ø	
9	%9	10	ល	4	ເດ	
Ŋ	8%	10	2	9	œ	ļ
4	%L	15	12	o,	11	
က	20%	œ	16	14	14	
Ø	18%	21	18	19	18	
H	24%	18	23	19	19	
0	18%	18	18	27	22	
Type of Institution	USMA AD	45 USMA NAD	USMA Total	Engineering & Science	National Norm	
		<b>48</b>				

TABLE 11

#### ACTIVITIES SCALES: LITERATURE

Percent of Alumni Obtaining Each Score

X S.D.	3.5 1.9	3.6 2.0	3.5 1.9	2.7 1.9	3.0 2.0	
z	135	39	330	1060	5651	
	· ·					
6	%0	0	0	0	0	
<b>∞</b>	2%	0	н	0	7	
7	2%	0	N	н	က	
9	%6	21	12	က	œ	
ហ	22%	23	50	<b>4</b>	15	
4	15%	15	18	16	15	
က	17%	10	16	18	16	
87	17%	10	13	18	15	
H	10%	13	10	12	13	
0	6%	œ	2	18	14	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
	·4 4	<b>.9</b>		, in , <b>:Y</b>	-	

TABLE 12

#### ACTIVITIES SCALES: EDUCATION

S.D.	2.0	1.9	2.0	1,8	2.0	
IXI	5.0	5.7	5.2	5.3	5.8	
z	135	39	330	1060	5651	
0	<i>1</i> %					_
10	1%	က	7	0	63	
6	4%	က	ប្	જ	9	
80	%	13	œ	œ	11	
7	10%	18	12	17	19	
9	18%	21	18	20	21	
ಬ	19%	21	21	21	18	
4	23%	13	18	15	11	
ဗ	10%	က	7	10	2	
87	4%	ß	9	ល	4	
1	3%	က	က	83	8	
0	1%	0	н	Н	П	
Type of Institution	· C. USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
	<b>ب</b> بي 48	1				

TABLE 13

#### ACTIVITIES SCALES: MUSIC

Percent of Alumni Obtaining Each Score

S.D.	1,8	2.3	2.0	2.2	6. 6.
l×I		3.7	3.4	3.6	4.0
Z	135	39	330	1060	5651
11	%0	0	0	0	1
10	1%	0	0	0	н
<b>o</b>	%0	က	0	07	8
œ	%0	ນ	8	က	4
7	5%	က	ເນ	9	<b>!</b>
9	%2	13	7	œ	10
5	10%	18	14	13	14
4	19%	œ	17	18	16
က	21%	13	18	17	16
8	22%	23	21	17	15
н	13%	10	11	12	10
0	2%	ເດ	က	က	4
Type of Institution	CUSMA AD	USMA NAD	. USMA Total	Engineering & Science	National Norm
#	49	<b>1</b>		届 ∞". •	()增计

TABLE 14

#### ACTIVITIES SCALES: DRAMA

Percent of Alumni Obtaining Each Score

S.D.	1.7	1.9	1.9	1.8	1.9	
IXI	3.5	3.8	3.6	3.2	ი ი	
z	135	39	330	1060	5651	
11	%0	0	0	0	0	
10	%0	0	0	0	0	
6	%0	0	0	0	H	
8	1%	က	7	H	0	
7	4%	ည	က	7	4	
9	%9	10	œ	œ	<b>!</b> -	
သ	15%	15	14	12	13	
4	26%	23	22	17	19	
က	15%	28	18	25	24	
83	20%	ຜ	17	18	16	
н	11%	က	O	10	6	
0	1%	<b>∞</b>	က	ø	ເດ	
Type of Institution	OS CASMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	

TABLE 15

#### ACTIVITIES SCALES: RELIGION

S.D.	2.4	2.7	2.6	2.9	2.9	
I×I	4.9	5.4	4.9	5.1	5, 5	
z	co co	39	330	1060	5651	
6	4%	10	œ	77	18	
<b>∞</b>	11%	18	10	16	15	
2	17%	10	14	12	11	
9	15%	13	13	10	10	
ည	12%	13	12	10	6	
4	11%	18	10	œ	œ	
က	2%	0	œ	Q	o o	
Ø	13%	œ	11	œ	۲-	
1	%L	0	6	œ	9	
0	3%	10	ည	∞	<b>ω</b>	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
	51	3		- · ·		

TABLE 16

#### ACTIVITIES SCALES: INTERCULTURAL

## Percent of Alumni Obtaining Each Score

S.D.	2.8	2.5	2.6	2.2	2.2	
I×I	4.2	3.6	3.7	2.6	8	
×	135	39	330	1060	5651	
10	3%	0	8	0	н	
o.	2%	ເລ	က	ч	ч	
œ	%9	က	4	83	81	j
7	%1	œ	œ	က	4	
9	10%	10	œ	4	ည	
2	13%	ល	Ø	۷	œ	
4	10%	10	13	11	12	
က	15%	21	15	14	15	
67	13%	15	16	20	20	
г	2%	18	12	20	19	
0	11%	ເດ	10	17	13	
Type of Institution	C USMA AD	CT ISMA NAD	USMA Total	Engineering & Science	National Norm	

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TABLE 17

#### ACTIVITIES SCALES: SCIENCE

Percent of Alumni Obtaining Each Score

S.D.	2.0	2.3	2.2	2.	4.
IXI	3.6	4.5	4.1	5.1	<b>4</b> .
z	135	39	330	1060	5651
10	%0	က	N	4	က
O	1%	က	83	9	4
œ	1%	က	4	۲-	വ
2	%9	15	œ	10	9
9	88	œ	10	15	o
က	16%	<b>∞</b>	14	14	123
4		31	18	17	17
က	25%	13	21	15	22
N	11%	10	10	9	11
1	11%	က	œ	4	9
0	2%	ro	4	Ø	4
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm
ii		H		년 <sup>8</sup>	× 1000

TABLE 18

### ACTIVITIES SCALES: INTERNATIONAL

Percent of Alumni Obtaining Each Score

S.D.	1.4	1.3	1.4	1.2	1.3
Ι×Ι	8. 4.	3.1	ຕຸ	62 CO	2.7
×	135	39	330	1060	5651
6	%0	0	0	0	0
80	1%	0	н	0	0
2	2%	0	Ø	н	н
9	2%	<b>∞</b>	က	н	8
ည	13%	ល	13	4	ເດ
4	19%	13	16	6	11
က	26%	41	29	24	26
Ø	31%	31	31	51	44
н	1%	0	83	2	<b>L</b>
0	1%	က	П	က	က
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm
	7	5.7			

TABLE 19

#### CHANGING SOCIETY: OCCURRING

S.D.	3.3	8.8	3.6	4.1	4.0
l×I	18,3	19.0	18.2	18.1	18.9
×	135	39	330	1060	5651
27-28	1%	0	0		-1
21-23 24-26	3%	m ·	ည	œ	10
	24%	88	21	19	25
12-14 15-17 18-20	35%	44	35	28	30
15-17	25%	21	24	27	21
12-14	10%	က	11	11	o (
9-11	22%	က	4	4,	m
8-9	%0	0	Н	П	1
3 5	%0	0	0	0	0
0-2	%0	0	0	Н	0
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm
	57	<b>7</b> 55			

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TABLE 20

#### CHANGING SOCIETY: DESIRABLE

S.D.	2.5	2.8	2.5	2.6	2.7	
l×I,	7.3	7.3	7.3	7.1	7.2	
×	135	39	330	1060	5651	·· ·
14	<b>%</b> 0	0	0	0	0	
10-11 12-13	%9	വ	4	ო	ល	
10-11	14%	15	15	16	16	
8-6	28%	88	20	27	26	
2-9	30%	13	30	28	27	
4-5	13%	21	15	17	17	
2-3	8%	œ	9	œ	œ	
0-1	1%	0	83	87	83	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
	56	56 56				

TABLE 21

VIEWPOINTS: GOVERNMENT

Percent of Alumni Obtaining Each Score

Type of Institution	0	1	83	က	4	×	ī×ī	S.D.
USMA AD	%L	19%	44%	27%	4%	135	2.0	1.0
USMA NAD	10	28 7	44	13	ည	39	1.7	1.0
USMA Total	9	23	39	24	œ	330	2.0	1.0
Engineering & Science	O	26	31	25	Ø	1060	2.0	1,1
National Norm	<u>ი</u>	24	32	25	12	5651	2.1	1.1
				-				

TABLE 22

VIEWPOINTS: WOMEN

Percent of Alumni Obtaining Each Score

S.D.	1.0	1.0	1.0	1.1	1.0
IXI	8.	2.2	2.2	2.2	2.2
<b>z</b>	. 135	39	330	1060	5651
4	%9	10	œ	10	10
	37%	28	33	30	33
7	32%	36	33	34	33
1	21%	18	22	20	19
0	4%	œ	4	<b>6</b>	.co
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm

TABLE 23

VIEWPOINTS: CIVIL RIGHTS

Percent of Alumni Obtaining Each Score

S.D.	1,2	1.3	1,3	1,5	1.5	
IXI	2.7	2.3	2.6	2.7	2.8	
z	135	39	330	1060	5651	
ശ	4%	ល	9	14	16	
4,	25%	21	20	19	19	
က	27%	26	27	22	21	
83	30%	21	27	20	21	
H	%6	23	14	18	15	
0	4%	ശ	9	7	<b>L-</b>	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	

CD: ·

**61** 

*\*\** 

TABLE 24

#### EDUCATIONAL BENEFITS: VOCATIONAL

Percent of Alumni Obtaining Each Score

Type of Institution	0	-	7	က	4	×.	l×I	S.D.
	24%	32%	21%	13%	10%	135	1.5	1.3
	33	26	23	13	ເດ	39	1.3	1.2
	30	29	22	. 14	9	330	1.4	1.2
	36	27	21	12	4	1060	1,2	1.2
	42	27	19	o.	ო	5651	1.0	1,1
			٠					

14 C2 60

TABLE 25

## EDUCATIONAL BENEFITS: PERSONAL & SOCIAL

Percent of Alumni Obtaining Each Score

S.D.	1.5	1.6	1.5	1.0	1.3	
IXI	1,9	2.0	1.9	9.0	1.0	
z	135	39	330	1060	5651	
വ	%2	œ	9	н <sup>'</sup>	က	
4	%L	15	10	Ø	4	
က	18%	13	17	4	œ	
7	26%	21	22	6	13	
1	22%	56	24	21	21	
0	19%	18	21	63	52	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	

61

TABLE 26

TI ,

EDUCATIONAL BENEFITS: LIBERAL EDUCATION

Percent of Alumni Obtaining Each Score

TABLE 27

### MEMORY OF COLLEGE EXPERIENCE: PEERS

S.D.	1.6	1.4	1.6	7. 5	1.6	
I×I	2.6	2.7	2.6	1.7	2.0	
Z	135	39	330	1060	5651	
œ	%0	0	0	0	0	-
7	1%	0	н	0	Н	
9	1%	က	8	П	83	
ស	%6	œ	œ	4	ល	
4	19%	18	17	œ	10	
က	23%	31	25	14	17	
83	18%	15	18	21	22	
н	21%	23	20	29	27	
0	8%	ო	œ	23	17	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
	6	65				

TABLE 28

MEMORY OF COLLEGE EXPERIENCE: ACADEMIC

Percent of Alumni Obtaining Each Score

S.D.	1.4	1.3	1.3	1,3	1.4	
i×i	1,7	1.8	1.6	2.0	2.3	
Z	135	39	330	1060	5651	
ខ	4%	0	ო	ო	œ	
4	4%	10	ß	11	14	
က	20%	23	19	21	23	
2	19%	23	19	26	24	
1	32%	21	32	25	19	
Ö	20%	23	22	13	11	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	

TABLE 29

PERSONAL TRAITS: AUTONOMY SCALE

S.D.	1.8	2.0	1.9	2.2	2.3	
ı×ı	4.2	4.9	4.5	5.7	5. 4.	
Z	135	39	330	1060	5651	
12	%0	0	0	0	0	
11	%0	0	0	Н	-	
10	%0	0	1	83	83	
6	%0	ນ	87	2	2	
<b>∞</b>	2%	S	က	თ	o	
7	8%	13	6	16	13	
9	16%	13	14	18	15	
ശ	16%	21	17	17	16	
4	23%	21	23	13	15	
က	17%	13	16	o.	11	
82	13%	rC	13	ល	2	
н	4%	က	4	83	e	
0	1%	0	П	П	1	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	<b>:</b> \$}
		657				

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TABLE 30

#### PERSONAL TRAITS: COMPLEXITY

S.D.	3.2	3.2	3.4	3.4	5
l⋈I	11.9	12.6	12.0	12.0	12.0
×	135	39	330	1060	5651
20-21	%0	0	1	п	1
18-19	2%	က	7	9	9
16-17	10%	23	14	14	13
14-15	21%	13	18	20	19
10-11 12-13 14-15	22%	23	22	21	21
10-11	21%	23	20	20	20
8-8	13%	10	13	12	12
L-9	%2	ო	7	ιΩ	ဗ
4-5	2%	ო	4	8	8
2-3	1%	0	0	0	1
0-1	%0	0	0	0	0
Type of Institution	COUSMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm

TABLE 31

PERSONAL TRAITS: THEORETICAL ORIENTATION

Percent of Alumni Obtaining Each Score

S.D.	8.	4.0	3.1	3.3	3.4	
I×I	8.0	9.0	8.4	8.7	7.9	
×	135	39	330	1060	5651	
16	%0	0	0	н	, r.	
14-15	4%	13	9	œ	ß	
12-13	5%	18	10	12	10	
10-11	21%	23	19	18	16	
6-8	28%	13	25	24	21	
2-9	24%	ო	21	19	21	
4-5	13%	18	12	12	16	
2-3	2%	13	2	က	თ	
0-1	%0	0	0	0	П	
Type of Institution	USMA AD	USMA NAD	USMA Total	Engineering & Science	National Norm	
•	69	67				